



**Department of
Design and
Construction**

**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

30-30 THOMSON AVENUE
LONG ISLAND CITY, NEW YORK 11101-3045
TELEPHONE (718) 391-1000
WEBSITE www1.nyc.gov/site/ddc/index.page

VOLUME 1 OF 3

LAW

BID BOOKLET

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND
REQUIRED FOR:

PROJECT ID: HWD10105

ATLANTIC AVENUE SAFETY IMPROVEMENTS

FROM GEORGIA AVENUE TO LOGAN STREET

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING AND
TRAFFIC SIGNAL WORK**

Together With All Work Incidental Thereto

**BOROUGH OF BROOKLYN
CITY OF NEW YORK**

FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY

HENNINGSON, DURHAM AND RICHARDSON, INC.

NOVEMBER 1, 2016

NYS DOT PIN X761.15

Fed. Aid Project No. _____

Bid Opening 11:00 A.M. on

Location 1st Floor Bid Room, 30-30 Thomson Ave., Long Island City, N.Y. 11101



17-077

Bid Tab

Description ATLANTIC AVENUE SAFETY IMPROVEMENTS FROM GEORGIA AVE TO LOGAN ST-BOROUGH OF BROOKLYN

Bid Date 3/15/2017 **FMS ID** HWD10105

Estimated Cost \$35,296,526.00 **Client Agency** DOT

Bid Security Not less than 5% of Total Bid Price **PLA** NO

Time Allowed 730 CCD **Federal Funded:** YES

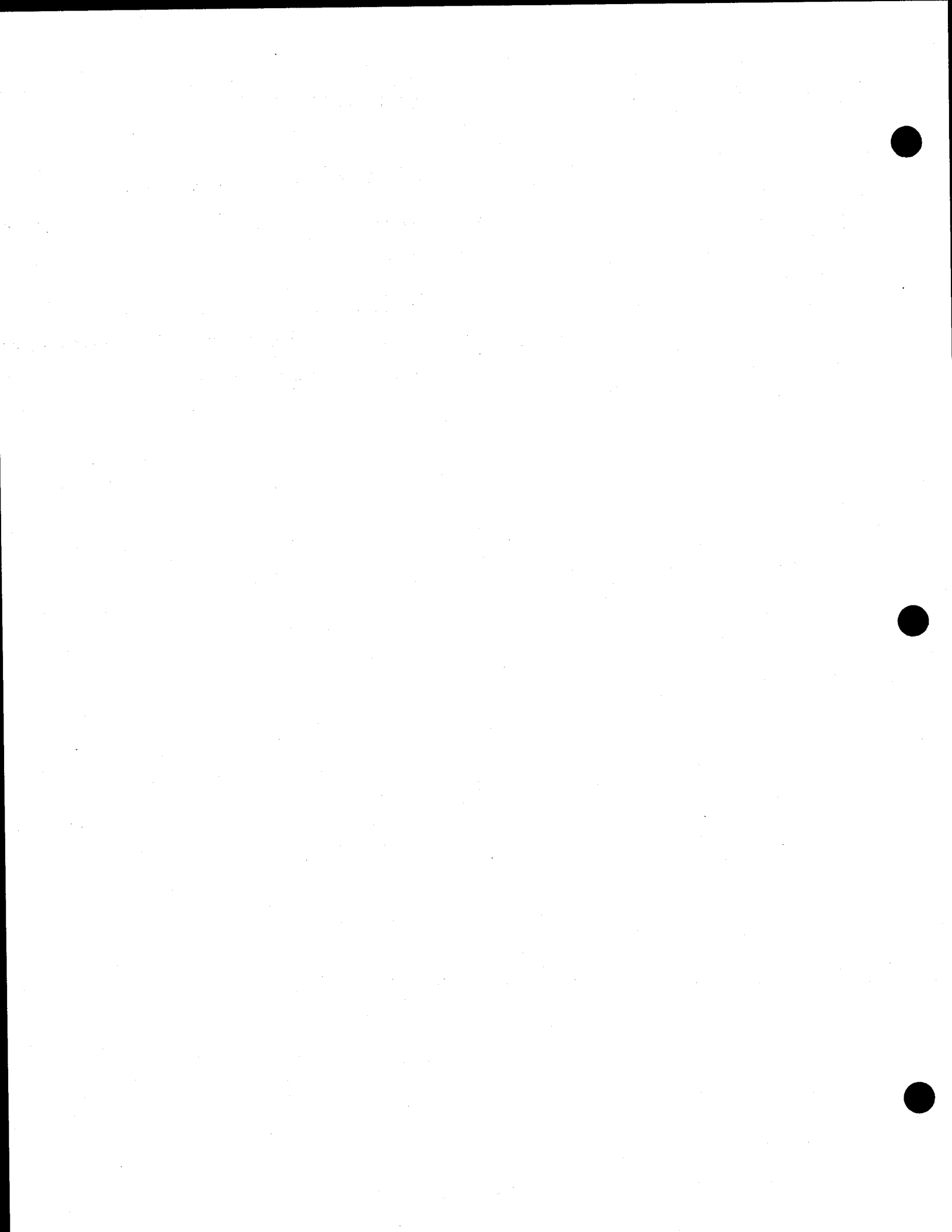
Addendum 1 **Contract Manager** Shermaine Manifold

PIN 8502017HW0034C **Project Manager** Ashishkumar Patel

Selective Bidding Yes No **E-PIN** 85017B0049

Bid Rank	Vendor	Bid Amount	Security Type
1	TULLY CONSTRUCTION CO. INC.	\$36,601,757.74	Bond
2	PERFETTO CONTRACTING CO. INC.	\$38,493,153.25	Bond
3	JR CRUZ CORP	\$39,452,285.60	Bond
4	TRIUMPH CONSTRUCTION CORP.	\$45,884,687.63	Bond
5	C.A.C. INDUSTRIES, INC.	\$50,341,872.60	Bond

Recorder: Brenda Barreiro Ext. 1041 Approver: *Loraine Holley*





May 18, 2017

CERTIFIED MAIL - RETURN RECEIPT REQUEST

TULLY CONSTRUCTION CO. INC.
127-50 NORTHERN BLVD.
FLUSHING, NY 11368

RE: FMS ID: HWD10105
E-PIN: 85017B0049001
DDC PIN: 8502017HW0034C
ATLANTIC AVENUE SAFETY
IMPROVEMENTS FROM GEORGIA AVE
TO LOGAN ST-BOROUGH OF
BROOKLYN
NOTICE OF AWARD

Dear Contractor:

You are hereby awarded the above referenced contract based upon your bid in the amount of \$36,604,679.18 submitted at the bid opening on March 15, 2017. Within ten (10) days of your receipt of this notice of award, you are required to take the actions set forth in Paragraphs (1) through (3) below. For your convenience, attached please find a copy of Schedule A of the General Conditions to the Contract, which sets forth the types and amounts of insurance coverage required for this contract.

- (1) Execute two copies of the Agreement in the Contracts Unit, 30-30 Thomson Avenue, 1st Floor, Long Island City, New York (IDCNY Building). A Commissioner of Deeds will be available to witness and notarize your signature. The Agreement must be signed by an officer of the corporation or a partner of the firm.
- (2) Submit to the Contracts Unit two properly executed performance and payment bonds. If required for this contract, copies of performance and payment bonds are attached.
- (3) Submit to the Contracts Unit the following insurance documentation: (a) original certificate of insurance for general liability in the amount required by Schedule A, and (b) original certificates of insurance or other proof of coverage for workers' compensation and disability benefits, as required by New York State Law. The insurance documentation specified in this paragraph is required for registration of the contract with the Comptroller's Office.



**Department of
Design and
Construction**

On or before the contract commencement date, you are required to submit all other certificates of insurance and/or policies in the types and amounts required by Schedule A. Such certificates of Insurance and/or policies must be submitted to the Agency Chief Contracting Office, Attention: Risk Manager, Fourth Floor at the above indicated department address.

Your attention is directed to the section of the Information for Bidders entitled "Failure to Execute Contract". As indicated in this section, in the event you fail to execute the contract and furnish the required bonds within the (10) days of your receipt of this notice of award, your bid security will be retained by the City and you will be liable for the difference between your bid price and the price for which the contract is subsequently awarded, less the amount of the bid security retained.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Shipman". The signature is fluid and cursive, written over a horizontal line.

Michael Shipman
Director of Contracts

Notices to Bidders

Pre-Bid Questions (PBQs)

Please be advised that PBQs should be submitted to the Agency Contact Person at least five (5) business days (by 5:00 PM EST) prior to the bid opening date as indicated in ATTACHMENT 1 - BID INFORMATION, page A-1 and SCHEDULE B, page 13, VOLUME 1 OF 3 of this BID BOOKLET.

Apprenticeship Program

If Apprenticeship Program is required as noted on Page 19 of this BID BOOKLET, the following notice applies:

Please be advised that, pursuant to the authority granted to the City under Labor Law §816-b, the New York City Department of Design and Construction hereby requires that the contractor awarded a contract as a result of this solicitation, and any of its subcontractors with subcontracts worth two million dollars or over, have, prior to entering into such contract or subcontract, apprenticeship agreements appropriate for the type and scope of work to be performed that have been registered with, and approved by, the New York State Commissioner of Labor. In addition, the contractor and its subcontractors will be required to show that such apprenticeship program/s have successfully passed the two year Probation period following the initial registration date of such program/s with the New York State Department of Labor.

The failure to prove, upon request, that these requirements have been met shall result in the contract not being awarded to the contractor or the subcontractor not being approved.

Please be further advised that, pursuant to Labor Law §220, the allowable ratio of apprentices to journeypersons in any craft classification shall not be greater than the ratio permitted to the contractor as to its workforce on any job under the registered apprenticeship program.

Notices to Bidders

Compliance with HireNYC and Reporting Requirements

The Hiring and Employment Rider shall apply to contracts valued at \$1 million or more for all goods, services and construction except human services contracts that are subject to the Public Assistance Hiring Commitment Rider. The Rider describes the Hire NYC process and obligations, including reporting requirements throughout the life of the contract. The Hire NYC process requires contractors to enroll with the Hire NYC system within thirty days after the registration of the contract subject to this solicitation, to provide information regarding all entry to mid-level job opportunities arising from this contract and located in New York City, and to agree to interview qualified candidates from HireNYC for those opportunities. The Rider also includes reporting requirements unrelated to HireNYC.

NYC Construction Loan Pilot Program

The New York City Department of Small Business Services (SBS), in conjunction with the New York Business Development Corporation (NYBDC), have established a **NYC Construction Loan** pilot program to provide prime contractors and subcontractors financing for mobilization costs on certain City construction projects.

Under this initiative, loans are available for early stage mobilization needs such as insurance, labor, supplies and equipment. Bidders are strongly encouraged to visit "Growing Your Business" at www.nyc.gov/nycbusiness to learn more about the loan or contact constructionloan@sbs.nyc.gov / (212) 513-6444 to obtain details and to determine preliminary eligibility.

A successful loan applicant will be required to make an assignment of its contract (or subcontract) payments to the lender NYBDC until the loan is repaid. If the loan is to a subcontractor, a prime contractor must honor the terms of such an assignment.

A prime contractor may not discriminate against a subcontractor or potential subcontractor by reason of the subcontractor's participation, or nonparticipation, in the NYC Construction loan program.

CITY OF NEW YORK

**DEPARTMENT OF
DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

BID BOOKLET

**FOR FURNISHING ALL LABOR AND MATERIALS
NECESSARY AND REQUIRED FOR:**

PROJECT ID: HWD10105

ATLANTIC AVENUE SAFETY IMPROVEMENTS

FROM GEORGIA AVENUE TO LOGAN STREET

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING
AND TRAFFIC SIGNAL WORK**

Together With All Work Incidental Thereto

**BOROUGH OF BROOKLYN
CITY OF NEW YORK**

(NO TEXT ON THIS PAGE)

CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE

BID BOOKLET

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(NO TEXT ON THIS PAGE)

**CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

SPECIAL NOTICE TO BIDDERS – FEDERALLY FUNDED CONTRACTS (Revised 11-2016)

BID SUBMISSION REQUIREMENTS

THE FOLLOWING DOCUMENTS ARE TO BE COMPLETED AND SUBMITTED WITH THE BID:

1. Bid Schedule and Bid Form, including Affirmation
2. Bid Security (if required, see Attachment 1 on Page A-1)
3. Debarment History Certification (See Page TF-J1 in the TF-Pages)
4. DBE Schedule of Utilization (See Page TF-D6 in the TF-Pages)

**FAILURE TO SUBMIT ITEMS (1) THROUGH (5)
WILL RESULT IN THE DISQUALIFICATION OF THE BID.**

5. Safety Questionnaire
6. Construction Employment Report (if bid is \$1,000,000 or more)
7. Contract Certificate (if bid is less than \$1,000,000)
8. Confirmation of Vendex Compliance
9. Bidder's Certification of Compliance with Iran Divestment Act
10. Special Experience Requirements (if applicable)
11. Apprenticeship Program Questionnaire
12. Disclosure of Lobbying Activities (if applicable) (See Page TF-J3 in the TF-Pages)
13. Any addenda issued prior to the receipt of bids

**FAILURE TO SUBMIT ITEMS (5) THROUGH (13)
MAY RESULT IN THE DISQUALIFICATION OF THE BID.**

NOTES:

- (1) All of the above referred to blank forms to be completed and submitted with the bid are included in the BID BOOKLET, except forms for items (3), (4), and (12) which are in the TF-Pages as noted above.
- (2) If the bidder has any questions or requires additional information, please contact the Department of Design and Construction by phone (718-391- 2601) or by fax (718-391-2615).
- (3) **VENDEX QUESTIONNAIRES:** The Bidder is advised that Vendex Questionnaires and procedures have been changed. Vendex Questionnaires, as well as detailed instructions, may be obtained at www.nyc.gov/vendex. The bidder may also obtain Vendex forms and instructions by contacting the Agency Chief Contracting Officer or the contact person for this contract.
- (4) **SPECIAL EXPERIENCE REQUIREMENTS:** The Bidder is advised that Special Experience Requirements may apply to this contract. Such requirements are set forth on pages 3, 3a, 3b, and 4 of this Bid Booklet.

SPECIAL NOTICE TO BIDDERS

SPECIAL EXPERIENCE REQUIREMENTS (Revised 03/2014)

- (A) **SPECIAL EXPERIENCE REQUIREMENTS FOR THE BIDDER:** The Special Experience Requirements set forth below apply to the bidder. Compliance with such Special Experience Requirements will be determined solely by the City prior to an award of contract. Failure to comply with the Special Experience Requirements will result in rejection of the bid as non-responsive.

The requirements in this Section (A) apply to this contract where indicated by a blackened box (■).

- The bidder must, within the last seven (7) consecutive years prior to the bid opening, have successfully completed in a timely fashion at least one (1) project similar in scope and type to the required work. Such prior project may have been performed as a prime contractor, subcontractor or sub-subcontractor.

The Special Experience Requirements next to the blackened box below apply to the bidder. If the bidder intends to perform such work itself, it must demonstrate compliance with the Special Experience Requirements. If the bidder intends to subcontract this work, the proposed subcontractor or sub-subcontractor must demonstrate compliance with the Special Experience Requirements. The contractor, subcontractor or sub-subcontractor (hereinafter referred to as the "entity") that will perform any specific area of work indicated by the blackened box below, may have performed the required prior project(s) as a prime contractor, subcontractor or sub-subcontractor. Once approved, no substitution will be permitted, unless the qualifications of the proposed replacement have been approved in writing in advance by the City.

- **Trunk Water Main Work:** The entity that will perform the trunk water main work must, within the last seven (7) consecutive years prior to the bid opening, have successfully completed in a timely fashion at least one (1) project similar in scope and type to the required work.
- **Best Management Practice Work:** Best Management Practice ("BMP") Work is any item of work in the Bid Schedule that begins with the prefix "BMP". The entity that will perform any BMP Work must, within the last five (5) consecutive years prior to the bid opening, have successfully completed in a timely fashion at least three (3) projects similar in scope and type to the required work.

For professional services in connection with BMP Work, (i.e., monitoring and reporting services), the individual who will perform the required services must, within the last five (5) consecutive years prior to the bid opening, have successfully completed in a timely fashion at least three (3) projects similar in scope and type to the required work. Additional requirements are set forth below.

- The individual serving as the Restoration Specialist (Construction Monitor) must be a Registered Landscape Architect licensed by the state of New York, or must have equivalent professional experience.
- The individual serving as the Erosion and Sediment Control Licensed/Certified Professional must be a Certified Professional in Erosion and Sediment Control (CPESC), certified by CPESC, Inc.
- **Micro-Tunneling/Pipe Jacking Work:** The entity that will perform the micro-tunneling/pipe jacking work must, within the last five (5) consecutive years prior to the bid opening, have successfully completed in a timely fashion at least two (2) projects similar in scope and type to the required work.

- **OTHER:** _____

(B) **SPECIAL EXPERIENCE REQUIREMENTS FOR SPECIFIC AREAS OF WORK (to be provided after an award of contract):**

The requirements in this Section (B) apply to this contract where indicated by a blackened box (■).

The Special Experience Requirements set forth below apply to the contractor, subcontractor or sub-subcontractor that will perform the specific area of work. **Compliance with such Special Experience Requirements will be determined solely by the City after an award of contract.** After an award of contract, when requested by the City, the contractor will be required to submit the qualifications of the contractor, subcontractor or sub-subcontractor that will perform the specific area of work. If the bidder intends to perform such work itself, it must demonstrate compliance with the Special Experience Requirements. If the bidder intends to subcontract this work, the proposed subcontractor or sub-subcontractor must demonstrate compliance with the Special Experience Requirements. Once approved, no substitution will be permitted, unless the qualifications of the proposed replacement have been approved in writing in advance by the City.

Special Experience Requirements apply to the contractor, subcontractor or sub-subcontractor (hereinafter referred to as the "entity") that will perform any specific area of work indicated by a blackened box. The entity may have performed the required prior project(s) as a prime contractor, subcontractor or sub-subcontractor.

■ **Hazmat Work:** Hazmat Work is any item of work in the Bid Schedule that begins with the prefix 8.01. The entity that will perform any Hazmat Work must, within the last three (3) consecutive years prior to the bid opening, have successfully completed in a timely fashion at least five (5) projects similar in scope and type to the required work.

□ **Pile, CFA Pile, and/or Mini-Pile Work:** The entity that will perform the Pile, CFA Pile and/or Mini-Pile Work must, within the last three (3) consecutive years prior to the bid opening, have successfully completed in a timely fashion at least two (2) projects similar in scope and type to the required work.

For professional services in connection with Pile Work, (i.e., engineering and inspection services), the individual who will perform the required services must be a Professional Engineer licensed by the state of New York. Such individual must also comply with the above requirements for prior projects.

□ **Construction Report, Monitoring And Post-Construction Report, and Continuous Real-Time Monitoring For Vibrations And Movements And Post-Construction Report Work:** The entity that will perform the Construction Report, Monitoring For Vibrations And Movements, and Post-Construction Report Work must, within the last three (3) consecutive years prior to the bid opening, have successfully completed in a timely fashion at least two (2) projects similar in scope and type to the required work.

For professional services in connection with Reporting and Monitoring Work, (i.e., engineering and inspection services), the individual who will perform the required services must be a Professional Engineer licensed by the state of New York. Such individual must also comply with the above requirements for prior projects.

■ **OTHER: LIRR Work : The entity that will perform the LIRR work must, within the last seven (7) consecutive years prior to the bid opening, have successfully completed in a timely fashion at least one (1) project similar in scope and type to the required work.**

(C) **SPECIFICATIONS:** In the event of any conflict, omission or inconsistency between (1) the Specifications and/or Contract Drawings, and (2) the Special Experience Requirements in Section (B) of the Special Notice To Bidders, the special experience listed in the Specifications and/or Contract Drawings shall be controlling. The Special Experience Requirements in Section (B) of this Special Notice To Bidders are only for the convenience of the bidders.

(D) **SUBMISSION REQUIREMENTS:** For each project submitted to demonstrate compliance with the Special Experience Requirements, the bidder must complete and submit the Qualification Form included in the Bid Booklet. The City will only evaluate a project if the following criteria are met: (1) the project is described on the Qualification Form, and (2) all information on the Qualification Form is provided. The City will not evaluate any project which does not comply with the criteria set forth herein, including any project which is referred to only on the resume of an individual.

If Special Experience Requirements are indicated for any specific area of work, the submission requirement set forth above shall apply to the entity that will perform the specific area of work.

(E) **CONDITIONS:** In determining compliance with the Special Experience Requirements for the bidder set forth above, the City may consider prior projects completed by principal(s) or other employees of the bidder while affiliated with another entity, subject to the conditions set forth below.

- Any principal or other employee on whose prior experience the bidder is relying to demonstrate compliance with this special experience requirement must have held the following: (a) a significant management role in the prior entity with which he/she was affiliated, and (b) a significant management role in the entity submitting the bid for a period of six (6) months or more from the inception of the bidding entity.
- The bidder may not rely on the experience of its principals or other employees to demonstrate compliance with any other requirements, including without limitation, financial requirements or requirements for a specified minimum amount of annual gross revenues.

(F) **JOINT VENTURES:** In the event the bidder is a joint venture, at least one firm in the joint venture must meet the above described experience requirements.

Qualification Form

List previous projects completed to meet the special experience requirements for this contract.
Please photocopy this form for submission of all required projects.

Name of Contractor: Tully Construction Co. Inc.

Name of Project: Reconstruction of Water Street and Fulton, NYC/DDC - SEK002355

Location of Project: Brooklyn, NY

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: Mr. Eric Macfarland

Title: _____ Phone Number: (718) 391-1903

Brief description of the Project completed or the Project in progress: Install 2, 500 lf of new 36" Trunk Mains and 36" Butterflies valve and 3, 500 Linear Ft. of Distribution Mains

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Prime

Amount of Contract, Subcontract or Sub-subcontract: \$20,469,326.00

Start Date and Completion Date: April/2008 - August/2012

Name of Contractor: Tully Construction Co. Inc.

Name of Project: Reconstruction of Houston Street - NYC/DDC - HWM738

Location of Project: Manhattan, NY

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: Mr. Eric Macfarland

Title: _____ Phone Number: (718) 391-1903

Brief description of the Project completed or the Project in progress: Install New 36 & 48" Butterflies 25", 30" & 36" Trunk Mains. 5,300 Linear Ft. of Truck Mains and 13,600 Linear Ft. of Distribution Mains

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Prime

Amount of Contract, Subcontract or Sub-subcontract: \$29,379,634.00

Start Date and Completion Date: May/2005 - August/2008

Qualification Form

List previous projects completed to meet the special experience requirements for this contract.
Please photocopy this form for submission of all required projects.

Name of Contractor: Spectrum Coverage Corp. dba Preferred Environmental Services

Name of Project: NYCDEP Paerdegat Basin CSO Facilities Contract

Location of Project: Avenue L & M, Brooklyn NY

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: Dean Devoe, PE, Tully

Title: Environmental PM Phone Number: 718-446-7000 x298

Brief description of the Project completed or the Project in progress: Implementation of in-situ waste characterization program, screening of soil/concrete, air monitoring, analytical testing and reporting, facilitate waste disposal

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Subcontractor

Amount of Contract, Subcontract or Sub-subcontract: \$750,000

Start Date and Completion Date: 5/2010 to 10/2012

Name of Contractor: Spectrum Coverage Corp. dba Preferred Environmental Services

Name of Project: NYCDEP Tallman Island WWTP

Location of Project: College Point Queens, NY

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: Monica Ampollini, PE

Title: Project Manager Phone Number: 516 315-0900

Brief description of the Project completed or the Project in progress: Implementation of soil characterization project for waste interceptor piping, enviro. submittals, SWPPP plans and inspection, CSP/CIH services CAMP

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Subcontractor

Amount of Contract, Subcontract or Sub-subcontract: \$250,000

Start Date and Completion Date: 9/2012 - ongoing

Qualification Form

List previous projects completed to meet the special experience requirements for this contract.
Please photocopy this form for submission of all required projects.

Name of Contractor: Spectrum Coverage Corp. dba Preferred Environmental Services

Name of Project: MTA LIRR - 5 Substations

Location of Project: Queens and LI

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: Chris Hurst Posillico

Title: Environmental PM Phone Number: 347-246-6497

Brief description of the Project completed or the Project in progress: Implementation of in-situ waste characterization program, screening of soil/sampling, air monitoring, analytical testing and reporting, CAMP monitoring

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Subcontractor

Amount of Contract, Subcontract or Sub-subcontract: \$90,000

Start Date and Completion Date: 7/2012 to 9/2012

Name of Contractor: Spectrum Coverage Corp. dba Preferred Environmental Services

Name of Project: BB&S Treated Lumber Site

Location of Project: Speonk, New York

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: Robert Fratus,

Title: Project Director Phone Number: 508-803-1234

Brief description of the Project completed or the Project in progress: Implementation of NYS Superfund Remediation project with waste disposal characterization, enviro. submittals, construction inspection, CAMP and worker documentation monitoring

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Subcontractor

Amount of Contract, Subcontract or Sub-subcontract: \$107,000

Start Date and Completion Date: 1/2010 - 7/2011

Qualification Form

List previous projects completed to meet the special experience requirements for this contract.
Please photocopy this form for submission of all required projects.

Name of Contractor: Spectrum Coverage Corp. dba Preferred Environmental Services

Name of Project: Columbia University, Manhattanville Campus

Location of Project: New York, New York

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: John Sullivan, Skanska Civil

Title: Project Manager Phone Number: 917-299-1888

Brief description of the Project completed or the Project in progress: Implementation of in-situ waste characterization program, screening of soil/sampling, analytical testing and reporting, environmental submittals

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Subcontractor

Amount of Contract, Subcontract or Sub-subcontract: \$150,000

Start Date and Completion Date: 9/2013 to ongoing

Name of Contractor: _____

Name of Project: _____

Location of Project: _____

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: _____

Title: _____ Phone Number: _____

Brief description of the Project completed or the Project in progress: _____

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: _____

Amount of Contract, Subcontract or Sub-subcontract: _____

Start Date and Completion Date: _____

Qualification Form

List previous projects completed to meet the special experience requirements for this contract.
Please photocopy this form for submission of all required projects.

Name of Contractor: Tully Construction Co. Inc

Name of Project: Reconstruction of Houston Street + W 73rd

Location of Project: Manhattan, NY

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: Mr. Eric Macfarland

Title: _____ Phone Number: 718. 391. 1903

Brief description of the Project completed or the Project in progress: this job was completed above the LIRR

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Prime

Amount of Contract, Subcontract or Sub-subcontract: 29,379,634⁶⁰

Start Date and Completion Date: May 2005 - Aug 2008

Name of Contractor: _____

Name of Project: _____

Location of Project: _____

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: _____

Title: _____ Phone Number: _____

Brief description of the Project completed or the Project in progress: _____

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: _____

Amount of Contract, Subcontract or Sub-subcontract: _____

Start Date and Completion Date: _____

DISADVANTAGE BUSINESS ENTERPRISE UTILIZATION GOALS

For

Federal Transit Administration Projects

New York City Department of Transportation

The New York City Department has established the following Disadvantaged Business Enterprise (DBE) utilization goal for this contract. The goal is expressed as a percentage of the total federal share of the contract. It is the Contractor's responsibility to secure DBE participation in the contract work to satisfy this goal, and to document acceptable good-faith efforts taken to fulfill the goal. Utilization is measured as the amount actually paid to DBE's, not the contract bid price for the work.

Disadvantaged Business Enterprise Utilization Goal 13%

A list of currently certified Disadvantage Business Enterprises can be obtained by contacting the Unified Certification program for NYS on the web:

<http://biznet.nysucp.net/>

Disadvantaged Business Enterprise Officer

The Bidder shall designate and enter below the name of a Disadvantaged Business Enterprise Officer who have the responsibility for effectively administering and promoting an active Disadvantaged Business Enterprise Program and who must be assigned adequate authority and responsibility to do so.

Bidder-Designated DBE Officer: Thomas Olesczuk, V.P.
(Name, Title)

Telephone: 718 446-2000

Fax Number: 718 446-1484

E-Mail Address tolesczuk@tollyconstruction.com

RETURN THIS PAGE WITH BID

BID FORM
THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE

BID FOR FURNISHING ALL LABOR AND
MATERIAL NECESSARY AND REQUIRED FOR:

PROJECT ID: HWD10105

ATLANTIC AVENUE SAFETY IMPROVEMENTS

FROM GEORGIA AVENUE TO LOGAN STREET

INCLUDING SEWER, WATER MAIN, STREET LIGHTING AND
TRAFFIC SIGNAL WORK

Together With All Work Incidental Thereto

BOROUGH OF BROOKLYN
CITY OF NEW YORK
Tully Construction Co., Inc.

Name of Bidder: _____

Date of Bid Opening: March 15, 2017

Bidder is: (Check one, whichever applies) Individual () Partnership () Corporation

Place of Business of Bidder: 127-50 Northern Blvd., Flushing, NY 11368

Bidder's Telephone Number: 718 446-7000 Fax Number: 718 446-6072

Bidder's E-Mail Address: ptully@tullyconstruction.com

Residence of Bidder (If Individual): _____

If Bidder is a Partnership, fill in the following blanks:

Names of Partners

Residence of Partners

If Bidder is a Corporation, fill in the following blanks:

Organized under the laws of the State of New York

Name and Home Address of President: Peter K. Tully
37A Frost Creek Drive, La Hingtown, NY 11560

Name and Home Address of Secretary: Kenneth W. Tully
7536 West Shore Rd. Port Washington, NY 11050

Name and Home Address of Treasurer: James M. Tully
28 Shady Lane, Laurel Hollow, NY 11791

ant. 100 notaudat. 10 q. 1

BID FORM

PROJECT ID. HWD10105

TOTAL BID PRICE: In the space provided below, the Bidder shall indicate its Total Bid Price in figures. Such Total Bid Price is set forth on the final page of the Bid Schedule.


**TOTAL BID PRICE:
(a/k/a BID PROPOSAL)**

\$ 36,601,757.74

PKB 3/15/17

BIDDER'S SIGNATURE AND AFFIDAVIT

Bidder: **Tully Construction Co., Inc.**

By:  _____
(Signature of Partner or corporate officer) Peter K. Tully

Attest: _____
(Corporate Seal) Kenneth W. Tully
Secretary of Corporate Bidder

Affidavit on the following page should be subscribed
and sworn to before a Notary Public

201 13 112011011111

BID SCHEDULE

- NOTE:** (1) The Agency may reject a bid if it contains unbalanced bid prices. An unbalanced bid is considered to be one containing lump sum or unit items which do not reflect reasonable actual costs plus a reasonable proportionate share of the Bidder's anticipated profit, overhead costs, and other indirect costs, anticipated for the performance of the items in question.
- (2) The following bid prices on Unit Price Contracts are to be paid for the actual quantities of the item numbers in the completed work or structure, and they cover the cost of all work, labor, material, tools, plant and appliances of every description necessary to complete the entire work, as specified, and the removal of all debris, temporary work and appliances.
- (3) PLEASE BE SURE A LEGIBLE BID IS ENTERED, IN INK, FOR EACH ITEM.
Alterations must be initialed in ink by the bidder.
- (4) The Extended Amount entered in Column 6 shall be the product of the Estimated Quantity in Column 3 times the Unit Price Bid in Column 5.
- (5) Prospective bidders must examine the Bid Schedule carefully and, before bidding, must advise the Commissioner, in writing, if any pages are missing, and must request that such missing pages be furnished them. The pages of this Bid Schedule are numbered consecutively, as follows:
B - 3 Through B - 51

PLEASE BE SURE A LEGIBLE BID IS ENTERED FOR EACH ITEM.
THE BIDDER SHALL INSERT THE TOTAL BID PRICE IN
THE BID FORM ON PAGE C-4 OF THIS BID BOOKLET.

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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER AND DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CENTS	DOLLARS	CENTS
001	4.02 AB-R ASPHALTIC CONCRETE WEARING COURSE, 1-1/2" THICK	400.00	S.Y.	24	00	9,600	00
002	4.02 AF-R ASPHALTIC CONCRETE WEARING COURSE, 2" THICK	66,900.00	S.Y.	13	00	869,700	00
003	4.02 CB ASPHALTIC CONCRETE MIXTURE	8,985.00	TONS	160	00	1,437,600	00
004	4.04 H CONCRETE BASE FOR PAVEMENT, VARIABLE THICKNESS FOR TRENCH RESTORATION, (HIGH-EARLY STRENGTH)	3,990.00	C.Y.	370	00	1,476,300	00
005	4.06 CONCRETE IN STRUCTURES, CLASS A-40	3,000.00	C.Y.	2000	00	6,000,000	00
006	4.06 CS EXISTING STRUCTURE - CONDITION SURVEY	1.00	L.S.	120,000	00	120,000	00



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COL 1 SEQ. NO.	COL 2 ITEM NUMBER AND DESCRIPTION	COL 3 ENGINEERS ESTIMATE QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS.	DOLLARS	CTS.
007	4.06 SCR STRUCTURAL CRACK REPAIR	3,844.00	L.F.	175	22	673,545	68
008	4.06 SR CONCRETE RESTORATION - SPALL REPAIR	2,420.00	S.F.	180	00	435,600	00
009	4.06 WS WATER STOP STRIP AT CONSTRUCTION JOINT	5,767.00	L.F.	5	50	31,718	50
010	4.08 AA CONCRETE CURB (18" DEEP)	1,800.00	L.F.	60	00	108,000	00
011	4.09 AE STRAIGHT STEEL FACED CONCRETE CURB (21" DEEP)	10,300.00	L.F.	64	00	659,200	00
012	4.09 BE DEPRESSED STEEL FACED CONCRETE CURB (21" DEEP)	2,100.00	L.F.	65	00	136,500	00



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COL 1 SEQ. NO.	COL 2 ITEM NUMBER AND DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CENTS	DOLLARS	CENTS
013	4.09 CE CORNER STEEL FACED CONCRETE CURB (21" DEEP)	2,600.00	L.F.	200	00	520,000	00
014	4.11 AS EARTH EXCAVATION FOR STRUCTURES	925.00	C.Y.	200	00	185,000	00
015	4.13 AAS 4" CONCRETE SIDEWALK (UNPIGMENTED)	151,150.00	S.F.	10	50	1,587,075	00
016	4.13 BAS 7" CONCRETE SIDEWALK (UNPIGMENTED)	47,235.00	S.F.	12	50	590,437	50
017	4.13 DE EMBEDDED PREFORMED DETECTABLE WARNING UNITS	1,300.00	S.F.	19	00	24,700	00
018	4.14 STEEL REINFORCEMENT BARS	760,500.00	LBS.	1	60	1,216,800	00

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				DOLLARS	CTS.	DOLLARS	CTS.
019	4.14 E EPOXY COATED STEEL REINFORCEMENT BARS	21,635.00	LBS.	2	00	43,270	00
020	4.15 TOPSOIL	1,855.00	C.Y.	81	00	150,255	00
021	4.15 SS STRUCTURAL SOIL FOUNDATION MATERIAL	721.00	C.Y.	110	00	79,310	00
022	4.16 AA TREES REMOVED (4" TO UNDER 12" CALIPER)	8.00	EACH	310	00	2,480	00
023	4.16 AC TREES REMOVED (18" TO UNDER 24" CALIPER)	14.00	EACH	960	00	13,440	00
024	4.16 ADE TREES REMOVED (24" TO UNDER 48" CALIPER)	15.00	EACH	1,350	00	20,250	00

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COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS.	DOLLARS	CTS.
025	4.16 CA TREES PLANTED, 3" TO 3-1/2" CALIPER, ALL TYPES	72.00	EACH	1,060	00	76,320	00
026	4.16 CA510 TREES PLANTED, 3" TO 3-1/2" CALIPER, ALL TYPES, IN 5' X 10' TREE PITS	81.00	EACH	1,180	00	95,580	00
027	4.16 STUMP STUMP REMOVAL	7.00	UNITS	1,000	00	7,000	00
028	4.17 AA SHRUBS PLANTED, 15" TO 18" HIGH, ALL TYPES	2,751.00	EACH	60	00	165,060	00
029	4.17 AC SHRUBS PLANTED, 18" TO 24" HIGH, ALL TYPES	210.00	EACH	68	00	14,280	00
030	4.17 ACA SHRUBS PLANTED, 24" TO 30" HIGH, ALL TYPES	173.00	EACH	78	00	13,494	00

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				DOLLARS	CENTS	DOLLARS	CENTS
031	4.17 LN-B-NDM GROUND COVER AND BULB PLANTING, (NARCISSUS BULBS)	7,610.00	EACH	3	60	27,396	00
032	4.17 PG1Q PERENNIALS OR GROUNDCOVERS, PLANTED, 1 GALLON, ALL TYPES	8,615.00	EACH	30	00	258,450	00
033	4.17 PG1Q PERENNIALS OR GROUNDCOVERS, PLANTED, 1 QUART, ALL TYPES	9,330.00	EACH	18	50	172,605	00
034	4.18 A MAINTENANCE TREE PRUNING (UNDER 12" CAL.)	17.00	EACH	190	00	3,230	00
035	4.18 B MAINTENANCE TREE PRUNING (12" TO UNDER 18" CAL.)	2.00	EACH	340	00	680	00
036	4.18 C MAINTENANCE TREE PRUNING (18" TO UNDER 24" CAL.)	11.00	EACH	610	00	6,710	00

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				DOLLARS	CENTS	DOLLARS	CENTS
037	4.18 D MAINTENANCE TREE PRUNING (24" CAL. AND OVER)	12.00	EACH	1,050	00	12,600	00
038	4.18 DC DECOMPACT TREE OVER 6" TO 12" DBH	65.00	EACH	345	00	22,425	00
039	4.18 DM GEOTEXTILE/COMPOSITE DRAINAGE MAT	9,810.00	S.F.	5	00	49,050	00
040	4.18 R TREE ROOT PRUNING (UNDER 12" Cal.)	18.00	EACH	375	00	6,750	00
041	4.18 RP ROOT PRUNING	25.00	EACH	425	00	10,625	00
042	4.21 TREE CONSULTANT	1,520.00	P/HR	65	00	98,800	00

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				DOLLARS	CENTS	DOLLARS	CENTS
043	50.31CC15 15" E.S.V.P. COMBINED SEWER, ON CONCRETE CRADLE	40.00	L.F.	2,000	00	80,000	00
044	51.21S0A1000V STANDARD MANHOLE TYPE A-1	2.00	EACH	15,000	00	30,000	00
045	51.41AA STANDARD CATCH BASIN, TYPE 1	20.00	EACH	10,000	00	200,000	00
046	51.42S1SO INCREMENTAL COST OF STANDARD CATCH BASIN TYPE 3 WITH CURB PIECE IN LIEU OF STANDARD CATCH BASIN TYPE 1	2.00	EACH	4,000	00	8,000	00
047	52.11D12 12" DUCTILE IRON PIPE BASIN CONNECTION	515.00	L.F.	320	00	164,800	00
048	59.18DR TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS	40.00	L.F.	50	00	2,000	00

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				DOLLARS	CENTS	DOLLARS	CENTS
049	6.02 AAN UNCLASSIFIED EXCAVATION	8,320.00	C.Y.	95	00	790,400	00
050	6.02 XHEC INCREMENTAL COST FOR MODIFYING WORK METHODS NEAR (WITHIN 3 FEET OF) TRANSIT FACILITIES AND BUILDING VAULTS	6,445.00	C.Y.	20	00	128,900	00
051	6.02 XSCW INCREMENTAL COST FOR USING SPECIAL CARE WORK METHODS NEAR (FROM 3 FEET TO 50 FEET) TRANSIT FACILITIES	3,825.00	C.Y.	5	00	19,125	00
052	6.04 DG DECORATIVE GRAVEL	517.00	S.Y.	35	00	18,095	00
053	6.22 F ADDITIONAL HARDWARE	250.00	LBS.	2	50	625	00
054	6.23 AB REMOVE EXISTING FIRE ALARM POST	7.00	EACH	1,000	00	7,000	00

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				DOLLARS	CTS.	DOLLARS	CTS.
055	6.23 BA FURNISH AND INSTALL FIRE ALARM POST AND SUBBASE IN ACCORDANCE WITH F.D. STD. DWG. #141	8.00	EACH	3,000	00	24,000	00
056	6.23 BD FURNISH AND INSTALL 4-PAIR FIRE ALARM CABLE	983.00	L.F.	14	00	13,762	00
057	6.23 BFB FURNISH AND INSTALL FIRE DEPARTMENT 24 WIRE TERMINAL BOX AND TERMINATE FIRE ALARM CABLES	8.00	EACH	3,820	00	30,560	00
058	6.23 BGSE FURNISH AND INSTALL 4" P.V.C. CONDUIT, SCHEDULE 40, U.L. 651 (WITH PAVEMENT EXCAVATION)	269.00	L.F.	32	00	8,608	00
059	6.23 BHE FURNISH AND INSTALL 4" 90-DEGREE P.V.C. WIDE BEND, SCHEDULE 40, U.L. 651 (WITH PAVEMENT EXCAVATION) IN ACCORDANCE WITH F.D. STD. DWG. #141 OR #145AA	8.00	EACH	280	00	2,240	00
060	6.23 BP FURNISH AND INSTALL FIRE ALARM PEDESTAL BUMPERS (2 REQUIRED PER SET) IN ACCORDANCE WITH F.D. STD. DWG. #168	8.00	SETS	1,570	00	12,560	00



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BID SCHEDULE FORM

COL 1	COL 2	COL 3	COL 4	COL 5		COL 6	
SEQ. NO.	ITEM NUMBER and DESCRIPTION	ENGINEER'S ESTIMATE OF QUANTITY	UNIT	UNIT PRICE (IN FIGURES)		EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS.	DOLLARS	CTS.
061	6.23 XBE FURNISH AND INSTALL 2" GALVANIZED STEEL CONDUIT (WITH PAVEMENT EXCAVATION)	920.00	L.F.	85	00	78,200	00
062	6.25 RS TEMPORARY SIGNS	10,900.00	S.F.	20	00	218,000	00
063	6.26 TIMBER CURB	10,900.00	L.F.	15	00	163,500	00
064	6.28 AA LIGHTED TIMBER BARRICADES	150.00	L.F.	42	00	6,300	00
065	6.29 TTM TEMPORARY TUBULAR MARKERS	27.00	EACH	40	00	1,080	00
066	6.36 DR STRUCTURAL REPAIR AND ADJUSTMENT OF UTILITY STRUCTURES	10.00	C.Y.	2,100	00	21,000	00

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COL 1	COL 2	COL 3	COL 4	COL 5		COL 6	
SEQ. NO.	ITEM NUMBER and DESCRIPTION	ENGINEER'S ESTIMATE OF QUANTITY	UNIT	UNIT PRICE (IN FIGURES)		EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CENTS	DOLLARS	CENTS
067	6.40 D ENGINEER'S FIELD OFFICE (TYPE D)	30.00	MONTH	12,900	00	387,000	00
068	6.43 PHOTOGRAPHS	100.00	SETS	18	50	1,850	00
069	6.44 THERMOPLASTIC REFLECTORIZED PAVEMENT MARKINGS (4" WIDE)	86,200.00	L.F.	0	85	73,270	00
070	6.49 TEMPORARY PAVEMENT MARKINGS (4" WIDE)	35,000.00	L.F.	0	25	8,750	00
071	6.50 CLEANING OF DRAINAGE STRUCTURES	44.00	EACH	650	00	28,600	00



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				DOLLARS	CTS.	DOLLARS	CTS.
072	6.52 FED UNIFORMED FLAGPERSON PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 180,000.00	1.00	F.S.	180,000	00	\$180,000	00
073	6.53 REMOVE EXISTING LANE MARKINGS (4" WIDE)	95,000.00	L.F.	0	45	42,750	00
074	6.55 SAWCUTTING EXISTING PAVEMENT	30,700.00	L.F.	3	00	92,100	00
075	6.67 SUBBASE COURSE, SELECT GRANULAR MATERIAL	2,000.00	C.Y.	45	00	90,000	00
076	6.68 PLASTIC FILTER FABRIC	6,160.00	S.Y.	1	00	6,160	00

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				DOLLARS	CTS.	DOLLARS	CTS.
077	6.74 B STEEL EDGING STRIP	8,650.00	L.F.	15	00	129,750	00
078	6.75 GRINDING EXISTING ASPHALTIC CONCRETE WEARING COURSE	18,000.00	C.Y.	90	00	1,620,000	00
079	6.85 A TRAFFIC ENFORCEMENT AGENTS PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 442,703.00	1.00	F.S.	442,703	00	\$442,703	00
080	6.87 PLASTIC BARRELS	12,150.00	EACH	14	00	170,100	00
081	6.91 REFLECTIVE CRACKING MEMBRANE (18" WIDE)	30,700.00	L.F.	2	50	76,750	00

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				DOLLARS	CTS.	DOLLARS	CTS.
082	6.99 AUDIO AND VIDEO DOCUMENTATION SURVEY	1.00	L.S.	20,000	00	20,000	00
083	60.11R516 FURNISHING AND DELIVERING 16-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	60.00	L.F.	160	00	9,600	00
084	60.11R520 FURNISHING AND DELIVERING 20-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	4,275.00	L.F.	200	00	855,000	00
085	60.11R606 FURNISHING AND DELIVERING 6-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	600.00	L.F.	45	00	27,000	00
086	60.11R608 FURNISHING AND DELIVERING 8-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	880.00	L.F.	65	00	57,200	00
087	60.11R612 FURNISHING AND DELIVERING 12-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	4,300.00	L.F.	108	00	464,400	00

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				DOLLARS	CTS.	DOLLARS	CTS.
088	60.12D06 LAYING 6-INCH DUCTILE IRON PIPE AND FITTINGS	610.00	L.F.	160	00	97,600	00
089	60.12D08 LAYING 8-INCH DUCTILE IRON PIPE AND FITTINGS	950.00	L.F.	130	00	123,500	00
090	60.12D12 LAYING 12-INCH DUCTILE IRON PIPE AND FITTINGS	4,600.00	L.F.	120	00	552,000	00
091	60.12D16 LAYING 16-INCH DUCTILE IRON PIPE AND FITTINGS	80.00	L.F.	340	00	27,200	00
092	60.12D20 LAYING 20-INCH DUCTILE IRON PIPE AND FITTINGS	4,600.00	L.F.	140	00	644,000	00
093	60.13M0A24 FURNISHING AND DELIVERING DUCTILE IRON MECHANICAL JOINT 24- -INCH DIAMETER AND SMALLER FITTINGS, INCLUDING WEDGE TYPE RETAINER GLANDS	46.00	TONS	10,500	00	483,000	00

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COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 (UNIT PRICE IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
094	60.18BJC20EL FURNISHING, DELIVERING AND INSTALLING BELL JOINT CLAMPS, COMPLETE FOR 20-INCH PIPE AND LESS	24.00	EACH	850	00	20,400	00
095	61.11DMM06 FURNISHING AND DELIVERING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	40.00	EACH	1,100	00	44,000	00
096	61.11DMM08 FURNISHING AND DELIVERING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	16.00	EACH	1,900	00	30,400	00
097	61.11DMM12 FURNISHING AND DELIVERING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	18.00	EACH	3,800	00	68,400	00
098	61.11DMM20 FURNISHING AND DELIVERING 20-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	15.00	EACH	20,500	00	307,500	00

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BID SCHEDULE FORM

COL 1	COL 2	COL 3	COL 4	COL 5		COL 6	
SEQ. NO.	ITEM NUMBER and DESCRIPTION	ENGINEER'S ESTIMATE OF QUANTITY	UNIT	UNIT PRICE (IN FIGURES)		EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS.	DOLLARS	CTS.
099	61.11TWC03 FURNISHING AND DELIVERING 3-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	5.00	EACH	760	00	3,800	00
100	61.11TWC04 FURNISHING AND DELIVERING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	1.00	EACH	860	00	860	00
101	61.11TWC06 FURNISHING AND DELIVERING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	1.00	EACH	1,000	00	1,000	00
102	61.12DMM06 SETTING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	40.00	EACH	460	00	18,400	00
103	61.12DMM08 SETTING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	16.00	EACH	580	00	9,280	00
104	61.12DMM12 SETTING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	18.00	EACH	970	00	17,460	00

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				DOLLARS	CTS.	DOLLARS	CTS.
105	61.12DMM20 SETTING 20-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	15.00	EACH	1,850	00	27,750	00
106	61.12TWC03 SETTING 3-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	5.00	EACH	320	00	1,600	00
107	61.12TWC04 SETTING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	1.00	EACH	400	00	400	00
108	61.12TWC06 SETTING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	1.00	EACH	400	00	400	00
109	62.11SD FURNISHING AND DELIVERING HYDRANTS	36.00	EACH	5,000	00	180,000	00
110	62.12SG SETTING HYDRANTS COMPLETE WITH WEDGE TYPE RETAINER GLANDS	36.00	EACH	1,600	00	57,600	00



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				DOLLARS	CTS.	DOLLARS	CTS.
111	62.13RH REMOVING HYDRANTS	34.00	EACH	650	00	22,100	00
112	62.14FS FURNISHING, DELIVERING AND INSTALLING HYDRANT FENDERS	72.00	EACH	750	00	54,000	00
113	63.11VC FURNISHING AND DELIVERING VARIOUS CASTINGS	60.00	TONS	1,500	00	90,000	00
114	637.9520 FIELD INFORMATION MANAGEMENT SYSTEM PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 50,000.00	1.00	F.S.	50,000	00	\$50,000	00
115	64.11EL WITHDRAWING AND REPLACING HOUSE SERVICES USING 1-1/2- INCH OR LARGER SCREW TAPS	10.00	EACH	620	00	6,200	00

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BID SCHEDULE FORM

COL 1	COL 2	COL 3	COL 4	COL 5		COL 6	
SEQ. NO.	ITEM NUMBER and DESCRIPTION	ENGINEER'S ESTIMATE OF QUANTITY	UNIT	UNIT PRICE (IN FIGURES)		EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS.	DOLLARS	CTS.
116	64.11ST WITHDRAWING AND REPLACING HOUSE SERVICES USING SMALLER THAN 1-1/2-INCH SCREW TAPS	120.00	EACH	400	00	48,000	00
117	64.12COEG CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	10.00	L.F.	100	00	1,000	00
118	64.12COLT CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	50.00	L.F.	85	00	4,250	00
119	64.12ESEG EXTENDING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	50.00	L.F.	350	00	17,500	00
120	64.12ESLT EXTENDING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	575.00	L.F.	150	00	86,250	00
121	64.13WC08 FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 8-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	1.00	EACH	3,400	00	3,400	00

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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CENTS	DOLLARS	CENTS
122	64.13WC12 FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 12-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	3.00	EACH	4,400	00	13,200	00
123	64.13WC20 FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 20-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	3.00	EACH	5,600	00	16,800	00
124	65.11BR FURNISHING, DELIVERING AND INSTALLING BANDS, RODS, WASHERS, ETC., COMPLETE, FOR RESTRAINING JOINTS	550.00	LBS.	3	00	1,650	00
125	65.21PS FURNISHING AND PLACING POLYETHYLENE SLEEVE Unit price bid shall not be less than: \$ 0.50	5,000.00	L.F.	0	50	2,500	00
126	65.31FF FURNISHING, DELIVERING AND PLACING FILTER FABRIC Unit price bid shall not be less than: \$ 0.10	97,000.00	S.F.	0	15	14,550	00
127	65.51PC FURNISHING AND PLACING CAST-IN-PLACE CONCRETE CLASS 40 AND PRECAST CONCRETE CLASS 50	30.00	C.Y.	700	00	21,000	00



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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CENTS	DOLLARS	CENTS
128	65.61SS FURNISHING, DELIVERING AND PLACING STRUCTURAL, REINFORCING AND MISCELLANEOUS STEEL	109,300.00	LBS.	1	00	109,300	00
129	65.71SG FURNISHING, DELIVERING AND PLACING SCREENED GRAVEL OR SCREENED BROKEN STONE BEDDING	610.00	C.Y.	45	00	27,450	00
130	7.01 BTS BRACING AND TUNNEL SHIELDING	1.00	LS.	1,630,000	00	1,630,000	00
131	7.01 RG LIRR RAISED SUBWAY COLLAR FRAME AND GRATINGS	2,610.00	S.F.	250	00	652,500	00
132	7.07 MB2 MARTELLO BOLLARD, VERSION 2.0	20.00	EACH	5,000	00	100,000	00
133	7.13 B MAINTENANCE OF SITE Unit price bid shall not be less than: \$ 8,000.00	24.00	MONTH	8,000	00	192,000	00

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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
134	7.16 D TEST PITS	50.00	C.Y.	500	00	25,000	00
135	7.18 LM LIGHT WEIGHT FILL MATERIAL (60 PCF COMPACTED DENSITY)	168.00	C.Y.	150	00	25,200	00
136	7.19 AA POST INSTALLED ADHESIVE ANCHORS	2,035.00	EACH	50	00	101,750	00
137	7.36 PEDESTRIAN STEEL BARRICADES	28,600.00	L.F.	5	00	143,000	00
138	7.50 CB2 CITY BENCH WITH BACK (V 2)	6.00	EACH	10,000	00	60,000	00
139	7.50 CBB2 CITY BENCH BACKLESS (V 2)	3.00	EACH	10,000	00	30,000	00

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BID SCHEDULE FORM

COL 1	COL 2	COL 3	COL 4	COL 5		COL 6	
SEQ. NO.	ITEM NUMBER and DESCRIPTION	ENGINEER'S ESTIMATE OF QUANTITY	UNIT	UNIT PRICE (IN FIGURES)		EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CENTS	DOLLARS	CENTS
140	7.54 R REMOVAL OF EXISTING TREE GRATES AND FRAMES	3.00	EACH	4,000	00	12,000	00
141	7.88 AA RODENT INFESTATION SURVEY AND MONITORING Unit price bid shall not be less than: \$ 9,000.00	1.00	L.S.	9,000	00	9,000	00
142	7.88 AB RODENT BAIT STATIONS Unit price bid shall not be less than: \$ 60.00	560.00	EACH	60	00	33,600	00
143	7.88 AC BAITING OF RODENT BAIT STATIONS Unit price bid shall not be less than: \$ 9.50	560.00	EACH	12	00	6,720	00
144	7.88 AD WATERBUG BAIT APPLICATIONS Unit price bid shall not be less than: \$ 65.00	110.00	BLOCK	65	00	7,150	00
145	70.31FN FENCING Unit price bid shall not be less than: \$ 2.00	21,600.00	L.F.	2	00	43,200	00

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BID SCHEDULE FORM

COL 1	COL 2	COL 3	COL 4	COL 5		COL 6	
SEQ. NO.	ITEM NUMBER and DESCRIPTION	ENGINEER'S ESTIMATE OF QUANTITY	UNIT	UNIT PRICE (IN FIGURES)		EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
146	70.51EO EXCAVATION OF BOULDERS IN OPEN CUT Unit price bid shall not be less than: \$ 75.00	25.00	C.Y.	75	00	1,875	00
147	70.71SB STONE BALLAST Unit price bid shall not be less than: \$ 15.00	20.00	C.Y.	45	00	900	00
148	70.81CB CLEAN BACKFILL Unit price bid shall not be less than: \$ 15.00	1,850.00	C.Y.	20	00	37,000	00
149	70.91SW12 FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 12-INCH IN DIAMETER AND LESS	7,000.00	S.F.	0	50	3,500	00
150	70.91SW20 FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 20-INCH IN DIAMETER	55,000.00	S.F.	0	50	27,500	00
151	72.11HF HYDRAULIC FILL FOR ABANDONED SEWERS AND WATER MAINS	60.00	C.Y.	100	00	6,000	00

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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
152	73.11AB ADDITIONAL BRICK MASONRY Unit price bid shall not be less than: \$ 62.50	80.00	C.Y.	62	50	5,000	00
153	73.21AC ADDITIONAL CONCRETE Unit price bid shall not be less than: \$ 62.50	125.00	C.Y.	62	50	7,812	50
154	73.31AE0 ADDITIONAL EARTH EXCAVATION INCLUDING TEST PITS (ALL DEPTHS) Unit price bid shall not be less than: \$ 20.00	190.00	C.Y.	50	00	9,500	00
155	73.41AG ADDITIONAL SELECT GRANULAR BACKFILL Unit price bid shall not be less than: \$ 15.00	185.00	C.Y.	24	00	4,440	00
156	73.51AS ADDITIONAL STEEL REINFORCING BARS Unit price bid shall not be less than: \$ 1.00	400.00	LBS.	1	00	400	00
157	8.01 C1 HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOIL	900.00	TONS	54	00	48,600	00

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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CENTS	DOLLARS	CENTS
158	8.01 C2 SAMPLING AND TESTING OF CONTAMINATED/POTENTIALLY HAZARDOUS SOIL FOR DISPOSAL PURPOSES	2.00	SETS	1,550	00	3,100	00
159	8.01 H HANDLING, TRANSPORTING AND DISPOSAL OF HAZARDOUS SOIL	40.00	TONS	140	00	5,600	00
160	8.01 S HEALTH AND SAFETY	1.00	L.S.	7,000	00	7,000	00
161	8.01 W1 REMOVAL, TREATMENT, AND DISCHARGE/DISPOSAL OF CONTAMINATED WATER	4.00	DAY	1,500	00	6,000	00
162	8.01 W2 SAMPLING AND TESTING OF CONTAMINATED WATER	2.00	SETS	1,200	00	2,400	00
163	8.02 A SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	235,975.00	S.F.	3	00	707,925	00

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BID SCHEDULE FORM

COL 1	COL 2	COL 3	COL 4	COL 5		COL 6	
SEQ. NO.	ITEM NUMBER and DESCRIPTION	ENGINEER'S ESTIMATE OF QUANTITY	UNIT	UNIT PRICE (IN FIGURES)		EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
164	8.02 B SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	28,200.00	L.F.	15	00	423,000	00
165	8.08 VARIABLE MESSAGE BOARD	2.00	EACH	7,000	00	14,000	00
166	8.32 BARK CHIP MULCH	3,860.00	S.Y.	10	50	40,530	00
167	9.00 C EXPLORATORY TEST PITS	100.00	C.F.	22	00	2,200	00
168	9.04 HW ALLOWANCE FOR ANTI-FREEZE ADDITIVE IN CONCRETE PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 50,000.00	1.00	F.S.	50,000	00	\$50,000	00

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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER AND DESCRIPTION	COL 3 ENGINEER'S ESTIMATE QTY QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
169	9.07 NON-WOVEN GEOTEXTILE (FOR BACKFILL AND UNDERDRAINS)	4,485.00	S.Y.	1	00	4,485	00
170	9.07 AWB NON-WOVEN GEOTEXTILE - WEED BARRIER	3,585.00	S.Y.	1	50	5,377	50
171	9.30 STORM WATER POLLUTION PREVENTION	1.00	L.S.	30,000	00	30,000	00
172	9.99 M FLASHING ARROW BOARD	2.00	MONTH	7,000	00	14,000	00
173	HW-914 ALLOWANCE FOR WAYFINDING TOTEMS PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 95,740.00	1.00	F.S.	95,740	00	\$95,740	00

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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
174	SL-20.02.02 FURNISH AND INSTALL STANDARD TYPE ANCHOR BOLT FOUNDATION, AS PER DRAWING E-3788	64.00	EACH	2,600	00	166,400	00
175	SL-20.08.01 REMOVE STANDARD TYPE ANCHOR BOLT CONCRETE FOUNDATION	66.00	EACH	950	00	62,700	00
176	SL-21.04.06 FURNISH AND INSTALL "FLATBUSH AVENUE" LAMPPOST WITH OCTAGONAL TRANSFORMER BASE	13.00	EACH	7,340	00	95,420	00
177	SL-21.04.07 FURNISH AND INSTALL "FLATBUSH AVENUE" TWIN ARM LAMPPOST WITH OCTAGONAL TRANSFORMER BASE. Arms at 90 degrees or 180 degrees.	51.00	EACH	8,670	00	442,170	00
178	SL-21.09.05 REMOVE STANDARD FABRICATED STEEL, SPUN ALUMINUM NO. 10, ETC. WITH ARM(S), LUMINAIRE(S), CONTROL(S) WITH ALL ATTACHMENTS, IF ANY.	66.00	EACH	790	00	52,140	00



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COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS.	DOLLARS	CTS.
179	SL-21.09.08 REMOVE ALL STREET LIGHTING EQUIPMENT FROM TYPE "M-2" TRAFFIC POST (ARM(S), PHOTOELECTRIC CONTROLLER, LUMINAIRE (S), SHAFT EXTENSION, WIRING, ETC.)	12.00	EACH	590	00	7,080	00
180	SL-22.16.17 FURNISH AND INSTALL "TEAR DROP" LUMINAIRE WITH PEC RECEPTACLE	135.00	EACH	1,360	00	183,600	00
181	SL-24.01.13 FURNISH 8" ORNAMENTAL TYPE "FLATBUSH AVE" BRACKET WITH HARDWARE ON WOOD POLE AS PER DWG J-5341	11.00	EACH	1,420	00	15,620	00
182	SL-24.01.14 INSTALL ORNAMENTAL BRACKET ON WOOD POLE.	11.00	EACH	790	00	8,690	00
183	SL-24.02.16 FURNISH AND INSTALL FABRICATED STEEL 6 FT. SHAFT EXTENSION (SINGLE ARM) FOR "M-2" TRAFFIC POST AS PER DWGs H-5159 OR H-5255.	9.00	EACH	1,330	00	11,970	00

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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER AND DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
184	SL-24.02.24 FURNISH AND INSTALL "FLATBUSH AVENUE" ARM	9.00	EACH	1,970	00	19,930	00
185	SL-26.01.04 FURNISH AND INSTALL LONG LIFE PHOTO ELECTRIC CONTROL WITH SURGE PROTECTION FOR LED LIGHT	84.00	EACH	80	00	6,720	00
186	SL-28.01.01 FURNISH AND INSTALL COPPER WELD GROUND ROD AND CLAMP, AS PER DRAWING H-5019	8.00	EACH	440	00	3,520	00
187	SL-31.01.03 PAINT "M-2" TRAFFIC POST INCLUDING SHAFT EXTENSION AND ARM	24.00	EACH	940	00	22,560	00
188	SL-33.01.02 FURNISH AND INSTALL NO. 6 AWG XLP COPPER CABLE OR EQUAL IN CONDUIT	7,630.00	L.F.	5	00	38,150	00
189	SL-33.03.01 FURNISH AND INSTALL #6 BARE COPPER CONDUCTOR IN CONDUIT OR OVERHEAD.	3,465.00	L.F.	4	50	19,592	50

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COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
190	SL-35.03.03 FURNISH AND INSTALL 1-1/2" HOT DIPPED GALVANIZED STEEL CONDUIT IN UNPAVED AREA	360.00	L.F.	42	00	15,120	00
191	SL-35.03.04 FURNISH AND INSTALL 2" HOT DIPPED GALVANIZED STEEL CONDUIT IN UNPAVED AREA	3,105.00	L.F.	45	00	139,725	00
192	SL-37.05.08 FURNISH AND INSTALL TYPE 1812 ROADWAY CONCRETE BOX WITH CAST IRON FRAME AND COVER WITH TAMPER PROOF BOLTS AS PER DWG J-3179B.	36.00	EACH	2,900	00	104,400	00
193	T-1.1 INSTALL TYPE "S" OR "T" FOUNDATION	18.00	EACH	2,200	00	39,600	00
194	T-1.18 REMOVE TYPE "A", "B", "S" OR "T" SERIES FOUNDATION	12.00	EACH	900	00	10,800	00
195	T-1.2 INSTALL TYPE "F-1" FOUNDATION	1.00	EACH	2,700	00	2,700	00

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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
196	T-1.20 REMOVE TYPE "M" SERIES FOUNDATION	20.00	EACH	900	00	18,000	00
197	T-1.21 REMOVE TYPE "F-1" FOUNDATION	11.00	EACH	1,100	00	12,100	00
198	T-1.23 REMOVE STREET LIGHT FOUNDATION	2.00	EACH	1,250	00	2,500	00
199	T-1.26 REMOVE STEEL CYLINDER (32" DIAMETER X 9")	3.00	EACH	1,200	00	3,600	00
200	T-1.29 RAISE OR LOWER FOUNDATION TO GRADE	2.00	EACH	1,490	00	2,980	00
201	T-1.3 INSTALL TYPE "M2-5S" FOUNDATION	23.00	EACH	2,800	00	64,400	00

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COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
202	T-1.6 INSTALL TYPE "M2-5T" FOUNDATION	2.00	EACH	2,500	00	5,000	00
203	T-2.1 INSTALL TYPE "S-1" OR "T-1" SERIES POST	18.00	EACH	500	00	9,000	00
204	T-2.16 FURNISH, INSTALL, MAINTAIN AND REMOVE TEMPORARY POST OR PYLON WITH SIGNALS	11.00	EACH	1,370	00	15,070	00
205	T-2.2 INSTALL TYPE "S-14" POST	1.00	EACH	590	00	590	00
206	T-2.22 REMOVE TYPE "S-1" OR "T-1" SERIES POST	12.00	EACH	300	00	3,600	00
207	T-2.23 REMOVE TYPE "S-10", "T-10" OR "S-14" SERIES POST	14.00	EACH	500	00	7,000	00



Department of
Design and
Construction

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN

PROJECT ID: HWD10105
CONTRACT PIN: 8502017HW0034C

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COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CENTS	DOLLARS	CENTS
208	T-2.24 REMOVE TYPE "M" SERIES POST	20.00	EACH	1,190	00	23,800	00
209	T-2.28 REMOVE MAST ARM FROM ANY POST	3.00	EACH	790	00	2,370 2,370	00
210	T-2.4 INSTALL TYPE "M-2" POST	25.00	EACH	1,600	00	40,000	00
211	T-2.9 INSTALL MAST ARM ON EXISTING "M-2" TRAFFIC POST	1.00	EACH	790	00	790	00
212	T-20000 FURNISH TEN FOOT ALUMINUM SIGNAL POST TYPE "S-1"	18.00	EACH	840	00	15,120	00
213	T-20020 a) FURNISH 3/4" ANCHOR BOLT ASSEMBLIES FOR S-1 (EACH) (3 REQUIRED PER POST)	54.00	EACH	30	00	1,620	00

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COL 1	COL 2	COL 3	COL 4	COL 5		COL 6	
SEQ. NO.	ITEM NUMBER AND DESCRIPTION	ENGINEER'S ESTIMATE OF QUANTITY	UNIT	UNIT PRICE (IN FIGURES)		EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CENTS	DOLLARS	CENTS
214	T-20021 b) FURNISH 1" ANCHOR BOLT ASSEMBLIES FOR F-1 (EACH) (4 REQUIRED PER POST)	4.00	EACH	38	00	152	00
215	T-20160 FURNISH 20 FOOT SIGNAL MAST ARM POLE ASSEMBLY TYPE "M-2"	25.00	EACH	4,000	00	100,000	00
216	T-20184 a) FURNISH 5' EXTENSION ARM ASSEMBLY WITH FITTINGS	22.00	EACH	350	00	7,700	00
217	T-20186 b) FURNISH 20' ARM ASSEMBLY WITH FITTINGS	1.00	EACH	1,680	00	1,680	00
218	T-20220 c) FURNISH 1-1/4" ANCHOR BOLT ASSEMBLIES FOR M-2 (EACH) (4 REQUIRED PER POST)	100.00	EACH	70	00	7,000	00
219	T-20640 FURNISH ALUMINUM TRAFFIC SIGNAL POST TYPE "S-14"	1.00	EACH	910	00	910	00



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COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS.	DOLLARS	CTS.
220	T-3.1 INSTALL "ONE-WAY" SIGNAL UNIT ON MAST ARM OR TOP OF TRAFFIC POST	51.00	EACH	500	00	25,500	00
221	T-3.18 REMOVE SIGNAL HEAD FROM ANY TYPE POST	45.00	EACH	400	00	18,000	00
222	T-3.2 INSTALL "ONE-WAY" SIGNAL UNIT ON THE SHAFT OF ANY POST	30.00	EACH	520	00	15,600	00
223	T-3.21 REMOVE PEDESTRIAN SIGNAL OR SIGN UNIT OR OTHER ILLUMINATED SIGNS FROM ANY POST	79.00	EACH	250	00	19,750	00
224	T-3.26 REMOVE STREET LIGHT LUMINAIRE AND PHOTO ELECTRIC CONTROL FROM STREET LIGHT ARM	2.00	EACH	100	00	200	00
225	T-3.27 INSTALL STREET LIGHT LUMINAIRE AND PHOTO ELECTRIC CONTROL ON STREET LIGHT MAST	2.00	EACH	200	00	400	00

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BID SCHEDULE FORM

COL 1	COL 2	COL 3	COL 4	COL 5		COL 6	
SEQ. NO.	ITEM NUMBER and DESCRIPTION	ENGINEER'S ESTIMATE OF QUANTITY	UNIT	UNIT PRICE (IN FIGURES)		EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS.	DOLLARS	CTS.
226	T-3.5 INSTALL PEDESTRIAN SIGNAL ON WOOD POLE, CONTRACTOR SUPPLYING BRACKETS	2.00	EACH	900	00	1,800	00
227	T-3.6 INSTALL PEDESTRIAN SIGNAL ON ANY TYPE POST	107.00	EACH	400	00	42,800	00
228	T-30013L FURNISH ADJUSTABLE 3 SECTION 1-WAY, DIE CAST ALUMINUM TRAFFIC SIGNALS 8" - W/LED LENS	78.00	EACH	380	00	29,640	00
229	T-31150 FURNISH "1SA" ALUMINUM DIE CASTINGS AND ASSEMBLY FOR POST SIGNAL MOUNTING	1.00	EACH	80	00	80	00
230	T-31175 b) "2SPA"	1.00	EACH	240	00	240	00
231	T-31200 e) "VB" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	26.00	EACH	80	00	2,080	00

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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
232	T-31205 FURNISH MAST ARM SIGNAL MOUNTING ASSEMBLY - a) "1MS"	5.00	EACH	32	00	160	00
233	T-31210 h) "HUB" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	81.00	EACH	30	00	2,430	00
234	T-31215 b) "2MS"	19.00	EACH	230	00	4,370	00
235	T-31225 c) "3MS"	3.00	EACH	250	00	750	00
236	T-31340 f) "VB-P" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	7.00	EACH	80	00	560	00
237	T-31351 g) "VB-2P" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	48.00	EACH	210	00	10,080	00

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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS.	DOLLARS	CTS.
238	T-31500AL FURNISH 12" LENS & SIGNAL SECTION (LED AMBER ARROWS)	5.00	EACH	200	00	1,000	00
239	T-31500GL FURNISH 12" LENS & SIGNAL SECTION (LED GREEN ARROWS)	9.00	EACH	200	00	1,800	00
240	T-31500L FURNISH ADJUSTABLE 3 SECTION 1-WAY, DIE CAST ALUMINUM TRAFFIC SIGNALS 12" - W/LED LENS	2.00	EACH	500	00	1,000	00
241	T-31501AA FURNISH 12" AMBER ARROW LED (AS PER NYC SPEC)	2.00	EACH	80	00	160	00
242	T-31501GA FURNISH 12 INCH GREEN ARROW LED (AS PER NYC SPECIFICATION)	3.00	EACH	90	00	270	00
243	T-31501-RA FURNISH 12 INCH RED ARROW LED (AS PER ITE SPECIFICATION 1/1/98)	2.00	EACH	70	00	140	00



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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS.	DOLLARS	CTS.
244	T-33000L FURNISH POLYCARBONATE INCANDESCENT PED SIGNAL W/LED LENS	36.00	EACH	310	00	11,160	00
245	T-33001-L FURNISH POLYCARBONATE PEDESTRIAN SIGNAL (16 X 16) W/LED COUNT LENS (SPECIFICATION A-L)	71.00	EACH	410	00	29,110	00
246	T-4.22 INSTALL ANY TYPE OF ADVANCED SOLID STATE TRAFFIC SIGNAL CONTROLLER AND CABINET ON METAL POLE	12.00	EACH	1,620	00	19,440	00
247	T-4.8 REMOVE ONE CONTROL BOX AND CONTROLLER FROM ANY POST OR SUPPORT	11.00	EACH	790	00	8,690	00
248	T-5.17 FURNISH AND INSTALL 2" RIGID CONDUIT ON A POST	20.00	L.F.	70	00	1,400	00
249	T-5.32 RESTORING PERMANENT ROADWAY (INCLUDING SAWCUT)	2,500.00	L.F.	45	00	112,500	00

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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CENTS	DOLLARS	CENTS
250	T-5.34 RESTORING PERMANENT SIDEWALK	50.00	S.F.	18	00	900	00
251	T-5.36 REMOVE CONDUIT FROM POST	40.00	L.F.	12	00	480	00
252	T-5.49 FURNISH AND INSTALL ADDITIONAL 2" HDPE CONDUIT	110.00	L.F.	27	00	2,970	00
253	T-5.50 FURNISH AND INSTALL 2" HDPE UNDERGROUND CONDUIT IN PAVED ROADWAY	2,500.00	L.F.	50	00	125,000	00
254	T-5.51 FURNISH AND INSTALL 2" HDPE UNDERGROUND CONDUIT IN PAVED SIDEWALK	50.00	L.F.	50	00	2,500	00
255	T-6.1 INSTALL CABLE (INCLUDES OVERHEAD)	3,300.00	L.F.	6	70	22,110	00

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BID SCHEDULE FORM

COL 1 SEQ NO	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
256	T-6.10 REMOVE CABLE (INCLUDES OVERHEAD)	5,000.00	L.F.	4	80	24,000	00
257	T-6.2 INSTALL MULTIPLE CABLE (INCLUDES OVERHEAD)	5,500.00	L.F.	7	90	43,450	00
258	T-60000B FURNISH 2 c # 10B (BREAKDOWN = 2#10 WITH 3RD WIRE FOR GROUNDING).	5,500.00	L.F.	2	00	11,000	00
259	T-60040 c) 7 CONDUCTOR, 14 A.W.G.	3,300.00	L.F.	1	90	6,270	00
260	T-60190 e) 13 CONDUCTOR, 14 A.W.G.	6,500.00	L.F.	3	00	19,500	00
261	T-8.10 RELOCATE CONCRETE PYLON WITH POST	20.00	EACH	870	00	17,400	00

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BID SCHEDULE FORM

COL 1	COL 2	COL 3	COL 4	COL 5		COL 6	
SEQ. NO.	ITEM NUMBER and DESCRIPTION	ENGINEER'S ESTIMATE OF QUANTITY	UNIT	UNIT PRICE (IN FIGURES)		EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
262	T-8.8 INSTALL CONCRETE PYLON	20.00	EACH	1,300	00	26,000	00
263	T-8.9 REMOVE CONCRETE PYLON	20.00	EACH	590	00	11,800	00
264	T-81000 FURNISH CONCRETE PYLON	20.00	EACH	460	00	9,200	00
265	T-99999 FURNISH 8 LOAD SWITCHES ADVANCED SOLID STATE TRAFFIC CONTROLLER (ASTC)	1.00	EACH	16,760	00	16,760	00
266	UTL-6.01.8 GAS SERVICES CROSSING TRENCHES AND/OR EXCAVATIONS (S6.01) Unit price bid shall not be less than: \$ 465.00	18.00	EACH	1,000	00	18,000	00
267	UTL-6.01.9 GAS MAIN CROSSING WATER MAIN UP TO 20" IN DIAMETER (S6.01) Unit price bid shall not be less than: \$ 485.00	38.00	EACH	485	00	18,430	00



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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS.	DOLLARS	CTS.
268	UTL-6.02 EXTRA EXCAVATION FOR THE INSTALLATION OF CATCH BASIN SEWER DRAIN PIPES WITH GAS INTERFERENCES (S6.02) Unit price bid shall not be less than: \$ 715.00	2.00	EACH	715	00	1,430	00
269	UTL-6.03 REMOVAL OF ABANDONED GAS FACILITIES. ALL SIZES. (S6.03) Unit price bid shall not be less than: \$ 15.00	4,100.00	L.F.	15	00	61,500	00
270	UTL-6.03.1 REMOVAL OF ABANDONED GAS FACILITIES WITH POSSIBLE COAL TAR WRAP. ALL SIZES. (FOR NATIONAL GRID WORK ONLY) (S6.03) Unit price bid shall not be less than: \$ 25.00	2,600.00	L.F.	25	00	65,000	00
271	UTL-6.04 ADJUST HARDWARE TO GRADE USING SPACER RINGS/ADAPTORS. (STREET REPAVING.) (S6.04) Unit price bid shall not be less than: \$ 35.00	100.00	EACH	35	00	3,500	00
272	UTL-6.05 ADJUST HARDWARE TO GRADE BY RESETTING. (ROAD RECONSTRUCTION.) (S6.05) Unit price bid shall not be less than: \$ 65.00	100.00	EACH	65	00	6,500	00
273	UTL-6.06 SPECIAL CARE EXCAVATION AND BACKFILLING (S6.06) Unit price bid shall not be less than: \$ 180.00	1,500.00	C.Y.	180	00	270,000	00

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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
274	UTL-6.07 TEST PITS FOR GAS FACILITIES (S6.07) Unit price bid shall not be less than: \$ 100.00	100.00	C.Y.	200	00	20,000	00
275	UTL-GCS-2WS GAS INTERFERENCES AND ACCOMMODATIONS PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 50,000.00	1.00	F.S.	50,000	00	\$50,000	00

SUB-TOTAL: \$ 35,201,757.74

276	6.39 A MOBILIZATION BID PRICE OF MOBILIZATION SHALL NOT EXCEED 4% OF THE ABOVE SUB-TOTAL PRICE.	1.00	L.S.	1,400,000	00	1,400,000	00
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TOTAL BID PRICE: \$ 36,601,757.74

**PLEASE BE SURE A LEGIBLE BID IS ENTERED FOR EACH ITEM.
THE BIDDER SHALL INSERT THE TOTAL BID PRICE IN
THE BID FORM ON PAGE C-4 OF THIS BID BOOKLET.**

BID FORM (TO BE NOTARIZED)

AFFIDAVIT WHERE BIDDER IS AN INDIVIDUAL

STATE OF NEW YORK, COUNTY OF _____ ss:

_____ being duly sworn says:

I am the person described in and who executed the foregoing bid, and the several matters therein stated are in all respects true.

(Signature of the person who signed the Bid)

Subscribed and sworn to before me this
_____ day of _____,

Notary Public

AFFIDAVIT WHERE BIDDER IS A PARTNERSHIP

STATE OF NEW YORK, COUNTY OF _____ ss:

_____ being duly sworn says:

I am a member of _____ the firm described in and which executed the foregoing bid. I subscribed the name of the firm thereto on behalf of the firm, and the several matters therein stated are in all respects true.

(Signature of Partner who signed the Bid)

Subscribed and sworn to before me this
_____ day of _____,

Notary Public

AFFIDAVIT WHERE BIDDER IS A CORPORATION

STATE OF NEW YORK, COUNTY OF Queens ss:

_____ being duly sworn says:

I am the Peter K. Tully President of the above named corporation whose name is subscribed to and which executed the foregoing bid. I reside at 37A Frost Creek Drive, Lathropstown, NY 11560
I have knowledge of the several matters therein stated, and they are in all respects true.

(Signature of Corporate Officer who signed the Bid)

Peter K. Tully

Subscribed and sworn to before me this
10 day of March, 2017

Despina Philips
Notary Public

DESPINA PHILIPS
Notary Public, State of New York
No. 01845003152
Qualified in Queens County
Commission Expires Oct. 19, 2018



AFFIRMATION

PROJECT ID. HWD10105

The undersigned bidder affirms and declares that said bidder is not in arrears to the City of New York upon debt, contract or taxes and is not a defaulter, as surety or otherwise, upon obligation to the City of New York, and has not been declared not responsible, or disqualified, by any agency of the City of New York, nor is there any proceeding pending relating to the responsibility or qualification of the bidder to receive public contracts except: _____

None

(If none, the bidder shall insert the word "None" in the space provided above.)

Full Name of Bidder: Tully Construction Co., Inc.
Address: 127-50 Northern Blvd.
City Flushing State NY Zip Code 11368

CHECK ONE BOX AND INCLUDE APPROPRIATE NUMBER:

A - Individual or Sole Proprietorship*
SOCIAL SECURITY NUMBER

B - Partnership, Joint Venture or other unincorporated organization
EMPLOYER IDENTIFICATION NUMBER

C - Corporation
EMPLOYER IDENTIFICATION NUMBER

11-2493726

By: _____
Signature Peter K. Tully

Title: President

If a corporation, place seal here

This affirmation must be signed by an officer or duly authorized representative.

*Under the Federal Privacy Act the furnishing of Social Security Numbers by bidders on City contracts is voluntary. Failure to provide a Social Security Number will not result in a bidder's disqualification. Social Security Numbers will be used to identify bidders, proposers or vendors to ensure their compliance with laws, to assist the City in enforcement of laws, as well as to provide the City a means of identifying of businesses which seek City contracts.

BID BOND 1
FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENTS. That we, _____
Tully Construction Co., Inc. _____
127-50 Northern Boulevard, Flushing, NY 11368 _____

hereinafter referred to as the "Principal", and _____
Federal Insurance Company _____
15 Mountain View Road, Warren, NJ 07059 _____

hereinafter referred to as the "Surety" are held and firmly bound to THE CITY OF NEW YORK,
hereinafter referred to as the "CITY", or to its successors and assigns in the penal sum of _____

Ten Percent Of The Amount Bid _____

(\$ 10% Amt Bid _____), Dollars lawful money of the United States, for the payment of which said sum of money well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the Principal is about to submit (or has submitted) to the City the accompanying proposal, hereby made a part hereof, to enter into a contract in writing for Project ID: HWD10105,
Atlantic Avenue Safety Improvements, from Georgia Avenue to Logan Street, Including Sewer, Water Main, Street Lighting
and Traffic Signal Work, Together Will All Work Incidental Thereto, Borough of Brooklyn, City of New York.

NOW, THEREFORE, the conditions of this obligation are such that if the Principal shall not withdraw said Proposal without the consent of the City for a period of forty-five (45) days after the opening of bids and in the event of acceptance of the Principal's Proposal by the City, if the Principal shall:

(a) Within ten (10) days after notification by the City, execute in quadruplicate and deliver to the City all the executed counterparts of the Contract in the form set forth in the Contract Documents, in accordance with the proposal as accepted, and

(b) Furnish a performance bond and separate payment bond, as may be required by the City, for the faithful performance and proper fulfillment of such Contract, which bonds shall be satisfactory in all respects to the City and shall be executed by good and sufficient sureties, and

(c) In all respects perform the agreement created by the acceptance of said Proposal as provided in the Information for Bidders, bound herewith and made a part hereof, or if the City shall reject the aforesaid Proposal, then this obligation shall be null and void; otherwise to remain in full force and effect.

BID BOND 2

In the event that the Proposal of the Principal shall be accepted and the Contract be awarded to him the Surety hereunder agrees subject only to the payment by the Principal of the premium therefore, if requested by the City, to write the aforementioned performance and payment bonds in the form set forth in the Contract Documents.

It is expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

There shall be no liability under this bond if, in the event of the acceptance of the Principal's Proposal by the City, either a performance bond or payment bond, or both, shall not be required by the City on or before the 30th day after the date on which the City signs the Contract.

The surety, for the value received, hereby stipulates and agrees that the obligations of the Surety and its bond shall in no way be impaired or affected by any postponements of the date upon which the City will receive or open bids, or by any extensions of the time within which the City may accept the Principal's Proposal, or by any waiver by the City of any of the requirements of the Information for Bidders, and the Surety hereby waives notice of any such postponements, extensions, or waivers.

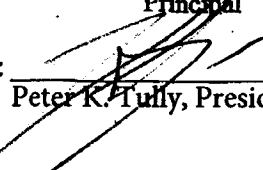
IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers the 15th day of March, 2017.

(Seal)

Tully Construction Co., Inc. (L.S.)

Principal

By:

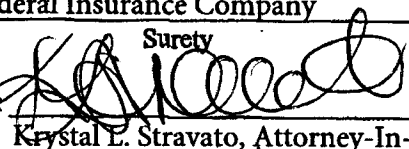

Peter K. Tully, President

(Seal)

Federal Insurance Company

Surety

By:

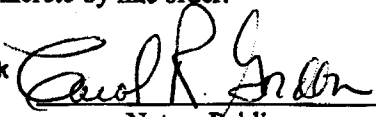

Krystal L. Stravato, Attorney-In-Fact

BID BOND 3

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of New York County of Queens ss:
On this 15th day of March, 2017, before me personally came
Peter K. Tully to me known, who, being by me duly sworn, did depose and say
that he resides at Lattingtown, NY
that he is the President of Tully Construction Co., Inc.
the corporation described in and which executed the foregoing instrument; that he knows the seal of said
corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of
the directors of said corporation, and that he signed his name thereto by like order.

CAROL R. GORDON
Notary Public, State of New York
No. 01GO4680187
Qualified in Queens County
Commission Expires April 30, 2018



Notary Public

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____ County of _____ ss:
On this _____ day of _____, _____, before me personally appeared
_____ to me known and known to me to be one of the members of the
firm of _____ described in and who executed the foregoing
instrument, and he acknowledged to me that he executed the same as and for the act and deed of said
firm.

Notary Public

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____ County of _____ ss:
On this _____ day of _____, _____, before me personally appeared
_____ to me known and known to me to be the person described in
and who executed the foregoing instrument and acknowledged that he executed the same.

Notary Public

AFFIX ACKNOWLEDGMENTS AND JUSTIFICATION OF SURETIES

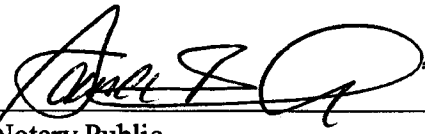
ACKNOWLEDGEMENT OF SURETY COMPANY

STATE OF NEW JERSEY

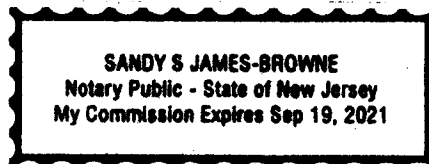
COUNTY OF MORRIS

On the 15th day of March, 2017 before me personally appeared Krystal L. Stravato to me known, who being by me duly sworn, did depose and say; that (s)he is the Attorney-In-Fact of Federal Insurance Company, the corporation that executed the foregoing instrument, and acknowledged to me that such corporation executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, at my office in the above county, the day and year written above.



Notary Public



28 MAY 2 1962
MAIL ROOM
COMMUNICATIONS SECTION

FEDERAL INSURANCE COMPANY

STATEMENT OF ASSETS, LIABILITIES AND SURPLUS TO POLICYHOLDERS

Statutory Basis

DECEMBER 31, 2015

(in thousands of dollars)

<u>ASSETS</u>		<u>LIABILITIES AND SURPLUS TO POLICYHOLDERS</u>	
Cash and Short Term Investments.....	\$ 687,917	Outstanding Losses and Loss Expenses	\$ 12,174,848
United States Government, State and Municipal Bonds	9,544,097	Unearned Premiums.....	3,726,665
Other Bonds.....	4,491,238	Dividends Payable to Stockholder	1,400,000
Stocks	692,901	Ceded Reinsurance Premiums Payable.....	329,694
Other Invested Assets.....	2,187,839	Provision for Reinsurance	35,560
		Other Liabilities.....	1,295,093
TOTAL INVESTMENTS	<u>17,603,992</u>	TOTAL LIABILITIES	<u>18,961,860</u>
Investments in Affiliates:		Capital Stock.....	20,980
Chubb Investment Holdings, Inc.....	3,679,770	Paid-In Surplus.....	3,106,809
Pacific Indemnity Company.....	2,930,246	Unassigned Funds	10,150,916
Executive Risk Indemnity Inc.....	1,267,144		
Chubb Insurance Investment Holdings Ltd....	1,020,650		
CC Canada Holdings Ltd.....	590,955		
Great Northern Insurance Company	469,230	SURPLUS TO POLICYHOLDERS.....	<u>13,278,705</u>
Chubb Insurance Company of Australia Ltd.	404,845		
Vigilant Insurance Company.....	306,232		
Chubb European Investment Holdings SLP ..	294,200		
Other Affiliates	566,480		
Premiums Receivable	1,659,749		
Other Assets	<u>1,447,072</u>		
TOTAL ADMITTED ASSETS	<u>\$ 32,240,565</u>	TOTAL LIABILITIES AND SURPLUS TO POLICYHOLDERS.....	<u>\$ 32,240,565</u>

Investments are valued in accordance with requirements of the National Association of Insurance Commissioners.
At December 31, 2015, investments with a carrying value of \$546,611,273 were deposited with government authorities
as required by law.

State, County & City of New York, — ss:

Dawn M. Chloros, Assistant Secretary _____ of the Federal Insurance Company

being duly sworn, deposes and says that the foregoing Statement of Assets, Liabilities and Surplus to Policyholders of said Federal Insurance Company on December 31, 2015 is true and correct and is a true abstract of the Annual Statement of said Company as filed with the Secretary of the Treasury of the United States for the 12 months ending December 31, 2015.

Subscribed and sworn to before me
this March 11, 2016.

Jeanette Shipsey

Notary Public

JEANETTE SHIPSEY
Notary Public, State of New York
No. 02SH5074142
Qualified in Nassau County
Commission Expires March 10, 2019

Dawn M. Chloros

Assistant Secretary

CHUBB

Power of Attorney

Federal Insurance Company | Vigilant Insurance Company | Pacific Indemnity Company


Attn: Surety Department | 15 Mountain View Road | Warren, NJ 07059

Now All by These Presents, That FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, and PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, do each hereby constitute and appoint **Ricardo Davila, Will Griffin and Michael Marino of Miami, Florida; Thomas MacDonald, Krystal L. Stravato and Kevin T. Walsh, Jr. of Cedar Knolls, New Jersey; Theresa J. Foley and Frankie Grella of Roslyn Heights, New York; Gerard Lieb and Mary C. McGinn of Berwyn, Pennsylvania**

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY have each executed and attested these presents and affixed their corporate seals on this 19th day of December, 2016.


Dawn M. Chloros, Assistant Secretary


David B. Norris, Jr., Vice President



STATE OF NEW JERSEY

County of Somerset

SS

On this 19th day of December, 2016 before me, a Notary Public of New Jersey, personally came Dawn M. Chloros, to me known to be Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY, the companies which executed the foregoing Power of Attorney, and the said Dawn M. Chloros, being by me duly sworn, did depose and say that she is Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY and knows the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of the By-Laws of said Companies; and that she signed said Power of Attorney as Assistant Secretary of said Companies by like authority; and that she is acquainted with David B. Norris, Jr., and knows him to be Vice President of said Companies; and that the signature of David B. Norris, Jr., subscribed to said Power of Attorney is in the genuine handwriting of David B. Norris, Jr., and was thereto subscribed by authority of said By-Laws and in deponent's presence.

Notarial Seal



KATHERINE J. ADELAAR
NOTARY PUBLIC OF NEW JERSEY
No. 2316685
Commission Expires July 16, 2019


Notary Public

CERTIFICATION

Extract from the By-Laws of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY:

"Except as otherwise provided in these By-Laws or by law or as otherwise directed by the Board of Directors, the President or any Vice President shall be authorized to execute and deliver, in the name and on behalf of the Corporation, all agreements, bonds, contracts, deeds, mortgages, and other instruments, either for the Corporation's own account or in a fiduciary or other capacity, and the seal of the Corporation, if appropriate, shall be affixed thereto by any of such officers or the Secretary or an Assistant Secretary. The Board of Directors, the President or any Vice President designated by the Board of Directors may authorize any other officer, employee or agent to execute and deliver, in the name and on behalf of the Corporation, agreements, bonds, contracts, deeds, mortgages, and other instruments, either for the Corporation's own account or in a fiduciary or other capacity, and, if appropriate, to affix the seal of the Corporation thereto. The grant of such authority by the Board or any such officer may be general or confined to specific instances."

I, Dawn M. Chloros, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY (the "Companies") do hereby certify that

- (i) the foregoing extract of the By-Laws of the Companies is true and correct,
- (ii) the signature of any authorized officer executing this Power of Attorney or any certificate relating thereto on behalf of the Companies, and the seal of the Companies, may be affixed to such Power of Attorney or certificate by facsimile and such Power of Attorney or certificate shall be valid and binding upon the Companies, and any such Power of Attorney so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Companies with respect to any bond or undertaking to which it is attached.
- (iii) the Companies are duly licensed and authorized to transact surety business in all 50 of the United States of America and the District of Columbia and are authorized by the U.S. Treasury Department; further, Federal and Vigilant are licensed in the U.S. Virgin Islands, and Federal is licensed in Guam, Puerto Rico, and each of the Provinces of Canada except Prince Edward Island; and
- (iv) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Warren, NJ this **March 15, 2017.**




Dawn M. Chloros, Assistant Secretary

IN THE EVENT YOU WISH TO NOTIFY US OF A CLAIM, VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT THE ADDRESS LISTED ABOVE, OR BY: Telephone (908) 903-3493 Fax (908) 903-3656 e-mail: surety@chubb.com

APPRENTICESHIP PROGRAM QUESTIONNAIRE ("APQ")

Bidder Name: Tully Construction Co., Inc.
Project ID Number: HWD10105

The Bidder MUST complete, sign, and submit this Apprenticeship Program Questionnaire with its bid.

1. Does the bidder have any Apprenticeship Program agreement(s) appropriate for the type and scope of work to be performed? (Note: Participation may be by either direct sponsorship or through collective bargaining agreement(s).)

YES NO

2. Has/have the bidder's Apprenticeship Program agreement(s) been registered with, and approved by the New York State Commissioner of Labor ("NYSDOL Commissioner")?

YES NO

3. Has/have the bidder's Apprenticeship Program successfully passed the two-year Probation period following its initial registration with the New York State Department of Labor ("NYSDOL")?

YES NO

If the answers to Questions 1, 2, and 3 are "Yes". The bidder shall, in the space below (and/or attached herewith where applicable), provide the contact information for such Apprenticeship Program(s) as well as information demonstrating that such Apprenticeship Program(s) have passed the two-year Probation period following its initial registration with the NYSDOL. (The bidder may attach additional pages if necessary).

- Where the bidder directly sponsors any such apprenticeship Program(s), the bidder shall provide the following:
 - The trade classification(s) covered by such program(s), and the date(s) such program(s) was/were approved by the NYSDOL Commissioner; and/or
 - A copy of a letter(s) from the NYSDOL, on NYSDOL's letterhead, executed by an official thereof, which verifies/verify the trade classification(s) covered by such program(s), and the date(s) such program(s) was/were approved by the NYSDOL Commissioner and the Active status of such program(s).

- Where the bidder participates in any such Apprenticeship Program(s) through its membership in an employer organization(s) that directly sponsors such program(s) or where the employer association(s) participates in such program(s) through collective bargaining, the bidder shall provide the following:
 - The contact information for the employer organization(s), and the apprenticeable trade(s) covered pursuant to the bidder's affiliation therewith, and the date such program(s) was/were approved by the NYSDOL Commissioner; or
 - A letter(s) from such employer organization(s), on letterhead of such organization(s), executed by an officer, delegate or official thereof, which verifies/verify the trade classification(s) covered by such program(s) was/were approved by the NYSDOL Commissioner, and that the bidder is both a member in good standing of the identified employer organization and is subject to the provisions of the Apprenticeship Program agreement(s) sponsored thereby.

Construction Co., Inc.

1975-1976



THE GENERAL CONTRACTORS ASSOCIATION OF NEW YORK, INC.

Denise M. Richardson
Executive Director

January 9, 2017

Tully Construction Co. Inc.
Attn: Mr. Peter Tully
127-50 Northern Blvd.
Flushing, NY 11368-1520

Dear Mr. Tully:

Tully Construction Co. Inc. is a member in good standing of the General Contractors Association of New York ("GCA"). Through your membership in the GCA, you have authorized the GCA to enter into collective bargaining agreements on your behalf.

As such, your firm is signatory to the collective bargaining agreements and participates in, upholds and is subject to all provisions of those agreements, including the union(s) established and approved apprenticeship programs.

The General Contractors Association has collective bargaining agreements with the following unions:

- Laborers International Union of North America
Local 731, Heavy Construction Laborers
Local 29 Drillers and Blasters
Local 147 Tunnel Workers
Local 1010 Asphalt Pavers
- New York District Council of Carpenters
Local 1556 Dockbuilders/Timbermen
- International Union of Operating Engineers
Local 14 / 15 Operating Engineers
Local 15 C Operating Engineers Mechanics & Helpers
Local 15 D Surveyors
- International Brotherhood of Teamsters Local 282
- Metallic Lathers Local 46

Please contact me if you require additional information.

Sincerely,

Denise M. Richardson

SAFETY QUESTIONNAIRE

The bidder must include, with its bid, all information requested on this Safety Questionnaire. Failure to provide a completed and signed Safety Questionnaire at the time of bid opening may result in disqualification of the bid as non-responsive.

1. Bidder Information:

Company Name: Tully Construction Co. Inc.

DDC Project Number: HWD10105

Company Size: Ten (10) employees or less
 X Greater than ten (10) employees

Company has previously worked for DDC X YES NO

2. Type(s) of Construction Work

TYPE OF WORK	LAST 3 YEARS	THIS PROJECT
General Building Construction	_____	_____
Residential Building Construction	_____	_____
Nonresidential Building Construction	_____	_____
Heavy Construction, except building	<u> X </u>	_____
Highway and Street Construction	<u> X </u>	<u> X </u>
Heavy Construction, except highways	<u> X </u>	_____
Plumbing, Heating, HVAC	_____	_____
Painting and Paper Hanging	_____	_____
Electrical Work	_____	_____
Masonry, Stonework and Plastering	_____	_____
Carpentry and Floor Work	_____	_____
Roofing, Siding, and Sheet Metal	_____	_____
Concrete Work	_____	_____
Specialty Trade Contracting	_____	_____
Asbestos Abatement	_____	_____
Other (specify)	_____	_____

3. Experience Modification Rate:

The Experience Modification Rate (EMR) is a rating generated by the National Council of Compensation Insurance (NCCI). This rating is used to determine the contractor's premium for worker's compensation insurance. The contractor may obtain its EMR by contacting its insurance broker or the NCCI. If the contractor cannot obtain its EMR, it must submit a written explanation as to why.

Project ID. HWD10105

The Contractor must indicate its Intrastate and Interstate EMR for the past three years. [Note: For contractors with less than three years of experience, the EMR will be considered to be 1.00].

YEAR	INTRASTATE RATE	INTERSTATE RATE
2016	.83	N/A
2015	.87	N/A
2014	1.01	N/A

If the Intrastate and/or Interstate EMR for any of the past three years is greater than 1.00, the contractor must attach, to this questionnaire, a written explanation for the rating and identify what corrective action was taken to correct the situation resulting in that rating.

4. OSHA Information:

YES NO Contractor has received a willful violation issued by OSHA or New York City Department of Buildings (NYCDOB) within the last three years.

YES NO Contractor has had an incident requiring OSHA notification within 8 hours (all work-related fatalities) or an incident requiring OSHA notification within 24 hours (all work-related in-patient hospitalizations, all amputations and all losses of an eye).

The Occupational Safety and Health Act (OSHA) of 1970 requires employers with ten or more employees, on a yearly basis to complete and maintain on file the form entitled "Log of Work-related Injuries and Illnesses". This form is commonly referred to as the OSHA 300 Log (OSHA 200 Log for 2001 and earlier).

The OSHA 300 Log must be submitted for the last three years for contractors with more than ten employees.

The Contractor must indicate the total number of hours worked by its employees, as reflected in payroll records for the past three years.

The contractor must submit the **Incident Rate for Lost Time Injuries (the Incident Rate)** for the past three years. The Incident Rate is calculated in accordance with the formula set forth below. For each given year, the total number of incidents is the total number of non-fatal injuries and illnesses reported on the OSHA 300 Log. The 200,000 hours represents the equivalent of 100 employees working forty hours a week, fifty weeks per year.

$$\text{Incident Rate} = \frac{\text{Total Number of Incidents} \times 200,000}{\text{Total Number of Hours Worked by Employees}}$$

YEAR	TOTAL NUMBERS OF HOURS WORKED BY EMPLOYEES	INCIDENT RATE
2016	1,099,569.99	.72
2015	696,683.50	.87
2014	590,749.00	1.01

Project ID. HW10105

If the contractor's Incident Rate for any of the past three years is one point higher than the Incident Rate for the type of construction it performs (listed below), the contractor must attach, to this questionnaire, a written explanation for the relatively high rate.

General Building Construction	8.5
Residential Building Construction	7.0
Nonresidential Building Construction	10.2
Heavy Construction, except building	8.7
Highway and Street Construction	9.7
Heavy Construction, except highways	8.3
Plumbing, Heating, HVAC	11.3
Painting and Paper Hanging	6.9
Electrical Work	9.5
Masonry, Stonework and Plastering	10.5
Carpentry and Floor Work	12.2
Roofing, Siding, and Sheet Metal	10.3
Concrete Work	8.6
Specialty Trade Contracting	8.6

5. Safety Performance on Previous DDC Project(s)

YES NO Contractor previously audited by the DDC Office of Site Safety.

DDC Project Number(s): _____, _____, _____

YES NO Accident on previous DDC Project(s).

DDC Project Number(s): _____, _____, _____

YES NO Fatality or Life-altering Injury on DDC Project(s) within the last three years.
[Examples of a life-altering injury include loss of limb, loss of a sense (e.g., sight, hearing), or loss of neurological function].

DDC Project Number(s): _____, _____, _____

Date: March 10, 2017 By: William D.
(Signature of Owner, Partner, Corporate Officer)

Title: EEO Officer - V. P. Risk Management



March 10, 2017

Tully Construction Co., Inc.
127-50 Northern Blvd.
Flushing, NY 11368

RE: Workers Compensation Experience Modification Rate

To Whom It May Concern:

Please see the following Experience Modification Rates as respects Tully Construction Co., Inc.

Effective Date	EMR
3/31/16	.83
3/31/15	.87
3/31/14	1.01

Should you have any questions please contact our office.

Thank you,

Robert Watson

Robert Watson
Account Manager

New York City
252 West 37th Street
Suite 200E
New York, NY 10018
Telephone 646.625.7100

New Jersey
Campus View Plaza
1250 Route 28, Suite 201
Branchburg, NJ 08876
Telephone 908.566.1010

Long Island, NY
Greenway Plaza Office Park
145 Pinelawn Road, Suite 220S
Melville, NY 11747
Telephone 516.962.8170

Greater Philadelphia
150 S Warner Road
Suite 420
King of Prussia, PA 19406
Telephone 484.654.0575

Contact us
info@constructionriskpartners.com

constructionriskpartners.com

TULLY CONSTRUCTION CO., INC

GENERAL CONTRACTORS

PHONE 718 446-7000
FAX 718 426-8737

127-50 NORTHERN BOULEVARD
FLUSHING, NEW YORK 11368

December 10, 2014
Ref: Tully OSHA Violations (Adverse Data)

Dear Ms.Espinal

In reference to your e-mail on 12/10/14; below is the current status for each OSHA violation.

8/28/08	<p>OSHA Inspection 310628953 Tully Construction, Hamden, Mass. NOT affiliated with our company.</p>
9/15/08	<p>OSHA Inspection 311759278 Tully Construction, Manchester Ct. NOT affiliated with our company.</p>
4/15/09	<p>OSHA Inspection 307613455 Tully Construction/AJ Pegno, a joint venture Inspector responded to our Whitestone Expressway project subject to a workers injury. He inspected and found no violations relative to the injury. He then observed a compressed air cylinder laying on it's side marked MT. He then wrote that single cylinder 6 times. RESULT: At an informal conference the six summonses were consolidated to two "other than serious" for \$ 1400.00 Date settled:12/3/09 Date Close & Paid: 4/15/10</p>
3/11/10	<p>OSHA Inspection 314169426 Tully Construction Company, Flushing NY We were digging for an electrical connection for a street lamp at Peter Minuit Park. A Con Ed inspector called OSHA and said our Mark-out was not complete. OSHA issued a summons for no mark out. Result: At an informal conference we submitted our mark-out ticket. The summons was reduced to Other than serious but remained at \$ 2500.00 Date Settled: 10/1/10 Date Paid: 10/1/10</p>

7/7/10	<p>OSHA Inspection 313205916 Tully Construction Company, Sturbridge Mass. NOT affiliated with our company.</p>
4/1/11	<p>OSHA Inspection 315463737 EE Cruz/ Tully, a joint venture We were digging to locate an underground utility. In the process an old gas line was damaged by an excavator. Keyspan came and repaired that gas line. OSHA issued one summons at the serious level for \$ 2550.00. Result: At an informal conference this ticket was reduced to "Other Than Serious". We paid a fine of \$ 2550.00 Date settled: Date Close & Paid: 5/8/11</p>
6/02/11	<p>OSHA Inspection 315610493 Tully Construction, Flushing NY We were doing gas utility work on Water Street in Brooklyn. We hit a live gas line. OSHA responded and gave a wall to wall inspection. Result: At an informal conference we accepted two "Other than serious" summonses. One for having a pump in use w/o a ground pin for \$ 2700.00 One for having used a spliced electrical cord for \$ 2700.00 Total \$ 5400.00 Date settled: 8/31/11 Date Paid: 9/6/11</p>
3/20/13	<p>OSHA Inspection 315463737 EE Cruz/ Tully, a joint venture We were working on the second ave. subway on a PM shift. A worker was to hookup a welding cart, below to a crane at street level. Upon completion the worker walked across mud in an exclusion zone. His feet got stuck in the mud and he was unable to free himself unassisted. FDNY responded to free the worker from the mud. We were issued four summonses for unstable soil. Result: At an informal conference one summons was eliminated. The three remaining serious summonses were downgraded to "Other than serious". We are waiting for the settlement amount to pay the fine. EE Cruz recently settled with OSHA. As of 9/10/13 EE Cruz is still waiting on the official settlement amount from OSHA.</p>

TULLY CONSTRUCTION CO., INC

GENERAL CONTRACTORS

PHONE 718 446-7000
FAX 718 426-8737

127-50 NORTHERN BOULEVARD
FLUSHING, NEW YORK 11368

December 10, 2014
Ref: Tully OSHA Violations (Adverse Data)

Dear Ms. Espinal

In reference to your email dated 12/3/14 you stated we had 3 OSHA violations from 2011 and 3 from 2013. As you can see from the chart above we did not have any. You requested that we reference corrective actions for these summonses.

The summonses we accepted in 2011 are from an inspection dated 6/2/11. This event listed above is from when we hit a utility on Water Street in Brooklyn. We were issued two summonses from this single event.

The inspection was for our mark-out procedures. As no discrepancies were found in our Mark-out procedures we were issued two electrical summonses. One for an extension cord not having a ground pin and one for having a spliced electrical cord.

As a result of these summons we retrained all our supervisors on the "One Call" system. I am confident that this retraining will prevent this from reoccurring.

There was no further OSHA summons activity for Tully Construction Company.

Sincerely,



William Ryan
Vice President of Risk Management
Tully Construction Company

TULLY CONSTRUCTION CO., INC

GENERAL CONTRACTORS

PHONE 718 446-7000
FAX 718 426-8737

127-50 NORTHERN BOULEVARD
FLUSHING, NEW YORK 11368

December 10, 2014
Ref: Tully EMR

Dear Ms.Espinal

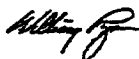
Our current EMR is 1.01 as stated in our Insurance broker's letter. Our EMR began to climb in 2008 in response to a serious Motor Vehicle intrusion. This intrusion into our work zone resulted in our employee being very seriously injured.

In 2011 our EMR pierced the 1.2 ceiling established by NYSDOL. On 4/15/11 we engaged in the NYSDOL monitoring program called ICR Title 59. We made substantial changes in the organization.

We now have 9 full time safety engineers. Another significant addition was our training division. We run an off- site classroom at 126-16 34 avenue. We cycle our employees thru these training classes associated with our work. Most exceed the required levels. This allows us to have smarter employees that are able to make better decisions.

Once we were up and running our EMR began to drop. The next promulgated EMR is 3/31/15 we await that rating.

Sincerely,



William Ryan
Vice President of Risk Management
Tully Construction Company

TULLY CONSTRUCTION CO. INC.
GENERAL CONTRACTORS

PHONE 446-7000
AREA CODE 718

127-50 NORTHEEN BOULEVARD
FLUSHING, NEW YORK 11368

February 20, 2013

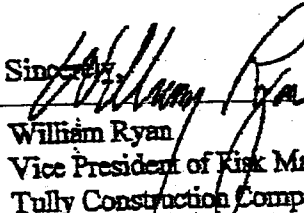
NYC Department of Design and Construction
30-30 Thompson Street
Long Island City, NY
Att. Ms Alla Ayzenshtat

Dear Ms. Ayzenshtat,

I am writing in response to the safety questionnaire completed for HWMP2012, Times Square Rehabilitation. We are in receipt of an email from you dated 2/19/13 in which you pose questions concerning EMR and OSHA status.

1. EMR- Our current EMR is 1.01 as stated in our insurance brokers letter. Our EMR began to climb in 2008 in response to a serious Motor Vehicle intrusion. This intrusion into our work zone resulted in our employee being very seriously injured. In 2011 our EMR pierced the 1.2 ceiling established by NYSDOL. On 4/15/11 we engaged in the NYSDOL monitoring program called ICR Title 59. A copy of that report is part of this package. We made substantial changes in the organization. We now have 9 full time safety engineers. Another significant addition was our training division. We run an off- site classroom at 126-16 34 ave. We cycle our employees thru these training classes associated with our work. Most exceed the required levels. This allows us to have smarter employees that are able to make better decisions. Once we were up and running our EMR began to drop. The next promulgated EMR is 3/31/13 we await that rating.
2. OSHA- Your email requests an explanation to our OSHA summons of 6/2/11. These two summonses were issued at the serious level at our Water St project in Brooklyn. One was for using an electric pump that had no ground pin. The second was for using an extension cord that had a splice in it. We requested and received an informal conference. At this conference we offered an explanation and a copy of our electrical policy for a defense. The OSHA supervisor changed both summonses to "other than Serious" and assessed a fine of \$5400. A copy of supporting documents is attached.

Sincerely,


William Ryan
Vice President of Risk Management
Tully Construction Company

U.S. DEPARTMENT OF LABOR
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

In the Matter of: Tully Construction Co., Inc.
OSHA No.(s): 315610493

INFORMAL SETTLEMENT AGREEMENT

The undersigned Employer and the undersigned Occupational Safety and Health Administration (OSHA), in settlement of the above citation(s) and penalties which were issued on 08/22/11, hereby agree as follows:

1. The Employer agrees to correct the violations as cited in the above citations or as amended below. The employer agrees to submit written proof of abatement within one week of the final abatement date.
2. The Employer agrees to pay the proposed penalties within 14 days of the signing of this agreement. If penalty is not received by that day, all penalties will revert to their original amounts.
3. The Employer agrees to immediately post a copy of this Settlement Agreement in a prominent place at or near the location of the violation(s). This Settlement Agreement must remain posted until the violations cited have been corrected, or for 3 working days (excluding weekends and Federal Holidays), whichever is longer.
4. The Employer agrees to continue to comply with the applicable provisions of the Occupational Safety and Health Act of 1970, and the applicable safety and health standards promulgated pursuant to the Act.
5. By entering into this agreement, the Employer does not admit that it violated the cited standards for any litigation or purpose other than a subsequent proceeding under the Occupational Safety and Health Act.
6. The Employer and OSHA agree that the following citations and penalties, are being amended as shown below:
Clt 1, Item 1a - \$2,700.00 (Changed to "Other Than Serious")
Clt 1, Item 1b - deleted
Clt 1, Item 2 - \$2,700.00 (Changode to "Other Than Serious")

Total Penalty \$5,400.00

7. The Employer, by signing this informal settlement agreement, hereby waives its rights to contest the above citation(s) and penalties, as amended in paragraph 6 of this agreement.
8. The employer agrees to submit to the Manhattan Area Office no later than the last abatement date, a letter detailing specifically how the hazard was abated and the date the hazard was abated.

Robert Stewart

8/31/11

For Occupational Safety
And Health Administration
Key Geo
(signature and date)

William Ron

For The Employer
(signature and date)

NOTICE TO EMPLOYEES

The law gives you or your representative the opportunity to object to any abatement date set for a violation if you believe the date to be unreasonable. Any contest to the abatement dates of the citations amended by this Settlement Agreement must be mailed to the U.S. Department of Labor Area Office at Manhattan Area Office, 201 Varick Street, Room 908, New York, NY 10014, within 15 working days (excluding weekends and Federal Holidays) of the receipt by the Employer of this Settlement Agreement. You or your representative also have the right to object to any of the abatement dates set for violations, which were not amended, provided that the objection is mailed to the office shown above within the 15-working-day period established by the original citation.

TULLY CONSTRUCTION CO INC

63378

DOL-OSEA

8-31-11	110831-09	08-420-OTHER	5400.00	.00	5400.00
CHECK DATE	8-31-11	CHECK NUMBER	113098	TOTAL >	5400.00
PLEASE DETACH AND RETAIN FOR YOUR RECORDS					

TULLY CONSTRUCTION CO INC

OPERATING ACCOUNT
127-50 NORTHERN BLVD
MIDDLETOWN, NY 11968-1520
TEL 785-7000

MERRILL LYNCH
JP MORGAN CHASE
JP MORGAN CHASE
COLUMBUS, OH 43271

DATE
August 31, 2011

CHECK NO.
113098

25-00
440
AMOUNT
\$5,400.00

Five thousand four hundred dollars and no cents

DOL-OSEA
TO BE PAID TO
OCCUPATIONAL SAFETY & HEALTH ADMIN
201 MARICK STREET - ROOM 908
NEW YORK, NY 10014

7878702281140240800402890E11000

U.S. Department of Labor

Occupational Safety and Health Administration
Manhattan Area Office
201 Varick Street - Room 908
Manhattan, NY 10014
(212) 620-3200
FAX: (212) 620-4121
OSHA Website Address: <http://www.osha.gov>



August 22, 2011

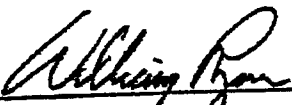
Tully Construction Co. Inc.
315610493

In accordance with 29 CFR 1903.19, Abatement Verification, effective May 30, 1997, employers are required to certify that abatement has been accomplished and, under certain circumstances, are required to submit documented proof of abatement of cited violations. The enclosed OSHA-2 Citation and Notification of Penalty has been annotated as to which items require abatement certification and which require abatement certification and documentation. Please list the specific method of correction and the date of correction for each citation item requiring abatement certification. In addition, please submit documentation for those items requiring abatement certification and documentation. Examples of such documentation would be evidence of purchase or repair of equipment, photographic or video evidence of abatement or other written evidence.


This information must be submitted to our office within 10 days of the date each violation must be abated.

I certify that all employees and their representatives have been informed of all abatement action taken on these violations.


I attest that the information contained in this document is accurate.



Signature



Typed or Printed Name



Date

Citation # 1, Item # 1a was corrected on (date) 9-1-11

Explain how condition(s) were corrected.

The black pump observed in use without a
ground pin. Has been tagged "out of service"
and returned to the owner a sub of OORS

Citation # 1, Item # 1b was corrected on (date) 9-1-11

Explain how condition(s) were corrected.

Deleted

Citation # 1, Item # 2 was corrected on (date) 9-1-11

Explain how condition(s) were corrected.

The extension cord observed to have
a splice was destroyed.

Citation # , Item # was corrected on (date) _____

Explain how condition(s) were corrected.

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses



Year 2016

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OSHA no. 1215-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.


Number of Cases			
Total number of deaths	Total number of cases away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	4	0	0
(G)	(H)	(I)	(J)

Number of Days	
Total number of days away from work	Total number of days of job transfer or restriction
103	0
(K)	(L)

Injury and Illness Types						
Total number of... (M)	(1) Injury	(2) Skin Disorder	(3) Respiratory Condition	(4) Poisoning	(5) Hearing Loss	(6) All Other illnesses
	4	0	0	0	0	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Public reporting burden for this collection of information is estimated to average 56 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspect of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave, NW, Washington, DC 20220. Do not send the completed forms to this office.

Establishment Information			
Your establishment name	Tully Construction Co. Inc.		
Street	127-50 Northern Blvd	City	Flushing
State	New York	Zip	11358
Industry description (e.g., Manufacture of motor truck trailers)	Construction		
Standard Industrial Classification (SIC), if known (e.g., SIC 3715)	OR North American Industrial Classification (NAICS), if known (e.g., 336212)		
Employment Information			
Annual average number of employees	880		
Total hours worked by all employees last year	1,099,699.99		
Sign here			
Knowingly falsifying this document may result in a fine.			
I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.			
 _____ Company executive			Title VP
718 446 7000 _____ Phone			Date 1-19-17

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases		Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	(G)	3	0	3
	(H)		(I)	(J)

Number of Days

Total number of days away from work	427	(K)
Total number of days of job transfer or restriction	0	(L)

Injury and Illness Types

Total number of...				
(1) Injury	3	(4) Poisoning	0	
(2) Skin Disorder	0	(5) Hearing Loss	0	
(3) Respiratory Condition	0	(6) All Other Illnesses	0	

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 50 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3614, 200 Constitution Ave. NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment Information

Your establishment name Tully Construction Co. Inc.
 Street 127-50 Northern Blvd.
 City Flushing State New York Zip 11358
 Industry description _____
 Standard Industrial Classification (SIC), if known (e.g., SIC 3715) _____
 OR North American Industrial Classification (NAICS), if known (e.g., 336212) _____
 237310

Employment Information

Annual average number of employees 752
 Total hours worked by all employees last year 686683.5

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

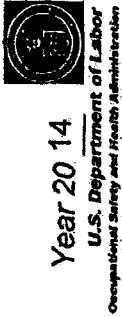
[Signature] Title VP
 Company executive
2-1-16 Date

Log of Work-Related Injuries and Illnesses

Notes: You can type input into this form and save it. Because the forms in this recordkeeping package are "fillable" PDF documents, you can type into the input form fields and then save your inputs using the free Adobe PDF Reader. In addition, the forms are programmed to auto-calculate as appropriate.

You must record information about every work-related death and about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR Part 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an Injury and Illness Incident Report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.



Form approved OMB no. 1218-0176
 Establishment name **TULLY CONSTRUCTION**
 City **FLUSHING** State **NY**

Identify the person			Describe the case					Classify the case				Enter the number of days the injured or ill worker was:									
(A) Case no.	(B) Employee's name	(C) Job title (e.g., Welder)	(D) Date of injury or onset of illness (e.g., 3/10)	(E) Where the event occurred (e.g., Loading dock north end)	(F) Describe injury or illness affected, and object(s) involved that directly injured or made person ill (e.g., Second degree laceration on right forearm from oxyacetylene torch)	(G) Death	(H) Days away from work or restriction on work	(I) Job transfer or restriction	(J) Days lost due to injury or illness	(K) Days lost due to job transfer or restriction	(L) On job limited or restricted work	(M) Days lost due to injury or illness	(1) Sick leave	(2) Vacation	(3) Personal leave	(4) Family care	(5) Military	(6) Other			
Reset 1	EDWIN ESTEVEZ	HELPER	4 / 7 month / day	JFK TAXIWAY	KNEE INJURY	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	180 days	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Reset 2	ROBERT HARKINS	DRIVER	6 / 7 month / day	COLLEGE POINT BLVD	FINGER INJURY	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	29 days	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Reset 3	RUSSELL HARLAN	LABORER	7 / 14 month / day	LIE MILL INLAY	FINGER INJURY	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	29 days	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Reset			month / day			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Reset			month / day			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Reset			month / day			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Reset			month / day			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Reset			month / day			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Reset			month / day			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Reset			month / day			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Reset			month / day			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
						Page totals	0	3	0	0	238	3	0	0	0	0	0	0			

Summary of Work-Related Injuries and Illnesses

Note: You can type input into this form and save it. Because the forms in this recordkeeping package are "fillable/writable" PDF documents, you can type into the input form fields and then save your inputs using the free Adobe PDF Reader.

Year 20 14

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0".

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	3	0	0
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
238	
(K)	(L)

Injury and Illness Types

Total number of . . .	(3) Respiratory conditions	(4) Poisonings	(5) Hearing loss	(6) All other illnesses
(M)	0	0	0	0
(1) Injuries	3			
(2) Skin disorders	0			

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these conditions or any other aspect of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 204 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment information
Year establishment name: TULLY CONSTRUCTION
Street: 127-50 NORTHERN BLVD
City: FLUSHING State: NY Zip: 11368
Industry description (e.g. *Manufacture of motor truck trailers*): _____
Standard Industrial Classification (SIC), if known (e.g. 3713): _____
OR _____
North American Industrial Classification (NAICS), if known (e.g. 336212): 237310

Employment information (If you don't have these figures, see the Worksheet on the next page to estimate.)
Annual average number of employees: 700
Total hours worked by all employees last year: 590749
Sign here _____
I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Company executive: [Signature] Title: VP
Phone: 718-446-7000 Date: 2/2/15

Knowingly falsifying this document may result in a fine.

Save Input

Pre-Award Process

The bidder is advised that as part of the pre-award review of its bid, it may be required to submit the information described in Sections (A) through (D) below. If required, such information must be submitted by the bidder within five (5) business days following receipt of notification from DDC that it is among the low bidders. Such notification from DDC will be by facsimile or in writing and will specify the types of information must be submitted. The types of information the bidder may be required to submit are described below. In the event the bidder fails to submit the required information within the specified time frame, its bid may be rejected as nonresponsive.

- (A) **Project Reference Form:** If required, the bidder must complete and submit the Project Reference Form set forth on pages 27 through 29 of this Bid Booklet. The Project Reference Form consists of 3 parts: (1) Contracts Completed by the Bidder, (2) Contracts Currently Under Construction by the Bidder, and (3) Pending Contracts Not Yet Started by the Bidder.
- (B) **Copy of License:** If required, the bidder must submit a copy of the license under which the bidder will be performing the work. Such license must clearly show the following: (1) Name of the Licensee, (2) License Number, and (3) Expiration date of the License. A copy of the license will be required from bidders for the following contracts: Plumbing Work, Electrical Work and Asbestos Abatement.
- (C) **Financial Information:** If required, the bidder must submit the financial information described below:
- (1) **Audited Financial Statements:** Financial statements (Balance Sheet and Income Statement) of the entity submitting the bid, as audited by an independent auditor licensed to practice as a certified public accountant (CPA). Audited financial statements for the three most recent fiscal years must be submitted. Each such financial statement must include the auditor's standard report.

If the bidder does not have audited financial statements, it must submit an affidavit attesting to the fact that the bidder does not have such statements. In addition, the bidder must submit the following documentation covering the three most recent fiscal years: signed federal tax returns, unaudited financial statements, and a "certified review letter" from a certified public accountant (CPA) verifying the unaudited financial statements.

Unless the most recent audited or unaudited financial statement was issued within ninety (90) days, the bidder must submit interim financial information that includes data on financial position and results of operation (income data) for the current fiscal year. Such information may be summarized on a monthly or quarterly basis or at other intervals.

- (2) **Schedule of Aged Accounts Receivable, including portion due within ninety (90) days.**

(D) **Project Specific Information:** If required, the bidder must submit the project specific information described below:

- (1) Statement indicating the number of years of experience the bidder has had and in what type of construction.
- (2) Resumes of all key personnel to be involved in the project, including the proposed project superintendent.
- (3) List of significant pieces of equipment expected to be used for the contract, and whether such equipment is owned or leased.
- (4) Description of work expected to be subcontracted, and to what firms, if known.
- (5) List of key material suppliers.
- (6) Preliminary bar chart time schedule
- (7) Contractor's expected means of financing the project. This should be based on the assumption that the contractor is required to finance 2X average monthly billings throughout the contract period.
- (8) Any other issues the contractor sees as impacting his ability to complete the project according to the contract.

In addition to the information described in Sections (A) through (D) above, the bidder shall submit such additional information as the Commissioner may require, including without limitation, an explanation or justification for specific unit price items.

The bidder is further advised that it may be required to attend a pre-award meeting with DDC representatives. If such a meeting is convened, the bidder will be advised as to any additional material to be provided.

A. PROJECT REFERENCES - CONTRACTS COMPLETED BY THE BIDDER

List all contracts substantially completed within the last 4 years, up to a maximum of 10, in descending order of date of substantial completion.

Project & Location	Contract Type	Contract Amount (\$000)	Date Completed	Owner Reference & Tel. No.	Architect/Engineer Reference & Tel. No. if different from owner
<i>Please see enclosed Completed Work</i>					

TULLY CONSTRUCTION CO. INC. COMPLETED WORK

START DATE	COMPLETE DATE	Description	SUB OR PRIME	CONTRACT AMOUNT	OWNER'S PROJECT NUMBER	LOCATION OF ACTUAL WORK PERFORMED TOWN, STATE	PROJECT CONTACT INFORMATION FULL NAME, ADDRESS AND PHONE @ OF OWNER	
Mar-12	1-Nov-2016 Subs 40%	New 2nd Avenue & 96th Street Station entrances, Ancillaries Finishes and MEP Systems	P	324,600,000.00	C-26010	New York, NY	NYC Transit 2 B'way NY, NY 10004 Bill Goodrich (917) 709-0792	Bill.Goodrich@nyct.com
Mar-12	1-Nov-2016 Subs 20%	New Police Academy Phase 2 College Point, Queens, NY	P	20,255,000.00	BP#96C	Queens, NY	Tuner Construction Mr. Pat Murray (646) 772-9649	pmurray@tcco.com
Apr-13	1-Nov-2016 Subs 35%	World Trade Center Campus Security Plan, Washington Street Manhattan, NY	P	18,016,831.00	PDWTC2013	New York, NY	Mr. Thomas Foley 30-30 Thomas Avenue LIC, NY Mr. Thomas Foley (917) 939-7333	tfoley@ddc.nyc.gov
2014	Oct./2016 Subs 0%	JFK-Pavement Rehabilitation of Pan-Am Road, Queens, NY	P	4,462,470.00	JFK-124.005	Queens, NY	PANYNJ Mr. Jeffrey Schramm (718) 316-5049	jschramm@panynj.gov
2014	Oct./2016	Jamaica Bend Weir Installation	P	6,853,955.00	CS-JA-BWR	Queens, NY	NYC/DEP 59-11 Junction Blvd Corona, NY 11368 Mr. Edward Novomy (646) 599-0826	enovomy@dep.nyc.gov
2014	June/2016	Safety Improvements on the Jackie Robinson Pkwy (5 Miles) from Jamaica Ave to NB Van Wyck Expressway Ramp (Exit 7)	P	16,834,669.50	D262685	Queens, NY	NYSDOT 50 Wolf Avenue Albany, NY Mr. Bruce Ogurek (718) 482-4825	bogurek@dot.state.ny.us

TULLY CONSTRUCTION CO. INC. COMPLETED WORK

START DATE	COMPLETE DATE	Description	SUB OR PRIME	CONTRACT AMOUNT	OWNER'S PROJECT NUMBER	LOCATION OF ACTUAL WORK PERFORMED TOWN, STATE	PROJECT CONTACT INFORMATION FULL NAME, ADDRESS AND PHONE @ OF OWNER	
2013	June/2016	Section 1/9 - Muldoon Ave. Corridor and Mound Final Cover and Closure Construction Fresh Kills	P	56,650,645.00	82711WD0041	Staten Island, NY	NYC/DOS 44 Beaver St. New York, NY 10004 Mr. Phil Gleason (917) 437-4420	pgleason@dsm.ny.nyc.gov
16-Mar	Sep-16 Subs 0%	Willeys Point Demolition	P	1,400,000.00	16850008	College Point Queens, NY	LiRo	mascarom@liro.com
2012	9/2016	Replacement of the Existing Water Siphons Between Brooklyn and S.I.	P	200,256,250.00	22560002	Brooklyn & Staten Island, NY	NYC/EDC 110 Williams Street NY, NY 10038 Mr. Thomas Fascianella (347) 291-8460	fascianellat@liro.com
13-Apr	1-Apr-2016 Subs 0%	LaGuardia Airport - Abatement and Demolition of Hangers 2 & 4 Queens, NY	P	10,659,000.00	LGA-124.208	Queens, NY	PANYNJ LaGuardia Airport Resident Engineer's Office Hangar 7C-2 2nd Floor Flushing, NY 11371 Emanuel Ciminiello (718) 244-3533 Cell# (917) 567-6772	eciminiello@panynj.gov
15-Apr	16-Oct	Grand Central Parkway - Resurface at 907 M. 4.2 Miles	P	5,549,155.00	S262964	Queens, NY	NYSDOT 50 Wolf Avenue Albany, NY Mr. Bruce Ogurek (718) 482-4825	bogurek@dot.state.ny.us

TULLY CONSTRUCTION CO. INC. COMPLETED WORK

START DATE	COMPLETE DATE	Description	SUB OR PRIME	CONTRACT AMOUNT	OWNER'S PROJECT NUMBER	LOCATION OF ACTUAL WORK PERFORMED TOWN, STATE	PROJECT CONTACT INFORMATION FULL NAME, ADDRESS AND PHONE @ OF OWNER	
12-Mar	16-Nov Subs 0%	Resurface w/2" Asphaltic Concrete wearing course	P	10,652,139.00	SAND349M	5 Boros, Citywide	NYC/DDC 30-30 Thomas Avenue LIC, NY Mr. Thomas Foley (917) 939-7333	tfoley@ddc.nyc.gov
2004	1-Dec-2015	9A West Street Promenade, Liberty Street Pedestrian Bridge.	P	273 Million	D26098	Manhattan, NY	NYS/DOT 50 Wolf Avenue Albany, NY Mr. Bruce Ogurek (718) 482-4825	bogurek@dot.state.ny.us
6-Jul	1-Jun-2016	9.7 Miles of Asphalt Concrete Milling and Paving Northern State Parkway	P	16,656,498.90	D262660	Town of North Hempstead and Hempstead, NY	NYS/DOT 50 Wolf Avenue Albany, NY Mr. Bruce Ogurek (718) 482-4825	bogurek@dot.state.ny.us
2013	1-Apr-2015	Mill and Inlay of 4.3 Miles of I-495, with pavement markings	P	9,553,584.80	D262440	Town of Hempstead, Nassau County, NY	NYS/DOT 50 Wolf Avenue Albany, NY Mr. Bruce Ogurek (718) 482-4825	bogurek@dot.state.ny.us
2013	1-Mar-2015	Safety Improvements on the Van Wyck the Eastbound Nassau Expressway	P	3,412,130.00	D262348	Queens, NY	NYS/DOT 50 Wolf Avenue Albany, NY Mr. Bruce Ogurek (718) 482-4825	bogurek@dot.state.ny.us
2013	2015	Reconstruction of Retaining Wall West of Cannon Place, Bronx, NY	P	3,861,408.34	RXW021	Bronx, NY	NYC/DDC 3030 Thomson Ave LIC, NY 11101 Mr. Eric Macfarland (718) 391-1903	macfarla@ddc.nyc.gov

TULLY CONSTRUCTION CO. INC. COMPLETED WORK

START DATE	COMPLETE DATE	Description	SUB OR PRIME	CONTRACT AMOUNT	OWNER'S PROJECT NUMBER	LOCATION OF ACTUAL WORK PERFORMED TOWN, STATE	PROJECT CONTACT INFORMATION FULL NAME, ADDRESS AND PHONE @ OF OWNER	
2011	2015	Replacement of Queens Approach at the Bronx Whitestone Bridge	P	108,792,000.00	BW-89C	Queens, NY	MTA - TBTA 2 Broadway New York, NY Mr. Chris Saladino (917) 836-2265	csaladin@mtabt.org
2012	1-Dec-2013	to Glen Cove Road, Routes 900P and 25 Intersection	P	21,149,878.00	D261906	Queens, Nassau Town of Hempstead and North Hempstead	NYS/DOT 50 Wolf Avenue Albany, NY Mr. Bruce Ogurek (718) 482-4825	bogurek@dot.state.ny.us
Apr-10	1-Jan-2013	Paerdegat Basin/Natural Area Park	P	14,637,485.00	CSO-6	Brooklyn, NY	NYC/DEP 59-11 Junction Blvd Corona, NY 11368 Mr. Michael Borsykowsky (718) 595-5921	MichaelBo@dep.nyc.gov
Apr-10	1-Oct-2013	Replacement of Shore-Belt parkway 3 Bridges-Over Paerdegat/Rockaway and Fresh Creek	P	365,404,606.00	8-4107BKBR186	Brooklyn, NY	NYC/DOT 55 Water Street New York, NY 10013 Mr. David Dunn (212) 839-4631	ddunn@dot.nyc.gov

TULLY CONSTRUCTION CO., INC
127-50 NORTHERN BOULEVARD
FLUSHING, NY 11368

WORK ON HAND

1	Job:	TCC Job No. 13-479 Contract No. HWMP2012 Reconstruction of Time Square & Duffy Square Broadway from West 42nd St. to West 47th St.	\$46,390,415.78 95% Completed Completion 1095 ccd's Subs 20%
	Location:	Manhattan, NY	
	Owner:	NYC/DDC Mr. Thomas Foley (917) 939-7333 tfoley@ddc.nyc.gov	

2	Job:	TCC Job No. 14-501 Contract No. HBCR01B Component Rehab-Ten Bridges Citywide(BX/NYC)	\$15,554,388.00 35% Completed Completion 1,095 ccd's Subs 10%
	Location:	Bronx, N.Y.	
	Owner:	NYC/DOT Mr. Malgorzata Barka (347) 714-4145 - mbarka@dot.nyc.gov	

3	Job:	TCC Job No. 14-502 Contract No. HBCR01C Component Rehab-Nine Bridges Citywide(NYC/Queens/SI)	\$13,734,610.00 35% Completed Completion 1,095 ccd's Subs 10%
	Location:	Queens, Staten Island, N.Y.	
	Owner:	NYC/DOT Mr. Malgorzata Barka (347) 714-4145 - mbarka@dot.nyc.gov	

4	Job:	TCC Job No. 14-504 Contract No. D262391 Bridge Rehabilitation on the Major Deegan Expwy (I-87)	\$126,223,498.00 40% Completed Completion 9/30/2018 Subs 20%
	Location:	Bronx, N.Y.	
	Owner:	NYS/DOT Mr. Bruce Ogurek (718) 482-1825 - bogurek@dot.state.ny.us	

5	Job:	TCC Job No. 14-523 Contract No. BB28S Sandy Restoration & Protects and Project BB-28, Phase II BB-54, Rehabilitation of the Tunnel & Brooklyn Battery Tunnel	\$283,495,095.00 50% Completed Dec/2014 - 4 years Subs 25%
	Location:	New York	
	Owner:	NYC/TBTA Mr. Louis Andreani (718) 797-6927 landreani@mtabt.org Mr. Brian Walsh (646) 252-7155 bwalsh@mtabt.org	
6	Job:	TCC Job No. 15-527 Contract No. HBQ1203 Pin# 8411QUBR805 Rehabilitation of Roosevelt Ave. Bridge over Van Wyck Expressway	\$60,455,224.00 20% Completed Completion 485 ccd's Subs
	Location:	Queens, NY	
	Owner:	NYC/DOT Nazim Khan (212) 839-4642 Nkhan@dot.nyc.gov	
7	Job:	TCC Job No. 15-542 Contract No. QED1005 Installation of Distribution - Water mains & appurtenances	\$30,735,299.60 0% Completed Completion 545 ccd's Subs
	Location:	LIC, Astoria and Queens, NY	
	Owner:	NYC/DDC	
8	Job:	TCC Job No. 15-544 Contract No. D262980 Pedestrian & Bicyclists Safety Improvement along the Ocean Parkway Corridor	\$8,456,553.00 90% Completed Completion -Sept. 30, 2017 Subs
	Location:	Brooklyn, NY	
	Owner:	NYS/DOT	
9	Job:	TCC Job No. 15-548 Contract No. 39090 Grand Central Fire Standpipe Upgrade Tully/Richards Plumbing Joint Venture	\$35,000,000.00 25% Completed Completion - 3 years Subs
	Location:	Manhattan, NY	
	Owner:	Metro North Railroad	

10	Job:	TCC Job No. 16-554 Contract No. LGA-124.240 LGA-Rehabilitation of Taxiway B from G-CY	\$2,733,000.00 95% Completed Completion - 270 ccd's Subs
	Location:	Queens, NY	
	Owner:	PANYNJ	
11	Job:	TCC Job No. 16-556 Contract No. 82715WM00036 Section 1/9 Final Cover & Closure of Fresh Kills Landfill	\$246,617,936.00 5% Completed Completion 2161 ccd's
	Location:	Staten Island, NY	
	Owner:	DSNY Mr. Phil Gleason (212) 437-4420 pgleason@dsny.nyc.gov	
12	Job:	TCC Job No. 16-557 Contract No. HBM551 Reconstruction of Park Avenue Tunnel	\$24,071,794.60 0% Completed Completion 915 ccd's Subs 10%
	Location:	Manhattan, NY	
	Owner:	NYC/DOT	
13	Job:	TCC Job No. 16-558 Contract No. SAND350FM Resurfacing with 2" Asphalt concrete wearing course	\$1,947,551.00 0% Completed Completion 180 ccd's Subs 12%
	Location:	NYC Citywide	
	Owner:	NYC/DDC	
14	Job:	TCC Job No. 16-565 Contract No. LGA-124.086 Rehabilitation of Runway 22 Deck wearing course	\$2,277,000.00 40% Completed Completion 120 ccd's Subs %
	Location:	Queens, NY	
	Owner:	PAN YNJ	
15	Job:	TCC Job No. 16-566 Contract No. CS-ER-WCP Construction of Combined sewers and appurtenances in Pugsley Creek Area - water main and traffic signal work	\$81,479,339.80 0% Completed Completion 1640 ccd's Subs % December 19, 2016 June 15, 2021
	Location:	Bronx, NY	
	Owner:	NYC/DDC	

16	Job:	TCC Job No. 16-567 Contract No. TF18-2012N Reconstruction of Queens Boro Municipal Parking Lot	\$8,556,442.00 0% Completed Subs % NTP - 10/12/16 Finish - Aug. 7, 2017
	Location:	Queens, NY	
	Owner:	NYC/DDC	
17	Job:	TCC Job No. 16-569 Contract No. JFK-144.019 Rehabilitation of Runway 4R - 22L and Associated Taxiways	\$68,462,700.00 5% Completed Completion Nov. 17, 2017 Subs % State Date - Feb 27, 2017
	Location:	Queens, NY	
	Owner:	PANYNJ Tully /Intercounty - JV Mr. James Brogan -R.E. PANYNJ-JFK-International Airport CMD/Trailer #44 (718) 244-3533 Cell (347) 392-1740 jbrogan@panynj.gov	
18	Job:	TCC Job No. 16-570 Contract No. RK-21 Design/Build to Install & update Fire System at the RFK Bridge	\$18,500,000.00 0% Completed Started Feb/2017 36 Months Subs 0%
	Location:	Manhattan, Queens and the Bronx	
	Owner:	TBTA Mr. Brian Walsh (646) 252-7155 bwalsh@mtabt.org	

Certificate of No Change Form

- Please fill in all the fields and DO NOT leave any field blank.
- Please submit two completed forms. Copies will not be accepted.
- Please send both copies to the agency that requested it, unless you are advised to send it directly to the Mayor's Office of Contract Services (MOCS).
- A materially false statement willfully or fraudulently made in connection with this certification, and/or the failure to conduct appropriate due diligence in verifying the information that is the subject of this certification, may result in rendering the submitting entity non-responsible for the purpose of contract award.
- A materially false statement willfully or fraudulently made in connection with this certification may subject the person making the false statement to criminal charges

I, Peter K. Tully, being duly sworn, state that I have read
Enter Your Name

and understand all the items contained in the vendor questionnaire and any submission of change as identified on page one of this form and certify that as of this date, these items have not changed. I further certify that, to the best of my knowledge, information and belief, those answers are full, complete, and accurate; and that, to the best of my knowledge, information, and belief, those answers continue to be full, complete, and accurate.

In addition, I further certify on behalf of the submitting vendor that the information contained in the principal questionnaire(s) and any submission of change identified on page two of this form have not changed and have been verified and continue, to the best of my knowledge, to be full, complete and accurate.

I understand that the City of New York will rely on the information supplied in this certification as additional inducement to enter into a contract with the submitting entity.

Vendor Questionnaire *This section is required.*

This refers to the vendor questionnaire(s) submitted for the vendor doing business with the City.

Name of Submitting Entity: Tully Construction Co. Inc.

Vendor's Address: 127-50 Northern Blvd., Flushing, NY 11368

Vendor's EIN or TIN: 11-2493726 Requesting Agency: _____

Are you submitting this Certification as a parent? (Please circle one) Yes **No**

Signature date on the last full vendor questionnaire signed by the submitting vendor: June 7, 2016

Signature date on changed submission, if applicable, for the submitting vendor: Sept. 7, 2016

Principal Questionnaire

This section refers to the most recent principal questionnaire submissions.



	Principal Name	Date of signature on last full Principal Questionnaire	Date(s) of signature on Changed Submission (if applicable)
1	Kenneth W. Tully	3/23/2016	
2	James M. Tully	3/23/2016	
3	Thomas E. Tully	3/23/2016	
4	Peter K. Tully	9/7/2016	
5			
6			

Check if additional changes were submitted and attach a document with the date of additional submissions.

Certification *This section is required.*

This form must be signed and notarized. Please complete this twice. Copies will not be accepted.

Certified By:

Peter K. Tully
Name (Print)

President
Title

Tully Construction Co. Inc.
Name of Submitting Entity

3/10/17
Signature Peter K. Tully-President Date

Notarized By: Queens DESPINA PHILIPS
Notary Public County License Issued Notary Public, State of New York
No. 01PH5003152
Qualified in Queens County
Commission Expires Oct. 19, 2018
License Number

Sworn to before me on: 3/10/17
Date

Certificate of No Change Form



- Please fill in all the fields and DO NOT leave any field blank.
- Please submit two completed forms. Copies will not be accepted.
- Please send both copies to the agency that requested it, unless you are advised to send it directly to the Mayor's Office of Contract Services (MOCS).
- A materially false statement willfully or fraudulently made in connection with this certification, and/or the failure to conduct appropriate due diligence in verifying the information that is the subject of this certification, may result in rendering the submitting entity non-responsible for the purpose of contract award.
- A materially false statement willfully or fraudulently made in connection with this certification may subject the person making the false statement to criminal charges

I, Peter K. Tully, being duly sworn, state that I have read
Enter Your Name

and understand all the items contained in the vendor questionnaire and any submission of change as identified on page one of this form and certify that as of this date, these items have not changed. I further certify that, to the best of my knowledge, information and belief, those answers are full, complete, and accurate; and that, to the best of my knowledge, information, and belief, those answers continue to be full, complete, and accurate.

In addition, I further certify on behalf of the submitting vendor that the information contained in the principal questionnaire(s) and any submission of change identified on page two of this form have not changed and have been verified and continue, to the best of my knowledge, to be full, complete and accurate.

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Vendor's Address: 127-50 Northern Blvd., Flushing, NY 11368

Vendor's EIN or TIN: 11-2493726 Requesting Agency: _____

Are you submitting this Certification as a parent? (Please circle one) Yes No

Signature date on the last full vendor questionnaire signed by the submitting vendor: June 7, 2016

Signature date on changed submission, if applicable, for the submitting vendor: Sept. 7, 2016

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5			
6			

Check if additional changes were submitted and attach a document with the date of additional submissions.

Certification *This section is required.*

This form must be signed and notarized. Please complete this twice. Copies will not be accepted.

Certified By:

Peter K. Tully
Name (Print)

President
Title

Tully Construction Co. Inc.
Name of Submitting Entity

3/10/17
Signature Peter K. Tully-President Date

Notarized By: Queens 3/10/17
Notary Public County License Issued License Number
DESPINA PHILIPS
Notary Public, State of New York
No. 01PH5003152
Qualified in Queens County
Commission Expires Oct. 19, 2018

Sworn to before me on: 3/10/17
Date

IRAN DIVESTMENT ACT COMPLIANCE RIDER

FOR NEW YORK CITY CONTRACTORS

The Iran Divestment Act of 2012, effective as of April 12, 2012, is codified at State Finance Law ("SFL") §165-a and General Municipal Law ("GML") §103-g. The Iran Divestment Act, with certain exceptions, prohibits municipalities, including the City, from entering into contracts with persons engaged in investment activities in the energy sector of Iran. Pursuant to the terms set forth in SFL §165-a and GML §103-g, a person engages in investment activities in the energy sector of Iran if:

- (a) The person provides goods or services of twenty million dollars or more in the energy sector of Iran, including a person that provides oil or liquefied natural gas tankers, or products used to construct or maintain pipelines used to transport oil or liquefied natural gas, for the energy sector of Iran; or
- (b) The person is a financial institution that extends twenty million dollars or more in credit to another person, for forty-five days or more, if that person will use the credit to provide goods or services in the energy sector in Iran and is identified on a list created pursuant to paragraph (b) of subdivision three of Section 165-a of the State Finance Law and maintained by the Commissioner of the Office of General Services.

A bid or proposal shall not be considered for award nor shall any award be made where the bidder or proposer fails to submit a signed and verified bidder's certification.

Each bidder or proposer must certify that it is not on the list of entities engaged in investment activities in Iran created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law. In any case where the bidder or proposer cannot certify that they are not on such list, the bidder or proposer shall so state and shall furnish with the bid or proposal a signed statement which sets forth in detail the reasons why such statement cannot be made. The City of New York may award a bid to a bidder who cannot make the certification on a case by case basis if:

- (1) The investment activities in Iran were made before the effective date of this section (i.e., April 12, 2012), the investment activities in Iran have not been expanded or renewed after the effective date of this section and the person has adopted, publicized and is implementing a formal plan to cease the investment activities in Iran and to refrain from engaging in any new investments in Iran; or
- (2) The City makes a determination that the goods or services are necessary for the City to perform its functions and that, absent such an exemption, the City would be unable to obtain the goods or services for which the contract is offered. Such determination shall be made in writing and shall be a public document.

**BIDDER'S CERTIFICATION OF COMPLIANCE WITH
IRAN DIVESTMENT ACT**

Pursuant to General Municipal Law §103-g, which generally prohibits the City from entering into contracts with persons engaged in investment activities in the energy sector of Iran, the bidder/proposer submits the following certification:

[Please Check One]

BIDDER'S CERTIFICATION

- By submission of this bid or proposal, each bidder/proposer and each person signing on behalf of any bidder/proposer certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief, that each bidder/proposer is not on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law.
- I am unable to certify that my name and the name of the bidder/proposer does not appear on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law. I have attached a signed statement setting forth in detail why I cannot so certify.

SIGNATURE
Peter K. Tully

PRINTED NAME
President

TITLE

Sworn to before me this
10 day of March, 2017

Despina Philips

Notary Public

Dated: 3/10/17

DESPINA PHILIPS
Notary Public, State of New York
No. 01PH5003152
Qualified in Queens County
Commission Expires Oct. 19, 2018

The City of New York Department of Small Business Services
Division of Labor Services Contract Compliance Unit
110 William Street, New York, New York 10038
Phone: (212) 513 - 6323
Fax: (212) 618-8879

CONSTRUCTION EMPLOYMENT REPORT

GENERAL INFORMATION

1. Your contractual relationship in this contract is: Prime contractor Subcontractor
- 1a. Are MWBE goals attached to this project? Yes No
2. Please check one of the following if your firm would like information on how to certify with the City of New York as a:
 Minority Owned Business Enterprise Locally Based Business Enterprise
 Women Owned Business Enterprise Emerging Business Enterprise
 Disadvantaged Business Enterprise
- 2a. If you are certified as an MBE, WBE, LBE, EBE or DBE, what city/state agency are you certified with? _____ Are you DBE certified? Yes No
3. Please indicate if you would like assistance from SBS in identifying certified MWBEs for contracting opportunities: Yes No
4. Is this project subject to a project labor agreement? Yes No
5. Are you a Union contractor? Yes No If yes, please list which local(s) you affiliated with _____ Please see enclosed GCA Letter of Good Standing
6. Are you a Veteran owned company? Yes No

PART I: CONTRACTOR/SUBCONTRACTOR INFORMATION

7. 11-2493726 bryan@tullyconstruction.com
Employer Identification Number or Federal Tax I.D. Email Address
8. Tully Construction Co. Inc.
Company Name
9. 127-50 Northern Blvd. , Flushing, NY 11368
Company Address and Zip Code
10. Peter K. Tully (718) 446-7000
Chief Operating Officer Telephone Number
11. William Ryan (718) 446-7000
Designated Equal Opportunity Compliance Officer Telephone Number
(If same as Item #10, write "same")
12. Same
Name of Prime Contractor and Contact Person
(If same as Item #8, write "same")

13. Number of employees in your company: 500

14. Contract information:

(a) NYC I DDC
Contracting Agency (City Agency)

(b) _____
Contract Amount

(c) 8502017HW0084C
Procurement Identification Number (PIN)

(d) _____
Contract Registration Number (CT#)

(e) _____
Projected Commencement Date

(f) _____
Projected Completion Date

(g) Description and location of proposed contract:

Atlantic Ave. Safety Improvements from
Georgia Ave to Logan Ave. Brooklyn, NY

15. Has your firm been reviewed by the Division of Labor Services (DLS) within the past 36 months and issued a Certificate of Approval? Yes X No _____

If yes, attach a copy of certificate.

16. Has DLS within the past month reviewed an Employment Report submission for your company and issued a Conditional Certificate of Approval? Yes X No _____

If yes, attach a copy of certificate.

NOTE: DLS WILL NOT ISSUE A CONTINUED CERTIFICATE OF APPROVAL IN CONNECTION WITH THIS CONTRACT UNLESS THE REQUIRED CORRECTIVE ACTIONS IN PRIOR CONDITIONAL CERTIFICATES OF APPROVAL HAVE BEEN TAKEN.

17. Has an Employment Report already been submitted for a different contract (not covered by this Employment Report) for which you have not yet received compliance certificate? Yes _____ No X If yes,

Date submitted: _____

Agency to which submitted: _____

Name of Agency Person: _____

Contract No: _____

Telephone: _____

18. Has your company in the past 36 months been audited by the United States Department of Labor, Office of Federal Contract Compliance Programs (OFCCP)? Yes _____ No X

If yes,

(a) Name and address of OFCCP office.

(b) Was a Certificate of Equal Employment Compliance issued within the past 36 months?
Yes___ No___

If yes, attach a copy of such certificate.

(c) Were any corrective actions required or agreed to? Yes___ No___

If yes, attach a copy of such requirements or agreements.

(d) Were any deficiencies found? Yes___ No___

If yes, attach a copy of such findings.

19. Is your company or its affiliates a member or members of an employers' trade association which is responsible for negotiating collective bargaining agreements (CBA) which affect construction site hiring? Yes X No___ Tully is a member of the GCA of Greater New York . See Attached
If yes, attach a list of such associations and all applicable CBA's.

PART II: DOCUMENTS REQUIRED

20. For the following policies or practices, attach the relevant documents (e.g., printed booklets, brochures, manuals, memoranda, etc.). If the policy(ies) are unwritten, attach a full explanation of the practices. See instructions.

- ___ (a) Health benefit coverage/description(s) for all management, nonunion and union employees (whether company or union administered)
- ___ (b) Disability, life, other insurance coverage/description
- ___ (c) Employee Policy/Handbook
- ___ (d) Personnel Policy/Manual
- ___ (e) Supervisor's Policy/Manual
- ___ (f) Pension plan or 401k coverage/description for all management, nonunion and union employees, whether company or union administered
- ___ (g) Collective bargaining agreement(s).
- ___ (h) Employment Application(s)
- ___ (i) Employee evaluation policy/form(s).
- ___ (j) Does your firm have medical and/or non-medical (i.e. education, military, personal, pregnancy, child care) leave policy?

SIGNATURE PAGE

I, (print name of authorized official signing) Peter K. Tully hereby certify that the information submitted herewith is true and complete to the best of my knowledge and belief and submitted with the understanding that compliance with New York City's equal employment requirements, as contained in Chapter 56 of the City Charter, Executive Order No. 50 (1980), as amended, and the implementing Rules and Regulations, is a contractual obligation. I also agree on behalf of the company to submit a certified copy of payroll records to the Division of Labor Services on a monthly basis.

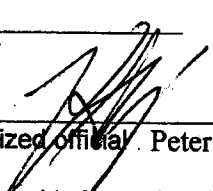
Tully Construction Co. Inc.

Contractor's Name

William Ryan EEO Officer - V.P. Risk Management
Name of person who prepared this Employment Report Title

Peter K. Tully President
Name of official authorized to sign on behalf of the contractor Title

(718) 446-7000
Telephone Number

 Peter K. Tully Date 3-10-17

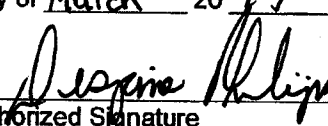
If contractors are found to be underutilizing minorities and females in any given trade based on Chapter 56 Section 3H, the Division of Labor Services reserves the right to request the contractor's workforce data and to implement an employment program.

Contractors who fail to comply with the above mentioned requirements or are found to be in noncompliance may be subject to the withholding of final payment.

Willful or fraudulent falsifications of any data or information submitted herewith may result in the termination of the contract between the City and the bidder or contractor and in disapproval of future contracts for a period of up to five years. Further, such falsification may result in civil and/or criminal prosecution.

To the extent permitted by law and consistent with the proper discharge of DLS' responsibilities under Charter Chapter 56 of the City Charter and Executive Order No. 50 (1980) and the implementing Rules and Regulations, all information provided by a contractor to DLS shall be confidential.

Only original signatures accepted.

Sworn to before me this 10 day of March 2017
DESPINA PHILIPS
Notary Public, State of New York
No. 01PH5003152
 Date 3-10-17
Qualified in Queens County Commission Expires Oct. 19, 2018 Authorized Signature



FORM A. CONTRACT BID INFORMATION: USE OF SUBCONTRACTORS/TRADES

1. Do you plan to subcontract work on this contract? Yes X No
2. If yes, complete the chart below.

NOTE: All proposed subcontractors with a subcontract in excess of \$750,000 must complete an Employment Report for review and approval before the contract may be awarded and work commences.

SUBCONTRACTOR'S NAME*	OWNERSHIP (ENTER APPROPRIATE CODE LETTERS BELOW)	WORK TO BE PERFORMED BY SUBCONTRACTOR	TRADE PROJECTED FOR USE BY SUBCONTRACTOR	PROJECTED DOLLAR VALUE OF SUBCONTRACT

*If subcontractor is presently unknown, please enter the trade (craft name).

OWNERSHIP CODES

- W: White
- B: Black
- H: Hispanic
- A: Asian
- N: Native American
- F: Female

FORM B: PROJECTED WORKFORCE

TRADE CLASSIFICATION CODES

- (J) Journeylevel Workers
- (H) Helper
- (TOT) Total by Column
- (A) Apprentice
- (TRN) Trainee

For each trade to be engaged by your company for this project, enter the projected workforce for Males and Females by trade classification on the charts below.

Trade:	MALES					FEMALES										
	(1)		(2)		(3)	(4)		(5)	(6)		(7)		(8)	(9)		(10)
	White Non-Hisp.	Black Non-Hisp.	White Non-Hisp.	Black Non-Hisp.	Hisp.	Asian	Native Amer.	White Non-Hisp.	Black Non-Hisp.	White Non-Hisp.	Black Non-Hisp.	Hisp.	Asian	Native Amer.		
Operating Engineers	8	2	1	0	0					0	1	0	0		0	
Union Affiliation, if applicable																
15																
Total (Col. #1-10):																
2																
Total Minority, Male & Female (Col. #2,3,4,5,7,8,9, & 10):																
4																
Total Female (Col. #6 - 10):																
1																
TOT	8	2	1	0	0					0	1	0	0		0	

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

UNIONS

FORM B: PROJECTED WORKFORCE

Trade:

Operating Engineers

Union Affiliation, if applicable

15

Total (Col. #1-10):

12

Total Minority, Male & Female

(Col. #2,3,4,5,7,8,9, & 10):

4

Total Female

(Col. #6 - 10):

1

	MALES					FEMALES				
	(1) White Non Hisp.	(2) Black Non Hisp.	(3) Hisp.	(4) Asian	(5) Native Amer.	(6) White Non Hisp.	(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) Native Amer.
J	8	2	1	0	0	0	1	0	0	0
H										
A										
TRN										
TOT	8	2	1	0	0	0	1	0	0	0

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

UNIONS

FORM C: CURRENT WORKFORCE

TRADE CLASSIFICATION CODES

(J) Journeylevel Workers
 (H) Helper
 (TOT) Total by Column

For each trade currently engaged by your company for all work performed in New York City, enter the current workforce for Males and Females by trade classification on the charts below.

Trade:

LABORER

Union Affiliation, if applicable

731

Total (Col. #1-10):

30

Total Minority, Male & Female

(Col. #2,3,4,5,7,8,9, & 10):

15

Total Female

(Col. #6 - 10):

3

MALES

	(1) White Non Hisp.		(2) Black Non Hisp.		(3) Hisp.		(4) Asian		(5) Native Amer.	
	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.	White Non Hisp.	Black Non Hisp.	Native Amer.
J	15	12			0	0	0	0	0	0
H										
A										
TRN										
TOT	15	12			0	0	0	0	0	0

FEMALES

	(6) White Non Hisp.		(7) Black Non Hisp.		(8) Hisp.		(9) Asian		(10) Native Amer.	
	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.	White Non Hisp.	Black Non Hisp.	Native Amer.
J	1	2			0	0	0	0	0	0
H										
A										
TRN										
TOT	1	2			0	0	0	0	0	0

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

UNIONS

FORM C: CURRENT WORKFORCE

Trade: Various

Union Affiliation, if applicable

425

Total (Col. #1-10):

Total Minority, Male & Female
(Col. #2,3,4,5,7,8,9, & 10):

122

Total Female
(Col. #6 - 10):

13

	MALES					FEMALES				
	(1) White Non Hisp.	(2) Black Non Hisp.	(3) Hisp.	(4) Asian	(5) Native Amer.	(6) White Non Hisp.	(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) Native Amer.
J	303	31	76	2	0	5	5	3	0	0
H										
A										
TRN										
TOT	303	31	76	2	0	5	5	3	0	0

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

UNIONS



THE GENERAL CONTRACTORS ASSOCIATION OF NEW YORK, INC.

Denise M. Richardson
Executive Director

January 9, 2017

Tully Construction Co. Inc.
Attn: Mr. Peter Tully
127-50 Northern Blvd.
Flushing, NY 11368-1520

Dear Mr. Tully:

Tully Construction Co. Inc. is a member in good standing of the General Contractors Association of New York ("GCA"). Through your membership in the GCA, you have authorized the GCA to enter into collective bargaining agreements on your behalf.

As such, your firm is signatory to the collective bargaining agreements and participates in, upholds and is subject to all provisions of those agreements, including the union(s) established and approved apprenticeship programs.

The General Contractors Association has collective bargaining agreements with the following unions:

- Laborers International Union of North America
Local 731, Heavy Construction Laborers
Local 29 Drillers and Blasters
Local 147 Tunnel Workers
Local 1010 Asphalt Pavers
- New York District Council of Carpenters
Local 1556 Dockbuilders/Timbermen
- International Union of Operating Engineers
Local 14 / 15 Operating Engineers
Local 15 C Operating Engineers Mechanics & Helpers
Local 15 D Surveyors
- International Brotherhood of Teamsters Local 282
- Metallic Lathers Local 46

Please contact me if you require additional information.

Sincerely,

Denise M. Richardson



career
businesses
neighborhoods

Kerri Jew
Deputy Commissioner

October 20, 2015

Mr. William Ryan
Tully Construction Company, Inc.
127-50 Northern Boulevard
Flushing, NY 11368

Re: Department of Design and Construction Contracts; Pin No. 8502015HW0025C, SAND349FM; Resurfacing with 2' asphaltic concrete wearing course and installation of missing pedestrian ramps, etc.; Citywide; Contract Value: \$20,255,000; **File No. 215CY336;**

Pin No. 8502015RQ0012C, MODULAR01; Installation of modular structures including electrical, sewer and water main connections; Borough of Manhattan; Contract Value: \$16,205,545; **File No. 215CY340;**

Pin No. 8502015RQ0013C, MODULAR02; Installation of modular structures including electrical, sewer and water main connections; Borough of the Bronx; Contract Value: \$16,119,345; **File No. 215CY339;**

Pin No. 8502015RQ0014C, MODULAR03; Installation of modular structures including electrical, sewer and water main connections; Borough of Queens; Contract Value: \$16,119,395; **File No. 215CY338; and**

Pin No. 8502015WM0029C, QED-1005; Installation of distribution water mains and appurtenances in Long Island City and Astoria area; Borough of Queens; Contract Value: \$30,735,299.60; **File No. 215CY339; Certificate of Approval.**

Dear Mr. Ryan:

The Department of Small Business Services/Division of Labor Services (DLS) has concluded that Tully Construction Company, Inc. (TCCI) met the equal employment opportunity requirements of the City of New York, as stated in Executive Order No. 50 (1980) as amended (E.O. 50), its implementing Rules (Rules), and Chapter 56 of the City Charter (Chapter 56). Consequently, DLS has notified the Department Design and Construction of this determination.

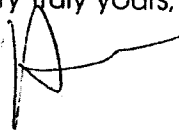
PAGE TWO
October 20, 2015

Contingent upon TCCI's ongoing compliance with E.O. 50 and Chapter 56, this approval shall be effective for the three (3) year period commencing on October 7, 2015 and terminating on October 6, 2018. **The determination for a three year approval only exempts contractors from completing the policy and procedure section of the Employment Report on future contracts within this three year period.** However, a Construction Employment Report must be submitted for each new project. In addition, TCCI must regularly submit to DLS the **Monthly Workforce Utilization Table and Payroll Records** as explained during the pre-award conference on October 6, 2015.

It is important that TCCI, as a New York City contractor, provide equal employment opportunity for all employees and applicants for employment.

Please direct all correspondence to Lisa Middleton, Project Manager. Should you have any questions regarding this letter, you may call Ms. Middleton at (212) 618-8823 or email her at lmiddleton@sbs.nyc.gov.

Very truly yours,



Helen Wilson
Assistant Commissioner
Division of Labor Services

cc: Lisa Middleton
Lorraine Holley
FILE

Certificate of Non-Compliance with 49 U.S.C. 5323(j)(2)(C)

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j)(2)(C), but may qualify for an exception pursuant to 49 U.S.C. 5323(j)(2)(B) or (j)(2)(D) and the regulations in 49 CFR 661.7.

Date March 10, 2017

Signature [Handwritten Signature]

Company Name **Tully Construction Co., Inc.**

Title President

am no notaxrendo yst

Appendix A1

DISCLOSURE OF LOBBYING ACTIVITIES

I Peter K. Tully - President hereby certifies on behalf of Tully Construction Co. Inc.
name and title of company representative name of company

that will file the certification required by 49 CFR Part 20, "New Restrictions on Lobbying." Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to that Federal contract, grant or award covered by 31 U.S.C. 1352. Such disclosures are forwarded from tier to tier up to the recipient.

The Contractor certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form--LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions [as amended by "Government wide Guidance for New Restrictions on Lobbying," 61 Fed. Reg. 1413 (1/19/96)].

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Pursuant to 31 U.S.C. § 1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure.

The Contractor, Tully Construction Co. Inc. certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. A 3801, *et seq.*, apply to this certification and disclosure, if any.

 Signature of Contractor's Authorized Official

Peter K. Tully - President Name and Title of Contractor's Authorized Official

March 10, 2017 Date

Appendix A2


**CERTIFICATION OF A CONTRACTOR REGARDING DEBARMENT, SUSPENSION AND
OTHER RESPONSIBILITY MATTERS**

The Contractor Tully Construction Co. Inc. certifies to the best of its knowledge and belief, that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or Local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated in paragraph (2) of this certification; and
4. Have not within a three-year period preceding this proposal or bid had one or more public transactions (Federal, State or Local) terminated for cause or default.
5. The Contractor agrees to provide the City with immediate written notice if, at any time, it learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. Each Subcontractor or Vendor for the Contractor shall provide the same updated notice to the Contractor and the Contractor shall be solely responsible for collecting, updating and submitting updated information to the City.

NOTE: If for any reason the Contractor is unable to certify to any of the statements in this certification, the Contractor shall attach an explanation to this certification.

THE CONTRACTOR, Tully Construction Co. Inc. CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE STATEMENTS SUBMITTED ON OR WITH THIS CERTIFICATION AND UNDERSTANDS THAT THE PROVISIONS OF 31 U.S.C. SECTIONS 3801 ET SEQ. ARE APPLICABLE THERETO.


Signature and Title of Authorized Official

Peter K. Tully President

Date

March 10, 2017

Qualification Form

List previous projects completed to meet the special experience requirements for this contract.
Please photocopy this form for submission of all required projects.

Name of Contractor: _____

Name of Project: _____

Location of Project: _____

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: _____

Title: _____ Phone Number: _____

Brief description of the Project completed or the Project in progress: _____

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: _____

Amount of Contract, Subcontract or Sub-subcontract: _____

Start Date and Completion Date: _____

Name of Contractor: _____

Name of Project: _____

Location of Project: _____

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: _____

Title: _____ Phone Number: _____

Brief description of the Project completed or the Project in progress: _____

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: _____

Amount of Contract, Subcontract or Sub-subcontract: _____

Start Date and Completion Date: _____

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ATTACHMENT 1 - BID INFORMATION

PROJECT ID: HWD10105

PIN: 8502017HW0034C

Description and Location of Work:

ATLANTIC AVENUE SAFETY IMPROVEMENTS

FROM GEORGIA AVENUE TO LOGAN STREET

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING AND
TRAFFIC SIGNAL WORK**

Together With All Work Incidental Thereto

**BOROUGH OF BROOKLYN
CITY OF NEW YORK**

Documents Available At: 30-30 Thomson Avenue
First Floor Bid Procurement Room
Long Island City, New York 11101
8:30 A.M. to 4:00 P.M. – Monday through Friday

Submission of Bids To: 30-30 Thomson Avenue
First Floor Bid Procurement Room
Long Island City, New York 11101
Before 11:00 A.M. on **MARCH 15, 2017**

Bid Opening: 30-30 Thomson Avenue
First Floor Bid Procurement Room
Long Island City, New York 11101
Time and Date: 11:00 A.M. on **MARCH 15, 2017**

Pre-Bid Conference: Yes _____ No **X**
If Yes, Mandatory _____ Optional: _____
Time and Date: _____
Location: _____

Bid Security: Bid Security is required in the amount set forth below; provided, however, bid security is not required if the TOTAL BID PRICE set forth on the Bid Form is less than \$ 1,000,000.00.

- (1) Bond in an amount not less than 10% of the TOTAL BID PRICE set forth on the Bid Form, OR
- (2) Certified Check in an amount not less than 5% of the TOTAL BID PRICE set forth on the Bid Form.

Performance and Payment Security: Required for contracts in the amount of \$1,000,000 or more. Performance Security and Payment Security shall each be in an amount equal to 100% of the Contract Price.

Agency Contact Person: Lorraine Holley
Phone: 718-391-2601 FAX: 718-391-2627

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LIST OF CONTRACT DRAWINGS		
SHEET NUMBER	DESCRIPTION	DRAWING NUMBER
001	TITLE	T1
002	KEY MAP WITH INDEX OF DRAWINGS	K1
003	LEGEND AND ABBREVIATIONS	L1
004 - 006	GENERAL NOTES	G1 - G3
007 - 008	SURVEY CONTROL PLANS	SC1 - SC2
009 - 010	HIGHWAY TYPICAL CROSS-SECTIONS	CS1 - CS2
011 - 019	HIGHWAY CONSTRUCTION PLANS	HP1 - HP9
020 - 033	UTILITY PLAN & PROFILE	U1 - U14
034 - 037	PAVEMENT MARKING PLANS	PM1 - PM4
038 - 041	WAY-FINDING PLANS & DETAILS	WF1 - WF4
042 - 045	TRAFFIC SIGNAL PLANS	TS1 - TS4
046 - 054	STREET LIGHTING PLANS	SL1 - SL9
055 - 061	MAINTENANCE & PROTECTION OF TRAFFIC	M1 - M7
062 - 073	LIRR VENT LOCATIONS & MODIFICATION PLANS	S1 - S12
074	LANDSCAPE NOTES	LN01
075 - 078	TREE MITIGATION PLANS	MP01 - MP04
079 - 081	TREE IMPACT MITIGATION TABLES	MT01 - MT03
082 - 084	TREE IMPACT MITIGATION TECHNIQUES	MD01 - MD03
085 - 088	LANDSCAPE PLANTING PLANS	LL01 - LL04
089 - 095	DETAILED MEDIAN PLANTING PLANS	LP01 - LP07
096 - 100	LANDSCAPE PLANTING SCHEDULES	LD01 - LD05
101 - 107	FDNY BASE & COMMUNICATION PLANS	FD1 - FD7
108	RECORD OF BORING	

NO TEXT ON THIS PAGE

STANDARDS AND REFERENCE DRAWINGS

THE LATEST PROVISIONS OF THE APPLICABLE REFERENCE STANDARDS THAT HAVE BEEN AUTHORIZED UPTO
THE START OF CONSTRUCTION SHALL BE CONSIDERED AS PART OF THESE CONTRACT DOCUMENTS.

<i>DRAWING NO.</i>	<i>DESCRIPTION</i>	<i>AGENCY</i>
H-1003A	PEDESTRIAN CROSSWALKS - MALL TYPE B	NYC DOT HIGHWAY
H-1004	TYPICAL TEMPORARY PEDESTRIAN PASSAGEWAY IN ROADWAY DURING CONSTRUCTION	NYC DOT HIGHWAY
H-1010	STEEL FACED CONCRETE CURB STEEL FACING TYPE D	NYC DOT HIGHWAY
H-1011	SIDEWALK PEDESTRIAN RAMPS	NYC DOT HIGHWAY
H-1012	TIMBER CURB	NYC DOT HIGHWAY
H-1014	TEMPORARY PEDESTRIAN STEEL BARRICADE	NYC DOT HIGHWAY
H-1015	STEEL FACED DROP CURB DRIVEWAYS	NYC DOT HIGHWAY
H-1031	TYPICAL PAVEMENT KEY	NYC DOT HIGHWAY
H-1033	TYPICAL RESURFACING ON ASPHALT PAVEMENT &/OR WEARING COURSE (LESS THAN FULL WIDTH)	NYC DOT HIGHWAY
H-1034	TYPICAL CONSTRUCTION JOINTS FOR CONCRETE BASE FOR PAVEMENTS	NYC DOT HIGHWAY
H-1035	REINFORCED CONCRETE CURB & DROP CURB	NYC DOT HIGHWAY
H-1036	CONCRETE POURED-IN-PLACE MALL CURB	NYC DOT HIGHWAY
H-1037	UNDER SIDEWALK DRAIN	NYC DOT HIGHWAY
H-1038	TYPE III BREAKAWAY BARRICADE	NYC DOT HIGHWAY
H-1040	TRANSVERSE CONSTRUCTION JOINTS FOR CONCRETE BASE	NYC DOT HIGHWAY
H-1042A	STANDARD TRENCH/HOLE RESTORATION IN ACCORDANCE WITH LOCAL LAW NO.14	NYC DOT HIGHWAY
H-1044	CONCRETE CURB	NYC DOT HIGHWAY
H-1045	CONCRETE SIDEWALK	NYC DOT HIGHWAY
H-1046	STREET TREE PLANTING DETAIL TYPE I	NYC DOT HIGHWAY
H-1046A	PROTECTIVE TREE BARRIER	NYC DOT HIGHWAY
H-1047	TYPICAL CURB DETAIL AT EXISTING TREES	NYC DOT HIGHWAY
H-1049	PLASTIC BARREL	NYC DOT HIGHWAY
H-1050	REINFORCED CONCRETE PAVEMENT CONSTRUCTION DETAILS (SHEET 1 TO 4)	NYC DOT HIGHWAY
H-1053	DETAILS FOR CONSTRUCTING AREAS OF ADJUSTMENT AND TRANSITION SECTIONS	NYC DOT HIGHWAY
H-1054	LIMITS OF MEASUREMENT FOR PAVEMENT OF TEMPORARY ASPHALT PAVEMENT	NYC DOT HIGHWAY
H-1055	PAVEMENT KEY TYPE A, B-1, B-2, C	NYC DOT HIGHWAY
H-1057	TEMPORARY STORAGE AREA	NYC DOT HIGHWAY
MS-1000	NEWYORK CITY COMPARISON OF DATUM PLANES	NYC DOT HIGHWAY
MS-1001	SIDEWALK PAVEMENT LIMITS	NYC DOT HIGHWAY
MS-1003	TYPICAL ROADWAY CROSS-SECTION/RESURFACING	NYC DOT HIGHWAY
MS-1005	ADJUSTMENTS AT CATCH BASINS	NYC DOT HIGHWAY
TAR-1	TYPICAL PAVEMENT MARKINGS, ARROWS & SYMBOLS	TRAFFIC
TBI-1	BIKE LANES THROUGH INTERSECTIONS	TRAFFIC
TBUS-1	TYPICAL PAVEMENT MARKINGS, BUS LANES	TRAFFIC
TBX-1	BIKE BOXES FOR BIKE LANES	TRAFFIC
TCW-1	TYPICAL PAVEMENT MARKINGS, CROSSWALKS & STOP BARS	TRAFFIC
TRF-2	TYPICAL PAVEMENT MARKINGS, PLANTED PEDESTRIAN ISLAND	TRAFFIC
TSC-1	TYPICAL PAVEMENT MARKINGS, STRIPING & CROSS HATCHING	TRAFFIC
TWM-1	TYPICAL PAVEMENT MARKINGS, WORD MESSAGES	TRAFFIC
E-3788	TYPICAL FOUNDATIONS FOR TYPES 8, 10, & 12 LAMPPOSTS	LIGHTING
H-3722 (3A)	STEEL TRANSFORMER BASE-ROUND CORNERS	LIGHTING
H-3722 (4A)	TAPERED STEEL SHAFT ASSEMBLIES OCTAGONAL	LIGHTING
H5212A	THREE RELAY CONTROL CABINET WITH 3 P.E.C.'S 30" x20" x 10"	LIGHTING
J3722	TYPE 8S & 12S SINGLE ARM AND 8T & 12T TWIN ARM LAMPPOST	LIGHTING
J3722M	POLE CAP FOR TAPERED STEEL OCTAGONAL SHAFT	LIGHTING
J-5306	30' (7.6mm) ALUMINUM DAVIT POLE WITH TRANSFORMER BASE	LIGHTING
J-5307	30' (7.6mm) ALUMINUM DAVIT POLE WITHOUT TRANSFORMER BASE	LIGHTING

STANDARDS AND REFERENCE DRAWINGS

THE LATEST PROVISIONS OF THE APPLICABLE REFERENCE STANDARDS THAT HAVE BEEN AUTHORIZED UP TO THE START OF CONSTRUCTION SHALL BE CONSIDERED AS PART OF THESE CONTRACT DOCUMENTS.

<i>DRAWING NO.</i>	<i>DESCRIPTION</i>	<i>AGENCY</i>
J-5308	14' (6.6mm) PEDESTRIAN DAVIT LAMPPOST	LIGHTING
141	MANHOLE CONSTRUCTION POST SETTING AND SUBSIDIARY CONNECTIONS	FDNY
144E	DRAIN PLATE FOR F.D. MANHOLE AND HANDHOLE	FDNY
144S	SLOTTED MANHOLE CONSTRUCTION	FDNY
168	INSTALLATION OF FIRE ALARM PEDESTAL BUMPERS	FDNY
SE1	VITRIFIED CLAY PIPE ON CONCRETE CRADLE ON EARTH OR ON ROCK	SEWER
SE3	CIRCULAR PRECAST REINFORCED CONCRETE PIPE ON CONCRETE CRADLE ON EARTH OR ON ROCK	SEWER
SE11	TYPE A-1 AND TYPE A-2 MANHOLES ON 8" DIAMETER TO 30" DIAMETER PIPE SEWERS IN DRY LOCATION	SEWER
SE57	CAST IRON FRAME FOR CATCH BASINS (WITH CURB PIECE)	SEWER
SE59	CAST IRON GRATING, BACK PLATE, AND CURB PIECE FOR CATCH BASINS	SEWER
SE60	CAST IRON HOOD AND HOOKS FOR CATCH BASINS	SEWER
SE70	MINIMUM LOAD DIAGRAM FOR NON-WATERTIGHT SHEETING DESIGN	SEWER
SE71	MINIMUM LOAD DIAGRAM FOR WATERTIGHT SHEETING DESIGN	SEWER
10240-A-Z	VALVE BOX SKIRT, CAST IRON	WATER
10241-A-Z	HYDRANT VALVE BOX, CAST IRON	WATER
11576-A-Z	FOUNDATIONS FOR VALVE BOXES	WATER
13547-B-Z	WIDE FLANGE MANHOLE HEAD & COVER, CAST IRON	WATER
42063-Y	SHALLOW CROSSING FOR WATER MAINS, 24" DIAMETER AND SMALLER	WATER
44292-B-Z	GRAVEL OR BROKEN STONE BEDDING AND FILTER FABRIC INSTALLATION FOR DUCTILE CAST IRON PIPES	WATER
44387-Z-B	RODDING ALL SPECIAL CASTINGS, LEAD & MECHANICAL JOINTS ON LOW PRESSURE WATER MAINS, PUSH-ON JOINT PIPE	WATER
45161-A-Z	STANDARD STEEL HYDRANT FLENDER	WATER
46069-Y	STANDARD CHAMBER FOR 12" OUTLET VALVE	WATER
46464-Z	METHOD FOR PROTECTING D.I. WATER MAINS WITH SHALLOW (LESS THAN 24") COVER	WATER
WM0401	PAVEMENT EXCAVATION LIMITS FOR PERMANENT RESTORATION IN STREETS NOT PROTECTED BY N..Y.C. ADM. CODE § 19.144, WATER MAINS 20" AND LESS IN DIAMETER	WATER
WM0402	PAVEMENT EXCAVATION LIMITS FOR PERMANENT RESTORATION IN STREETS PROTECTED BY N.Y.C. ADM. CODE § 19.144, WATER MAINS 20" AND LESS IN DIAMETER	WATER

NOTE: OTHER AGENCY STANDARDS AND REFERENCE DRAWINGS TO BE USED WHERE APPLICABLE

BID SCHEDULE

The following pages contain the Bid Schedule. Items listed in the Bid Schedule shall comply with the requirements of the corresponding sections of the specifications detailed in the table below. All references to the Standard Specifications, Details, Standards, and Drawings shall be to the version in effect at the time of bid.

NOTES:

- "XXX" in the table below signifies any possible combination of characters and spaces.
- The table below may contain item formats which are not included in the Bid Schedule.
- **Please refer to the Bid Schedule to determine which specifications apply.**

Item Number Format	Applicable Specifications
4.XXX 6.XXX 7.XXX 8.XXX (Except 8.01 XXX; see below) 9.XXX	NYC Department of Transportation ("DOT") Standard Highway Specifications, as amended in the R-Pages, located in Volume 3 of 3 herein; <p style="text-align: center;">AND</p> NYC DOT Standard Details of Construction; <p style="text-align: center;">OR,</p> <i>if the item is not contained within the Standard Specifications</i> , then see the applicable New Sections in the I-Pages, located in Volume 3 of 3 of the contract.
1.XXX 50.XXX through 55.XXX 60.XXX through 66.XXX 70.XXX through 79.XXX (Except 79.11XXX; see below) DSS XXX DSW XXX	NYC Department of Environmental Protection ("DEP") Standard Sewer and Water Main Specifications, as amended in the R-Pages and SW-Pages, located in Volume 3 of 3 herein; <p style="text-align: center;">AND</p> NYC DOT Specifications for Trunk Main Work; <p style="text-align: center;">AND</p> NYC DOT Sewer Design Standards; <p style="text-align: center;">AND</p> NYC DOT Water Main Standard Drawings; <p style="text-align: center;">OR,</p> <i>if the item is not contained within the Standard Specifications</i> , then see the Amendments to the Standard Sewer and Water Main Specifications in the SW-Pages, located in Volume 3 of 3 of the contract.
GI-XXX PM-XXX ROW XXX	New Sections in the I-Pages, located in Volume 3 of 3 herein <p style="text-align: center;">AND</p> NYC DEP Standards for Green Infrastructure.
UTL-XXX	Gas Cost Sharing Standard Specifications in the EP7-Pages, located in Volume 3 of 3 herein.

BID SCHEDULE

Item Number Format	Applicable Specifications
83X.XXX HW-XXX MX.XXX MP XXX NYC-XXX NYCT-XXX NYPD-XXX P XXX PK-XXX	New Sections in the I-Pages, located in Volume 3 of 3 herein.
BMP-XXX	Specifications for Construction of Best Management Practice (BMP) and Mitigation Area in the BMP-Pages, located in Volume 3 of 3 herein.
E XXX ME XXX	Specifications for the Specialty Electrical Works in the EL-Pages, located in Volume 3 of 3 herein.
SL-XXX	NYC DOT Division of Street Lighting Specifications <b style="text-align: center;">AND NYC Division of Street Lighting Standard Drawings.
T-XXX	NYC DOT Specifications for Traffic Signals and Intelligent Transportation Systems <b style="text-align: center;">AND NYC DOT Traffic Signal Standard Drawings.
JB XXX	Joint Bid Specifications in the JB-Pages, located in Volume 3 of 3 herein.
8.01 XXX	Specifications for Handling, Transportation and Disposal of Nonhazardous and Potentially Hazardous Contaminated Materials in the HAZ-Pages, located in Volume 3 of 3 herein.
67.XXX	Specifications for Abatement of Coal Tar Wrap Asbestos Containing Materials in the ASB-Pages, located in Volume 3 of 3 herein.
79.11XXX	Specifications for Abatement of Transit Authority Duct Insulation Asbestos Containing Materials in the ASB-Pages, located in Volume 3 of 3 herein.

(NO FURTHER TEXT ON THIS PAGE)

BID SCHEDULE

- NOTE:** (1) The Agency may reject a bid if it contains unbalanced bid prices. An unbalanced bid is considered to be one containing lump sum or unit items which do not reflect reasonable actual costs plus a reasonable proportionate share of the Bidder's anticipated profit, overhead costs, and other indirect costs, anticipated for the performance of the items in question.
- (2) The following bid prices on Unit Price Contracts are to be paid for the actual quantities of the item numbers in the completed work or structure, and they cover the cost of all work, labor, material, tools, plant and appliances of every description necessary to complete the entire work, as specified, and the removal of all debris, temporary work and appliances.
- (3) PLEASE BE SURE A LEGIBLE BID IS ENTERED, IN INK, FOR EACH ITEM.
Alterations must be initialed in ink by the bidder.
- (4) The Extended Amount entered in Column 6 shall be the product of the Estimated Quantity in Column 3 times the Unit Price Bid in Column 5.
- (5) Prospective bidders must examine the Bid Schedule carefully and, before bidding, must advise the Commissioner, in writing, if any pages are missing, and must request that such missing pages be furnished them. The pages of this Bid Schedule are numbered consecutively, as follows:
B - 3 Through B - 51

PLEASE BE SURE A LEGIBLE BID IS ENTERED FOR EACH ITEM.
THE BIDDER SHALL INSERT THE TOTAL BID PRICE IN
THE BID FORM ON PAGE C-4 OF THIS BID BOOKLET.

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BID SCHEDULE FORM

COL 1 SEQ. NO	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES) DOLLARS : CTS	COL 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS : CTS
001	4.02 AB-R ASPHALTIC CONCRETE WEARING COURSE, 1-1/2" THICK	400.00	S.Y.		
002	4.02 AF-R ASPHALTIC CONCRETE WEARING COURSE, 2" THICK	66,900.00	S.Y.		
003	4.02 CB ASPHALTIC CONCRETE MIXTURE	8,985.00	TONS		
004	4.04 H CONCRETE BASE FOR PAVEMENT, VARIABLE THICKNESS FOR TRENCH RESTORATION, (HIGH-EARLY STRENGTH)	3,990.00	C.Y.		
005	4.06 CONCRETE IN STRUCTURES, CLASS A-40	3,000.00	C.Y.		
006	4.06 CS EXISTING STRUCTURE - CONDITION SURVEY	1.00	L.S.		

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BID SCHEDULE FORM

COL 1	COL 2	COL 3	COL 4	COL 5	COL 6
SEQ. NO	ITEM NUMBER and DESCRIPTION	ENGINEER'S ESTIMATE OF QUANTITY	UNIT	UNIT PRICE (IN FIGURES) DOLLARS : CTS	EXTENDED AMOUNT (IN FIGURES) DOLLARS : CTS
007	4.06 SCR STRUCTURAL CRACK REPAIR	3,844.00	L.F.		
008	4.06 SR CONCRETE RESTORATION - SPALL REPAIR	2,420.00	S.F.		
009	4.06 WS WATER STOP STRIP AT CONSTRUCTION JOINT	5,767.00	L.F.		
010	4.08 AA CONCRETE CURB (18" DEEP)	1,800.00	L.F.		
011	4.09 AE STRAIGHT STEEL FACED CONCRETE CURB (21" DEEP)	10,300.00	L.F.		
012	4.09 BE DEPRESSED STEEL FACED CONCRETE CURB (21" DEEP)	2,100.00	L.F.		



Department of
Design and
Construction

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN

PROJECT ID: HWD10105

CONTRACT PIN: 8502017HW0034C

1/9/2017 11:34 AM

BID SCHEDULE FORM

COL 1	COL 2	COL 3	COL 4	COL 5	COL 6
SEQ. NO	ITEM NUMBER and DESCRIPTION	ENGINEER'S ESTIMATE OF QUANTITY	UNIT	UNIT PRICE (IN FIGURES) DOLLARS CTS	EXTENDED AMOUNT (IN FIGURES) DOLLARS CTS
013	4.09 CE CORNER STEEL FACED CONCRETE CURB (21" DEEP)	2,600.00	L.F.		
014	4.11 AS EARTH EXCAVATION FOR STRUCTURES	925.00	C.Y.		
015	4.13 AAS 4" CONCRETE SIDEWALK (UNPIGMENTED)	151,150.00	S.F.		
016	4.13 BAS 7" CONCRETE SIDEWALK (UNPIGMENTED)	47,235.00	S.F.		
017	4.13 DE EMBEDDED PREFORMED DETECTABLE WARNING UNITS	1,300.00	S.F.		
018	4.14 STEEL REINFORCEMENT BARS	760,500.00	LBS.		



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BID SCHEDULE FORM

COL 1	COL 2	COL 3	COL 4	COL 5	COL 6
SEQ. NO	ITEM NUMBER and DESCRIPTION	ENGINEER'S ESTIMATE OF QUANTITY	UNIT	UNIT PRICE (IN FIGURES) DOLLARS CTS	EXTENDED AMOUNT (IN FIGURES) DOLLARS CTS
019	4.14 E EPOXY COATED STEEL REINFORCEMENT BARS	21,635.00	LBS.		
020	4.15 TOPSOIL	1,855.00	C.Y.		
021	4.15 SS STRUCTURAL SOIL FOUNDATION MATERIAL	721.00	C.Y.		
022	4.16 AA TREES REMOVED (4" TO UNDER 12" CALIPER)	8.00	EACH		
023	4.16 AC TREES REMOVED (18" TO UNDER 24" CALIPER)	14.00	EACH		
024	4.16 ADE TREES REMOVED (24" TO UNDER 48" CALIPER)	15.00	EACH		

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BID SCHEDULE FORM

COL 1 SEQ. NO	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
025	4.16 CA TREES PLANTED, 3" TO 3-1/2" CALIPER, ALL TYPES	72.00	EACH				
026	4.16 CA510 TREES PLANTED, 3" TO 3-1/2" CALIPER, ALL TYPES, IN 5' X 10' TREE PITS	81.00	EACH				
027	4.16 STUMP STUMP REMOVAL	7.00	UNITS				
028	4.17 AA SHRUBS PLANTED, 15" TO 18" HIGH, ALL TYPES	2,751.00	EACH				
029	4.17 AC SHRUBS PLANTED, 18" TO 24" HIGH, ALL TYPES	210.00	EACH				
030	4.17 ACA SHRUBS PLANTED, 24" TO 30" HIGH, ALL TYPES	173.00	EACH				

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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES)		COL. 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
031	4.17 LN-B-NDM GROUND COVER AND BULB PLANTING, (NARCISSUS BULBS)	7,610.00	EACH				
032	4.17 PG1G PERENNIALS OR GROUNDCOVERS, PLANTED, 1 GALLON, ALL TYPES	8,615.00	EACH				
033	4.17 PG1Q PERENNIALS OR GROUNDCOVERS, PLANTED, 1 QUART, ALL TYPES	9,330.00	EACH				
034	4.18 A MAINTENANCE TREE PRUNING (UNDER 12" CAL.)	17.00	EACH				
035	4.18 B MAINTENANCE TREE PRUNING (12" TO UNDER 18" CAL.)	2.00	EACH				
036	4.18 C MAINTENANCE TREE PRUNING (18" TO UNDER 24" CAL.)	11.00	EACH				



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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS
037	4.18 D MAINTENANCE TREE PRUNING (24" CAL. AND OVER)	12.00	EACH		
038	4.18 DC DECOMPACT TREE OVER 6" TO 12" DBH	65.00	EACH		
039	4.18 DM GEOTEXTILE/COMPOSITE DRAINAGE MAT	9,810.00	S.F.		
040	4.18 R TREE ROOT PRUNING (UNDER 12" Cal.)	18.00	EACH		
041	4.18 RP ROOT PRUNING	25.00	EACH		
042	4.21 TREE CONSULTANT	1,520.00	P/HR		



Department of
Design and
Construction

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN

PROJECT ID: HWD10105
CONTRACT PIN: 8502017HW0034C

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BID SCHEDULE FORM

COL 1 SEQ. NO	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)
				DOLLARS	CTS	
043	50.31CC15 15" E.S.V.P. COMBINED SEWER, ON CONCRETE CRADLE	40.00	L.F.			
044	51.21S0A1000V STANDARD MANHOLE TYPE A-1	2.00	EACH			
045	51.41AA STANDARD CATCH BASIN, TYPE 1	20.00	EACH			
046	51.42S1SO INCREMENTAL COST OF STANDARD CATCH BASIN TYPE 3 WITH CURB PIECE IN LIEU OF STANDARD CATCH BASIN TYPE 1	2.00	EACH			
047	52.11D12 12" DUCTILE IRON PIPE BASIN CONNECTION	515.00	L.F.			
048	59.18DR TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS	40.00	L.F.			



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COL 1 SEQ. NO	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES) DOLLARS	COL 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
049	6.02 AAN UNCLASSIFIED EXCAVATION	8,320.00	C.Y.			
050	6.02 XHEC INCREMENTAL COST FOR MODIFYING WORK METHODS NEAR (WITHIN 3 FEET OF) TRANSIT FACILITIES AND BUILDING VAULTS	6,445.00	C.Y.			
051	6.02 XSCW INCREMENTAL COST FOR USING SPECIAL CARE WORK METHODS NEAR (FROM 3 FEET TO 50 FEET) TRANSIT FACILITIES	3,825.00	C.Y.			
052	6.04 DG DECORATIVE GRAVEL	517.00	S.Y.			
053	6.22 F ADDITIONAL HARDWARE	250.00	LBS.			
054	6.23 AB REMOVE EXISTING FIRE ALARM POST	7.00	EACH			

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				DOLLARS	CTS	DOLLARS	CTS
055	6.23 BA FURNISH AND INSTALL FIRE ALARM POST AND SUBBASE IN ACCORDANCE WITH F.D. STD. DWG. #141	8.00	EACH				
056	6.23 BD FURNISH AND INSTALL 4-PAIR FIRE ALARM CABLE	983.00	L.F.				
057	6.23 BFB FURNISH AND INSTALL FIRE DEPARTMENT 24 WIRE TERMINAL BOX AND TERMINATE FIRE ALARM CABLES	8.00	EACH				
058	6.23 BGSE FURNISH AND INSTALL 4" P.V.C. CONDUIT, SCHEDULE 40, U.L. 651 (WITH PAVEMENT EXCAVATION)	269.00	L.F.				
059	6.23 BHE FURNISH AND INSTALL 4" 90-DEGREE P.V.C. WIDE BEND, SCHEDULE 40, U.L. 651 (WITH PAVEMENT EXCAVATION) IN ACCORDANCE WITH F.D. STD. DWG. #141 OR #145AA	8.00	EACH				
060	6.23 BP FURNISH AND INSTALL FIRE ALARM PEDESTAL BUMPERS (2 REQUIRED PER SET) IN ACCORDANCE WITH F.D. STD. DWG. #168	8.00	SETS				

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				DOLLARS	CTS	DOLLARS	CTS
061	6.23 XBE FURNISH AND INSTALL 2" GALVANIZED STEEL CONDUIT (WITH PAVEMENT EXCAVATION)	920.00	L.F.				
062	6.25 RS TEMPORARY SIGNS	10,900.00	S.F.				
063	6.26 TIMBER CURB	10,900.00	L.F.				
064	6.28 AA LIGHTED TIMBER BARRICADES	150.00	L.F.				
065	6.29 TTM TEMPORARY TUBULAR MARKERS	27.00	EACH				
066	6.36 DR STRUCTURAL REPAIR AND ADJUSTMENT OF UTILITY STRUCTURES	10.00	C.Y.				

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				DOLLARS	CTS	DOLLARS	CTS
067	6.40 D ENGINEER'S FIELD OFFICE (TYPE D)	30.00	MONTH				
068	6.43 PHOTOGRAPHS	100.00	SETS				
069	6.44 THERMOPLASTIC REFLECTORIZED PAVEMENT MARKINGS (4" WIDE)	86,200.00	L.F.				
070	6.49 TEMPORARY PAVEMENT MARKINGS (4" WIDE)	35,000.00	L.F.				
071	6.50 CLEANING OF DRAINAGE STRUCTURES	44.00	EACH				

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COL 1 SEQ. NO	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES) DOLLARS . . . CTS		COL 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS . . . CTS	
072	6.52 FED UNIFORMED FLAGPERSON PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 180,000.00	1.00	F.S.	180,000	00	\$180,000	00
073	6.53 REMOVE EXISTING LANE MARKINGS (4" WIDE)	95,000.00	L.F.				
074	6.55 SAWCUTTING EXISTING PAVEMENT	30,700.00	L.F.				
075	6.67 SUBBASE COURSE, SELECT GRANULAR MATERIAL	2,000.00	C.Y.				
076	6.68 PLASTIC FILTER FABRIC	6,160.00	S.Y.				



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077	6.74 B STEEL EDGING STRIP	8,650.00	L.F.		
078	6.75 GRINDING EXISTING ASPHALTIC CONCRETE WEARING COURSE	18,000.00	C.Y.		
079	6.85 A TRAFFIC ENFORCEMENT AGENTS PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 442,703.00	1.00	F.S.	442,703 00	\$442,703 00
080	6.87 PLASTIC BARRELS	12,150.00	EACH		
081	6.91 REFLECTIVE CRACKING MEMBRANE (18" WIDE)	30,700.00	L.F.		

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				DOLLARS	CTS	DOLLARS	CTS
082	6.99 AUDIO AND VIDEO DOCUMENTATION SURVEY	1.00	L.S.				
083	60.11R516 FURNISHING AND DELIVERING 16-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	60.00	L.F.				
084	60.11R520 FURNISHING AND DELIVERING 20-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	4,275.00	L.F.				
085	60.11R606 FURNISHING AND DELIVERING 6-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	600.00	L.F.				
086	60.11R608 FURNISHING AND DELIVERING 8-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	880.00	L.F.				
087	60.11R612 FURNISHING AND DELIVERING 12-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	4,300.00	L.F.				

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				DOLLARS	CTS	DOLLARS	CTS
088	60.12D06 LAYING 6-INCH DUCTILE IRON PIPE AND FITTINGS	610.00	L.F.				
089	60.12D08 LAYING 8-INCH DUCTILE IRON PIPE AND FITTINGS	950.00	L.F.				
090	60.12D12 LAYING 12-INCH DUCTILE IRON PIPE AND FITTINGS	4,600.00	L.F.				
091	60.12D16 LAYING 16-INCH DUCTILE IRON PIPE AND FITTINGS	80.00	L.F.				
092	60.12D20 LAYING 20-INCH DUCTILE IRON PIPE AND FITTINGS	4,600.00	L.F.				
093	60.13M0A24 FURNISHING AND DELIVERING DUCTILE IRON MECHANICAL JOINT 24 -INCH DIAMETER AND SMALLER FITTINGS, INCLUDING WEDGE TYPE RETAINER GLANDS	46.00	TONS				

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				DOLLARS	CTS	DOLLARS	CTS
094	60.18BJC20EL FURNISHING, DELIVERING AND INSTALLING BELL JOINT CLAMPS, COMPLETE FOR 20-INCH PIPE AND LESS	24.00	EACH				
095	61.11DMM06 FURNISHING AND DELIVERING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	40.00	EACH				
096	61.11DMM08 FURNISHING AND DELIVERING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	16.00	EACH				
097	61.11DMM12 FURNISHING AND DELIVERING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	18.00	EACH				
098	61.11DMM20 FURNISHING AND DELIVERING 20-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	15.00	EACH				

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				DOLLARS	CTS	DOLLARS	CTS
099	61.11TWC03 FURNISHING AND DELIVERING 3-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	5.00	EACH				
100	61.11TWC04 FURNISHING AND DELIVERING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	1.00	EACH				
101	61.11TWC06 FURNISHING AND DELIVERING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	1.00	EACH				
102	61.12DMM06 SETTING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	40.00	EACH				
103	61.12DMM08 SETTING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	16.00	EACH				
104	61.12DMM12 SETTING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	18.00	EACH				

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				DOLLARS	CTS	DOLLARS	CTS
105	61.12DMM20 SETTING 20-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	15.00	EACH				
106	61.12TWC03 SETTING 3-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	5.00	EACH				
107	61.12TWC04 SETTING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	1.00	EACH				
108	61.12TWC06 SETTING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	1.00	EACH				
109	62.11SD FURNISHING AND DELIVERING HYDRANTS	36.00	EACH				
110	62.12SG SETTING HYDRANTS COMPLETE WITH WEDGE TYPE RETAINER GLANDS	36.00	EACH				

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				DOLLARS	CTS	DOLLARS	CTS
111	62.13RH REMOVING HYDRANTS	34.00	EACH				
112	62.14FS FURNISHING, DELIVERING AND INSTALLING HYDRANT FENDERS	72.00	EACH				
113	63.11VC FURNISHING AND DELIVERING VARIOUS CASTINGS	60.00	TONS				
114	637.9520 FIELD INFORMATION MANAGEMENT SYSTEM PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 50,000.00	1.00	F.S.	50,000	00	\$50,000	00
115	64.11EL WITHDRAWING AND REPLACING HOUSE SERVICES USING 1-1/2- INCH OR LARGER SCREW TAPS	10.00	EACH				



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				DOLLARS	CTS	DOLLARS	CTS
116	64.11ST WITHDRAWING AND REPLACING HOUSE SERVICES USING SMALLER THAN 1-1/2-INCH SCREW TAPS	120.00	EACH				
117	64.12COEG CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	10.00	L.F.				
118	64.12COLT CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	50.00	L.F.				
119	64.12ESEG EXTENDING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	50.00	L.F.				
120	64.12ESLT EXTENDING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	575.00	L.F.				
121	64.13WC08 FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 8-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	1.00	EACH				

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				DOLLARS	CTS	
122	64.13WC12 FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 12-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	3.00	EACH			
123	64.13WC20 FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 20-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	3.00	EACH			
124	65.11BR FURNISHING, DELIVERING AND INSTALLING BANDS, RODS, WASHERS, ETC., COMPLETE, FOR RESTRAINING JOINTS	550.00	LBS.			
125	65.21PS FURNISHING AND PLACING POLYETHYLENE SLEEVE Unit price bid shall not be less than: \$ 0.50	5,000.00	L.F.			
126	65.31FF FURNISHING, DELIVERING AND PLACING FILTER FABRIC Unit price bid shall not be less than: \$ 0.10	97,000.00	S.F.			
127	65.51PC FURNISHING AND PLACING CAST-IN-PLACE CONCRETE CLASS 40 AND PRECAST CONCRETE CLASS 50	30.00	C.Y.			



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				DOLLARS	CTS	DOLLARS	CTS
128	65.61SS FURNISHING, DELIVERING AND PLACING STRUCTURAL, REINFORCING AND MISCELLANEOUS STEEL	109,300.00	LBS.				
129	65.71SG FURNISHING, DELIVERING AND PLACING SCREENED GRAVEL OR SCREENED BROKEN STONE BEDDING	610.00	C.Y.				
130	7.01 BTS BRACING AND TUNNEL SHIELDING	1.00	L.S.				
131	7.01 RG LIRR RAISED SUBWAY COLLAR FRAME AND GRATINGS	2,610.00	S.F.				
132	7.07 MB2 MARTELLO BOLLARD, VERSION 2.0	20.00	EACH				
133	7.13 B MAINTENANCE OF SITE Unit price bid shall not be less than: \$ 8,000.00	24.00	MONTH				



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				DOLLARS	CTS	
134	7.16 D TEST PITS	50.00	C.Y.			
135	7.18 LM LIGHT WEIGHT FILL MATERIAL (60 PCF COMPACTED DENSITY)	168.00	C.Y.			
136	7.19 AA POST INSTALLED ADHESIVE ANCHORS	2,035.00	EACH			
137	7.36 PEDESTRIAN STEEL BARRICADES	28,600.00	L.F.			
138	7.50 CB2 CITY BENCH WITH BACK (V 2)	6.00	EACH			
139	7.50 CBB2 CITY BENCH BACKLESS (V 2)	3.00	EACH			



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				DOLLARS	CTS	DOLLARS	CTS
140	7.54 R REMOVAL OF EXISTING TREE GRATES AND FRAMES	3.00	EACH				
141	7.88 AA RODENT INFESTATION SURVEY AND MONITORING Unit price bid shall not be less than: \$ 9,000.00	1.00	L.S.				
142	7.88 AB RODENT BAIT STATIONS Unit price bid shall not be less than: \$ 60.00	560.00	EACH				
143	7.88 AC BAITING OF RODENT BAIT STATIONS Unit price bid shall not be less than: \$ 9.50	560.00	EACH				
144	7.88 AD WATERBUG BAIT APPLICATIONS Unit price bid shall not be less than: \$ 65.00	110.00	BLOCK				
145	70.31FN FENCING Unit price bid shall not be less than: \$ 2.00	21,600.00	L.F.				

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				DOLLARS	CTS	DOLLARS	CTS
146	70.51EO EXCAVATION OF BOULDERS IN OPEN CUT Unit price bid shall not be less than: \$ 75.00	25.00	C.Y.				
147	70.71SB STONE BALLAST Unit price bid shall not be less than: \$ 15.00	20.00	C.Y.				
148	70.81CB CLEAN BACKFILL Unit price bid shall not be less than: \$ 15.00	1,850.00	C.Y.				
149	70.91SW12 FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 12-INCH IN DIAMETER AND LESS	7,000.00	S.F.				
150	70.91SW20 FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 20-INCH IN DIAMETER	55,000.00	S.F.				
151	72.11HF HYDRAULIC FILL FOR ABANDONED SEWERS AND WATER MAINS	60.00	C.Y.				



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				DOLLARS	CTS	DOLLARS	CTS
152	73.11AB ADDITIONAL BRICK MASONRY Unit price bid shall not be less than: \$ 62.50	80.00	C.Y.				
153	73.21AC ADDITIONAL CONCRETE Unit price bid shall not be less than: \$ 62.50	125.00	C.Y.				
154	73.31AE0 ADDITIONAL EARTH EXCAVATION INCLUDING TEST PITS (ALL DEPTHS) Unit price bid shall not be less than: \$ 20.00	190.00	C.Y.				
155	73.41AG ADDITIONAL SELECT GRANULAR BACKFILL Unit price bid shall not be less than: \$ 15.00	185.00	C.Y.				
156	73.51AS ADDITIONAL STEEL REINFORCING BARS Unit price bid shall not be less than: \$ 1.00	400.00	LBS.				
157	8.01 C1 HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOIL	900.00	TONS				

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				DOLLARS	CTS	DOLLARS	CTS
158	8.01 C2 SAMPLING AND TESTING OF CONTAMINATED/POTENTIALLY HAZARDOUS SOIL FOR DISPOSAL PURPOSES	2.00	SETS				
159	8.01 H HANDLING, TRANSPORTING AND DISPOSAL OF HAZARDOUS SOIL	40.00	TONS				
160	8.01 S HEALTH AND SAFETY	1.00	L.S.				
161	8.01 W1 REMOVAL, TREATMENT, AND DISCHARGE/DISPOSAL OF CONTAMINATED WATER	4.00	DAY				
162	8.01 W2 SAMPLING AND TESTING OF CONTAMINATED WATER	2.00	SETS				
163	8.02 A SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	235,975.00	S.F.				

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				DOLLARS	CTS	DOLLARS	CTS
164	8.02 B SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	28,200.00	L.F.				
165	8.08 VARIABLE MESSAGE BOARD	2.00	EACH				
166	8.32 BARK CHIP MULCH	3,860.00	S.Y.				
167	9.00 C EXPLORATORY TEST PITS	100.00	C.F.				
168	9.04 HW ALLOWANCE FOR ANTI-FREEZE ADDITIVE IN CONCRETE PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 50,000.00	1.00	F.S.	50,000	00	\$50,000	00

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				DOLLARS	CTS	DOLLARS	CTS
169	9.07 NON-WOVEN GEOTEXTILE (FOR BACKFILL AND UNDERDRAINS)	4,485.00	S.Y.				
170	9.07 AWB NON-WOVEN GEOTEXTILE - WEED BARRIER	3,585.00	S.Y.				
171	9.30 STORM WATER POLLUTION PREVENTION	1.00	L.S.				
172	9.99 M FLASHING ARROW BOARD	2.00	MONTH				
173	HW-914 ALLOWANCE FOR WAYFINDING TOTEMS PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 95,740.00	1.00	F.S.	95,740	00	\$95,740	00



Department of
Design and
Construction

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN

PROJECT ID: HWD10105
CONTRACT PIN: 8502017HW0034C

1/9/2017 11:34 AM

BID SCHEDULE FORM

COL 1 SEQ. NO	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
174	SL-20.02.02 FURNISH AND INSTALL STANDARD TYPE ANCHOR BOLT FOUNDATION, AS PER DRAWING E-3788	64.00	EACH				
175	SL-20.08.01 REMOVE STANDARD TYPE ANCHOR BOLT CONCRETE FOUNDATION	66.00	EACH				
176	SL-21.04.06 FURNISH AND INSTALL "FLATBUSH AVENUE" LAMPPOST WITH OCTAGONAL TRANSFORMER BASE	13.00	EACH				
177	SL-21.04.07 FURNISH AND INSTALL "FLATBUSH AVENUE" TWIN ARM LAMPPOST WITH OCTAGONAL TRANSFORMER BASE. Arms at 90 degrees or 180 degrees.	51.00	EACH				
178	SL-21.09.05 REMOVE STANDARD FABRICATED STEEL, SPUN ALUMINUM NO. 10, ETC. WITH ARM(S), LUMINAIRE(S), CONTROL(S) WITH ALL ATTACHMENTS, IF ANY.	66.00	EACH				

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BID SCHEDULE FORM

COL 1 SEQ. NO	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
179	SL-21.09.08 REMOVE ALL STREET LIGHTING EQUIPMENT FROM TYPE "M-2" TRAFFIC POST (ARM(S), PHOTOELECTRIC CONTROLLER, LUMINAIRE (S), SHAFT EXTENSION, WIRING, ETC.)	12.00	EACH				
180	SL-22.16.17 FURNISH AND INSTALL "TEAR DROP" LUMINAIRE WITH PEC RECEPTACLE	135.00	EACH				
181	SL-24.01.13 FURNISH 8' ORNAMENTAL TYPE "FLATBUSH AVE" BRACKET WITH HARDWARE ON WOOD POLE AS PER DWG J-5341	11.00	EACH				
182	SL-24.01.14 INSTALL ORNAMENTAL BRACKET ON WOOD POLE.	11.00	EACH				
183	SL-24.02.16 FURNISH AND INSTALL FABRICATED STEEL 6 FT. SHAFT EXTENSION (SINGLE ARM) FOR "M-2" TRAFFIC POST AS PER DWGs H-5159 OR H- 5255.	9.00	EACH				

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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES)		COL. 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
184	SL-24.02.24 FURNISH AND INSTALL "FLATBUSH AVENUE" ARM	9.00	EACH				
185	SL-26.01.04 FURNISH AND INSTALL LONG LIFE PHOTO ELECTRIC CONTROL WITH SURGE PROTECTION FOR LED LIGHT	84.00	EACH				
186	SL-28.01.01 FURNISH AND INSTALL COPPER WELD GROUND ROD AND CLAMP, AS PER DRAWING H-5019	8.00	EACH				
187	SL-31.01.03 PAINT "M-2" TRAFFIC POST INCLUDING SHAFT EXTENSION AND ARM	24.00	EACH				
188	SL-33.01.02 FURNISH AND INSTALL NO. 6 AWG XLP COPPER CABLE OR EQUAL IN CONDUIT	7,630.00	L.F.				
189	SL-33.03.01 FURNISH AND INSTALL #6 BARE COPPER CONDUCTOR IN CONDUIT OR OVERHEAD.	3,465.00	L.F.				

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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES)		COL. 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
190	SL-35.03.03 FURNISH AND INSTALL 1-1/2" HOT DIPPED GALVANIZED STEEL CONDUIT IN UNPAVED AREA	360.00	L.F.				
191	SL-35.03.04 FURNISH AND INSTALL 2" HOT DIPPED GALVANIZED STEEL CONDUIT IN UNPAVED AREA	3,105.00	L.F.				
192	SL-37.05.08 FURNISH AND INSTALL TYPE 1812 ROADWAY CONCRETE BOX WITH CAST IRON FRAME AND COVER WITH TAMPER PROOF BOLTS AS PER DWG J-3179B.	36.00	EACH				
193	T-1.1 INSTALL TYPE "S" OR "T" FOUNDATION	18.00	EACH				
194	T-1.18 REMOVE TYPE "A", "B", "S" OR "T" SERIES FOUNDATION	12.00	EACH				
195	T-1.2 INSTALL TYPE "F-1" FOUNDATION	1.00	EACH				



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BID SCHEDULE FORM

COL 1 SEQ. NO	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
196	T-1.20 REMOVE TYPE "M" SERIES FOUNDATION	20.00	EACH				
197	T-1.21 REMOVE TYPE "F-1" FOUNDATION	11.00	EACH				
198	T-1.23 REMOVE STREET LIGHT FOUNDATION	2.00	EACH				
199	T-1.26 REMOVE STEEL CYLINDER (32" DIAMETER X 9")	3.00	EACH				
200	T-1.29 RAISE OR LOWER FOUNDATION TO GRADE	2.00	EACH				
201	T-1.3 INSTALL TYPE "M2-5S" FOUNDATION	23.00	EACH				

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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS : CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS : CTS
202	T-1.6 INSTALL TYPE "M2-5T" FOUNDATION	2.00	EACH		
203	T-2.1 INSTALL TYPE "S-1" OR "T-1" SERIES POST	18.00	EACH		
204	T-2.16 FURNISH, INSTALL, MAINTAIN AND REMOVE TEMPORARY POST OR PYLON WITH SIGNALS	11.00	EACH		
205	T-2.2 INSTALL TYPE "S-14" POST	1.00	EACH		
206	T-2.22 REMOVE TYPE "S-1" OR "T-1" SERIES POST	12.00	EACH		
207	T-2.23 REMOVE TYPE "S-10", "T-10" OR "S-14" SERIES POST	14.00	EACH		

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BID SCHEDULE FORM

COL 1	COL 2	COL 3	COL 4	COL 5	COL 6
SEQ. NO	ITEM NUMBER and DESCRIPTION	ENGINEER'S ESTIMATE OF QUANTITY	UNIT	UNIT PRICE (IN FIGURES) DOLLARS CTS	EXTENDED AMOUNT (IN FIGURES) DOLLARS CTS
208	T-2.24 REMOVE TYPE "M" SERIES POST	20.00	EACH		
209	T-2.28 REMOVE MAST ARM FROM ANY POST	3.00	EACH		
210	T-2.4 INSTALL TYPE "M-2" POST	25.00	EACH		
211	T-2.9 INSTALL MAST ARM ON EXISTING "M-2" TRAFFIC POST	1.00	EACH		
212	T-20000 FURNISH TEN FOOT ALUMINUM SIGNAL POST TYPE "S-1"	18.00	EACH		
213	T-20020 a) FURNISH 3/4" ANCHOR BOLT ASSEMBLIES FOR S-1 (EACH) (3 REQUIRED PER POST)	54.00	EACH		

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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES)		COL. 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
214	T-20021 b) FURNISH 1" ANCHOR BOLT ASSEMBLIES FOR F-1 (EACH) (4 REQUIRED PER POST)	4.00	EACH				
215	T-20160 FURNISH 20 FOOT SIGNAL MAST ARM POLE ASSEMBLY TYPE "M-2"	25.00	EACH				
216	T-20184 a) FURNISH 5' EXTENSION ARM ASSEMBLY WITH FITTINGS	22.00	EACH				
217	T-20186 b) FURNISH 20' ARM ASSEMBLY WITH FITTINGS	1.00	EACH				
218	T-20220 c) FURNISH 1-1/4" ANCHOR BOLT ASSEMBLIES FOR M-2 (EACH) (4 REQUIRED PER POST)	100.00	EACH				
219	T-20640 FURNISH ALUMINUM TRAFFIC SIGNAL POST TYPE "S-14"	1.00	EACH				



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BID SCHEDULE FORM

COL 1 SEQ. NO	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
220	T-3.1 INSTALL "ONE-WAY" SIGNAL UNIT ON MAST ARM OR TOP OF TRAFFIC POST	51.00	EACH				
221	T-3.18 REMOVE SIGNAL HEAD FROM ANY TYPE POST	45.00	EACH				
222	T-3.2 INSTALL "ONE-WAY" SIGNAL UNIT ON THE SHAFT OF ANY POST	30.00	EACH				
223	T-3.21 REMOVE PEDESTRIAN SIGNAL OR SIGN UNIT OR OTHER ILLUMINATED SIGNS FROM ANY POST	79.00	EACH				
224	T-3.26 REMOVE STREET LIGHT LUMINAIRE AND PHOTO ELECTRIC CONTROL FROM STREET LIGHT ARM	2.00	EACH				
225	T-3.27 INSTALL STREET LIGHT LUMINAIRE AND PHOTO ELECTRIC CONTROL ON STREET LIGHT MAST	2.00	EACH				



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BID SCHEDULE FORM

COL 1 SEQ. NO	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
226	T-3.5 INSTALL PEDESTRIAN SIGNAL ON WOOD POLE, CONTRACTOR SUPPLYING BRACKETS	2.00	EACH				
227	T-3.6 INSTALL PEDESTRIAN SIGNAL ON ANY TYPE POST	107.00	EACH				
228	T-30013L FURNISH ADJUSTABLE 3 SECTION 1-WAY, DIE CAST ALUMINUM TRAFFIC SIGNALS 8" - W/LED LENS	78.00	EACH				
229	T-31150 FURNISH "1SA" ALUMINUM DIE CASTINGS AND ASSEMBLY FOR POST SIGNAL MOUNTING	1.00	EACH				
230	T-31175 b) "2SPA"	1.00	EACH				
231	T-31200 e) "VB" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	26.00	EACH				

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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES)		COL. 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
232	T-31205 FURNISH MAST ARM SIGNAL MOUNTING ASSEMBLY - a) "1MS"	5.00	EACH				
233	T-31210 h) "HUB" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	81.00	EACH				
234	T-31215 b) "2MS"	19.00	EACH				
235	T-31225 c) "3MS"	3.00	EACH				
236	T-31340 f) "VB-P" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	7.00	EACH				
237	T-31351 g) "VB-2P" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	48.00	EACH				

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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES)		COL. 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
238	T-31500AL FURNISH 12" LENS & SIGNAL SECTION (LED AMBER ARROWS)	5.00	EACH				
239	T-31500GL FURNISH 12" LENS & SIGNAL SECTION (LED GREEN ARROWS)	9.00	EACH				
240	T-31500L FURNISH ADJUSTABLE 3 SECTION 1-WAY, DIE CAST ALUMINUM TRAFFIC SIGNALS 12" - W/LED LENS	2.00	EACH				
241	T-31501AA FURNISH 12" AMBER ARROW LED (AS PER NYC SPEC)	2.00	EACH				
242	T-31501GA FURNISH 12 INCH GREEN ARROW LED (AS PER NYC SPECIFICATION)	3.00	EACH				
243	T-31501-RA FURNISH 12 INCH RED ARROW LED (AS PER ITE SPECIFICATION 1/1/98)	2.00	EACH				



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BID SCHEDULE FORM

COL 1 SEQ. NO	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
244	T-33000L FURNISH POLYCARBONATE INCANDESCENT PED SIGNAL W/LED LENS	36.00	EACH				
245	T-33001-L FURNISH POLYCARBONATE PEDESTRIAN SIGNAL (16 X 16) W/LED COUNT LENS (SPECIFICATION A-L)	71.00	EACH				
246	T-4.22 INSTALL ANY TYPE OF ADVANCED SOLID STATE TRAFFIC SIGNAL CONTROLLER AND CABINET ON METAL POLE	12.00	EACH				
247	T-4.8 REMOVE ONE CONTROL BOX AND CONTROLLER FROM ANY POST OR SUPPORT	11.00	EACH				
248	T-5.17 FURNISH AND INSTALL 2" RIGID CONDUIT ON A POST	20.00	L.F.				
249	T-5.32 RESTORING PERMANENT ROADWAY (INCLUDING SAWCUT)	2,500.00	L.F.				



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BID SCHEDULE FORM

COL 1 SEQ. NO	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
250	T-5.34 RESTORING PERMANENT SIDEWALK	50.00	S.F.				
251	T-5.36 REMOVE CONDUIT FROM POST	40.00	L.F.				
252	T-5.49 FURNISH AND INSTALL ADDITIONAL 2" HDPE CONDUIT	110.00	L.F.				
253	T-5.50 FURNISH AND INSTALL 2" HDPE UNDERGROUND CONDUIT IN PAVED ROADWAY	2,500.00	L.F.				
254	T-5.51 FURNISH AND INSTALL 2" HDPE UNDERGROUND CONDUIT IN PAVED SIDEWALK	50.00	L.F.				
255	T-6.1 INSTALL CABLE (INCLUDES OVERHEAD)	3,300.00	L.F.				

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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES)		COL. 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
256	T-6.10 REMOVE CABLE (INCLUDES OVERHEAD)	5,000.00	L.F.				
257	T-6.2 INSTALL MULTIPLE CABLE (INCLUDES OVERHEAD)	5,500.00	L.F.				
258	T-60000B FURNISH 2 c # 10B (BREAKDOWN = 2#10 WITH 3RD WIRE FOR GROUNDING).	5,500.00	L.F.				
259	T-60040 c) 7 CONDUCTOR, 14 A.W.G.	3,300.00	L.F.				
260	T-60190 e) 13 CONDUCTOR, 14 A.W.G.	6,500.00	L.F.				
261	T-8.10 RELOCATE CONCRETE PYLON WITH POST	20.00	EACH				

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BID SCHEDULE FORM

COL 1	COL 2	COL 3	COL 4	COL 5	COL 6
SEQ. NO	ITEM NUMBER and DESCRIPTION	ENGINEER'S ESTIMATE OF QUANTITY	UNIT	UNIT PRICE (IN FIGURES) DOLLARS : CTS	EXTENDED AMOUNT (IN FIGURES) DOLLARS : CTS
262	T-8.8 INSTALL CONCRETE PYLON	20.00	EACH		
263	T-8.9 REMOVE CONCRETE PYLON	20.00	EACH		
264	T-81000 FURNISH CONCRETE PYLON	20.00	EACH		
265	T-99999 FURNISH 8 LOAD SWITCHES ADVANCED SOLID STATE TRAFFIC CONTROLLER (ASTC)	1.00	EACH		
266	UTL-6.01.8 GAS SERVICES CROSSING TRENCHES AND/OR EXCAVATIONS (\$6.01) Unit price bid shall not be less than: \$ 465.00	18.00	EACH		
267	UTL-6.01.9 GAS MAIN CROSSING WATER MAIN UP TO 20" IN DIAMETER (\$6.01) Unit price bid shall not be less than: \$ 485.00	38.00	EACH		



Department of
Design and
Construction

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN

PROJECT ID: HWD10105
CONTRACT PIN: 8502017HW0034C

1/9/2017 11:34 AM

BID SCHEDULE FORM

COL 1 SEQ. NO	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
268	UTL-6.02 EXTRA EXCAVATION FOR THE INSTALLATION OF CATCH BASIN SEWER DRAIN PIPES WITH GAS INTERFERENCES (\$6.02) Unit price bid shall not be less than: \$ 715.00	2.00	EACH				
269	UTL-6.03 REMOVAL OF ABANDONED GAS FACILITIES. ALL SIZES. (\$6.03) Unit price bid shall not be less than: \$ 15.00	4,100.00	L.F.				
270	UTL-6.03.1 REMOVAL OF ABANDONED GAS FACILITIES WITH POSSIBLE COAL TAR WRAP. ALL SIZES. (FOR NATIONAL GRID WORK ONLY) (\$6.03) Unit price bid shall not be less than: \$ 25.00	2,600.00	L.F.				
271	UTL-6.04 ADJUST HARDWARE TO GRADE USING SPACER RINGS/ADAPTORS. (STREET REPAVING.) (\$6.04) Unit price bid shall not be less than: \$ 35.00	100.00	EACH				
272	UTL-6.05 ADJUST HARDWARE TO GRADE BY RESETTING. (ROAD RECONSTRUCTION.) (\$6.05) Unit price bid shall not be less than: \$ 65.00	100.00	EACH				
273	UTL-6.06 SPECIAL CARE EXCAVATION AND BACKFILLING (\$6.06) Unit price bid shall not be less than: \$ 180.00	1,500.00	C.Y.				

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BID SCHEDULE FORM

COL 1 SEQ. NO	COL 2 ITEM NUMBER and DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (IN FIGURES)		COL 6 EXTENDED AMOUNT (IN FIGURES)	
				DOLLARS	CTS	DOLLARS	CTS
274	UTL-6.07 TEST PITS FOR GAS FACILITIES (\$6.07) Unit price bid shall not be less than: \$ 100.00	100.00	C.Y.				
275	UTL-GCS-2WS GAS INTERFERENCES AND ACCOMMODATIONS PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 50,000.00	1.00	F.S.	50,000	00	\$50,000	00

SUB-TOTAL: \$ _____

276	6.39 A MOBILIZATION BID PRICE OF MOBILIZATION SHALL NOT EXCEED 4% OF THE ABOVE SUB-TOTAL PRICE.	1.00	L.S.				
-----	--	------	------	--	--	--	--

TOTAL BID PRICE: \$ _____

PLEASE BE SURE A LEGIBLE BID IS ENTERED FOR EACH ITEM.
THE BIDDER SHALL INSERT THE TOTAL BID PRICE IN
THE BID FORM ON PAGE C-4 OF THIS BID BOOKLET.

(NO TEXT ON THIS PAGE)

**BID FORM
THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

**BID FOR FURNISHING ALL LABOR AND
MATERIAL NECESSARY AND REQUIRED FOR:**

PROJECT ID: HWD10105

ATLANTIC AVENUE SAFETY IMPROVEMENTS

FROM GEORGIA AVENUE TO LOGAN STREET

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING AND
TRAFFIC SIGNAL WORK**

Together With All Work Incidental Thereto

**BOROUGH OF BROOKLYN
CITY OF NEW YORK**

Name of Bidder: _____

Date of Bid Opening: _____

Bidder is: (Check one, whichever applies) Individual () Partnership () Corporation ()

Place of Business of Bidder: _____

Bidder's Telephone Number: _____ Fax Number: _____

Bidder's E-Mail Address: _____

Residence of Bidder (If Individual): _____

If Bidder is a Partnership, fill in the following blanks:

Names of Partners

Residence of Partners

If Bidder is a Corporation, fill in the following blanks:

Organized under the laws of the State of _____

Name and Home Address of President: _____

Name and Home Address of Secretary: _____

Name and Home Address of Treasurer: _____

BID FORM

The above-named Bidder affirms and declares:

1. The said bidder is of lawful age and the only one interested in this bid; and no person, firm or corporation other than hereinbefore named has any interest in this bid, or in the Contract proposed to be taken.
2. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief: (1) the prices in this bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor; (2) unless otherwise required by law, the prices quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and (3) No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.
3. No councilman or other officer or employee or person whose salary is payable in whole or in part from the City Treasury is directly or indirectly interested in this bid, or in the supplies, materials, equipment, work or labor to which it relates, or in any of the profits thereof.
4. The bidder is not in arrears to the City of New York upon debt or contract or taxes, and is not a defaulter, as surety or otherwise, upon any obligation of the City of New York, and has not been declared not responsible, or disqualified, by any agency of the City of New York or State of New York, nor is there any proceeding pending relating to the responsibility or qualification of the bidder to receive public contracts except as set forth on the Affirmation included as page C-6 of this Bid Booklet.

The bidder hereby affirms that it has paid all applicable City income, excise and other taxes for all years it has conducted business activities in New York City.

5. The bidder, as an individual, or as a member, partner, director or officer of the bidder, if the same be a firm, partnership or corporation, executes this document expressly warranting and representing that should this bid be accepted by the City and the Contract awarded to him, he and his subcontractors engaged in the performance: (1) will comply with the provisions of Section 6-108 of the Administrative Code of the City of New York and the non-discrimination provisions of Section 220a of the New York State Labor Law, as more expressly and in detail set forth in the Agreement; (2) will comply with Section 6-109 of the Administrative Code of the City of New York in relation to minimum wages and other stipulations as more expressly and in detail set forth in the Agreement; (3) have complied with the provisions of the aforesaid laws since their respective effective dates, and (4) will post notices to be furnished by the City, setting forth the requirements of the aforesaid laws in prominent and conspicuous places in each and every plant, factory, building and structure where employees engaged in the performance of the Contract can readily view it, and will continue to keep such notices posted until the supplies, materials and equipment, or work labor and services required to be furnished or rendered by the Contractor have been finally accepted by the City. In the event of any breach or violation of the foregoing, the Contractor may be subject to damages, liquidated or otherwise, cancellation of the Contract and suspension as a bidder for a period of three years. (The words, "the bidder", "he", "his", and "him" where used herein shall mean the individual bidder, firm, partnership or corporation executing this bid).

6. Compliance Report

The bidder, as an individual, or as a member, partner, director, or officer of the bidder, if the same be a firm, partnership, or corporation, (1) represents that his attention has been specifically drawn to Executive Order No. 50, dated, April 25, 1980, on Equal Employment Compliance of the contract, and (2) warrants that he will comply with the provisions of Executive Order No. 50. The Employment Report must be submitted as part of the bid.

The bidder, as an individual, or as a member, partner, director, or officer of the bidder, if the same be a firm, partnership, or corporation, executes this document expressly warranting that he will comply with: (1) the provision of the contract on providing records, Chapter 8.

7. By submission of this bid, the bidder certifies that it now has and will continue to have the financial capability to fully perform the work required for this contract. Any award of this contract will be made in reliance upon such certification. Upon request therefor, the bidder will submit written verification of such financial capability in a form that is acceptable to the department.

8. In accordance with Section 165 of the State Finance Law, the bidder agrees that tropical hardwoods, as defined in Section 165 of the State Finance Law, shall not be utilized in the performance of this Contract, except as the same are permitted by the foregoing provision of law.

9. The bidder has visited and examined the site of the work and has carefully examined the Contract in the form approved by the Corporation Counsel, and will execute the Contract and perform all its items, covenants and conditions, and will provide, furnish and deliver all the work, materials, supplies, tools and appliances for all labor and materials necessary or required for the hereinafter named work, all in strict conformity with the Contract, for the prices set forth in the Bid Schedule:

10. M/WBE UTILIZATION PLAN: By signing its bid, the bidder agrees to the Vendor Certification and Required Affirmations set forth below, unless a full waiver of the Participation Goals is granted. The Vendor Certification and Required Affirmations will be deemed to satisfy the requirement to complete Section V of Part II of Schedule B: M/WBE Utilization Plan.

Section V: Vendor Certification and Required Affirmations:

I hereby:

- 1) acknowledge my understanding of the M/WBE participation requirements as set forth in this Contract and the pertinent provisions of Section 6-129 of the Administrative Code of the City of New York and the rules promulgated thereunder;
- 2) affirm that the information supplied in support of the M/WBE Utilization Plan is true and correct;
- 3) agree, if awarded this Contract, to comply with the M/WBE participation requirements of this Contract, the pertinent provisions of Section 6-129, and the rules promulgated thereunder, all of which shall be deemed to be material terms of this Contract;
- 4) agree and affirm that it is a material term of this Contract that the Vendor will award the total dollar value of the M/WBE Participation Goals to certified MBEs and/or WBEs, unless a full waiver is obtained or such goals are modified by the Agency; and
- 5) agree and affirm, if awarded this Contract, to make all reasonable, good faith efforts to meet the M/WBE Participation Goals, or If a partial waiver is obtained or such goals are modified by the Agency, to meet the modified Participation Goals by soliciting and obtaining the participation of certified MBE and/or WBE firms.

(NO TEXT ON THIS PAGE)

BID FORM

PROJECT ID. HWD10105

TOTAL BID PRICE: In the space provided below, the Bidder shall indicate its Total Bid Price in figures. Such Total Bid Price is set forth on the final page of the Bid Schedule.

TOTAL BID PRICE: _____ \$ _____
(a/k/a BID PROPOSAL)

BIDDER'S SIGNATURE AND AFFIDAVIT

Bidder: _____

By: _____
(Signature of Partner or corporate officer)

Attest:
(Corporate Seal)

Secretary of Corporate Bidder

Affidavit on the following page should be subscribed
and sworn to before a Notary Public

BID FORM (TO BE NOTARIZED)

AFFIDAVIT WHERE BIDDER IS AN INDIVIDUAL

STATE OF NEW YORK, COUNTY OF _____ ss:
_____ being duly sworn says:
I am the person described in and who executed the foregoing bid, and the several matters therein stated are in all respects true.

(Signature of the person who signed the Bid)

Subscribed and sworn to before me this
_____ day of _____, _____

Notary Public

AFFIDAVIT WHERE BIDDER IS A PARTNERSHIP

STATE OF NEW YORK, COUNTY OF _____ ss:
_____ being duly sworn says:
I am a member of _____ the firm described in and which executed the foregoing bid. I subscribed the name of the firm thereto on behalf of the firm, and the several matters therein stated are in all respects true.

(Signature of Partner who signed the Bid)

Subscribed and sworn to before me this
_____ day of _____, _____

Notary Public

AFFIDAVIT WHERE BIDDER IS A CORPORATION

STATE OF NEW YORK, COUNTY OF _____ ss:
_____ being duly sworn says:
I am the _____ of the above named corporation whose name is subscribed to and which executed the foregoing bid. I reside at _____
I have knowledge of the several matters therein stated, and they are in all respects true.

(Signature of Corporate Officer who signed the Bid)

Subscribed and sworn to before me this
_____ day of _____, _____

Notary Public

AFFIRMATION

PROJECT ID. HWD10105

The undersigned bidder affirms and declares that said bidder is not in arrears to the City of New York upon debt, contract or taxes and is not a defaulter, as surety or otherwise, upon obligation to the City of New York, and has not been declared not responsible, or disqualified, by any agency of the City of New York, nor is there any proceeding pending relating to the responsibility or qualification of the bidder to receive public contracts except: _____

(If none, the bidder shall insert the word "None" in the space provided above.)

Full Name of Bidder: _____

Address: _____

City _____ State _____ Zip Code _____

CHECK ONE BOX AND INCLUDE APPROPRIATE NUMBER:

A - Individual or Sole Proprietorship*
SOCIAL SECURITY NUMBER

B - Partnership, Joint Venture or other unincorporated organization
EMPLOYER IDENTIFICATION NUMBER

C- Corporation
EMPLOYER IDENTIFICATION NUMBER

By: _____
Signature

Title: _____

If a corporation, place seal here

This affirmation must be signed by an officer or duly authorized representative.

*Under the Federal Privacy Act the furnishing of Social Security Numbers by bidders on City contracts is voluntary. Failure to provide a Social Security Number will not result in a bidder's disqualification. Social Security Numbers will be used to identify bidders, proposers or vendors to ensure their compliance with laws, to assist the City in enforcement of laws, as well as to provide the City a means of identifying of businesses which seek City contracts.

(NO TEXT ON THIS PAGE)

BID BOND 1
FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENTS. That we, _____

hereinafter referred to as the "Principal", and _____

hereinafter referred to as the "Surety" are held and firmly bound to THE CITY OF NEW YORK, hereinafter referred to as the "CITY", or to its successors and assigns in the penal sum of _____

(\$ _____), Dollars lawful money of the United States, for the payment of which said sum of money well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the Principal is about to submit (or has submitted) to the City the accompanying proposal, hereby made a part hereof, to enter into a contract in writing for _____

NOW, THEREFORE, the conditions of this obligation are such that if the Principal shall not withdraw said Proposal without the consent of the City for a period of forty-five (45) days after the opening of bids and in the event of acceptance of the Principal's Proposal by the City, if the Principal shall:

(a) Within ten (10) days after notification by the City, execute in quadruplicate and deliver to the City all the executed counterparts of the Contract in the form set forth in the Contract Documents, in accordance with the proposal as accepted, and

(b) Furnish a performance bond and separate payment bond, as may be required by the City, for the faithful performance and proper fulfillment of such Contract, which bonds shall be satisfactory in all respects to the City and shall be executed by good and sufficient sureties, and

(c) In all respects perform the agreement created by the acceptance of said Proposal as provided in the Information for Bidders, bound herewith and made a part hereof, or if the City shall reject the aforesaid Proposal, then this obligation shall be null and void; otherwise to remain in full force and effect.

BID BOND 2

In the event that the Proposal of the Principal shall be accepted and the Contract be awarded to him the Surety hereunder agrees subject only to the payment by the Principal of the premium therefore, if requested by the City, to write the aforementioned performance and payment bonds in the form set forth in the Contract Documents.

It is expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

There shall be no liability under this bond if, in the event of the acceptance of the Principal's Proposal by the City, either a performance bond or payment bond, or both, shall not be required by the City on or before the 30th day after the date on which the City signs the Contract.

The surety, for the value received, hereby stipulates and agrees that the obligations of the Surety and its bond shall in no way be impaired or affected by any postponements of the date upon which the City will receive or open bids, or by any extensions of the time within which the City may accept the Principal's Proposal, or by any waiver by the City of any of the requirements of the Information for Bidders, and the Surety hereby waives notice of any such postponements, extensions, or waivers.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers the _____ day of _____, _____.

(Seal)

Principal (L.S.)

By: _____

(Seal)

Surety

By: _____

BID BOND 3

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of _____ County of _____ ss:
On this _____ day of _____, _____, before me personally came
_____ to me known, who, being by me duly sworn, did depose and say
that he resides at _____
that he is the _____ of _____
the corporation described in and which executed the foregoing instrument; that he knows the seal of said
corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of
the directors of said corporation, and that he signed his name thereto by like order.

Notary Public

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____ County of _____ ss:
On this _____ day of _____, _____, before me personally appeared
_____ to me known and known to me to be one of the members of the
firm of _____ described in and who executed the foregoing
instrument, and he acknowledged to me that he executed the same as and for the act and deed of said
firm.

Notary Public

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____ County of _____ ss:
On this _____ day of _____, _____, before me personally appeared
_____ to me known and known to me to be the person described in
and who executed the foregoing instrument and acknowledged that he executed the same.

Notary Public

AFFIX ACKNOWLEDGMENTS AND JUSTIFICATION OF SURETIES

(NO TEXT ON THIS PAGE)

M/WBE PROGRAM

M/WBE UTILIZATION PLAN

M/WBE Program Requirements: The requirements for the M/WBE Program are set forth on the following pages of this Bid Booklet, in the section entitled “Notice to All Prospective Contractors”.

Schedule B: M/WBE Utilization Plan: Schedule B: M/WBE Utilization Plan for this Contract is set forth in this Bid Booklet on the pages following the section entitled “Notice to All Prospective Contractors”. The M/WBE Utilization Plan (Part I) indicates whether Participation Goals have been established for this Contract. If Participation Goals have been established for this Contract, the bidder must submit an M/WBE Utilization Plan (Part II) with its bid.

Waiver: The bidder may seek a full or partial pre-award waiver of the Participation Goals in accordance with the “Notice to All Prospective Contractors” (See Part A, Section 10). The bidder’s request for a waiver must be submitted at least seven (7) calendar days prior to the bid date. Waiver requests submitted after the deadline will not be considered. The form for requesting a waiver of the Participation Goals is set forth in the M/WBE Utilization Plan (Part III).

Rejection of the Bid: The bidder must complete Schedule B: M/WBE Utilization Plan (Part II) set forth in this Bid Booklet on the pages following the section entitled “Notice to All Prospective Contractors”. A Schedule B submitted by the bidder which does not include the Vendor Certification and Required Affirmations (See Section V of Part II) will be deemed to be non-responsive, unless a full waiver of the Participation Goals is granted (Schedule B, Part III). In the event that the City determines that the bidder has submitted a Schedule B where the Vendor Certification and Required Affirmations are completed but other aspects of the Schedule B are not complete, or contain a copy or computation error that is at odds with the Vendor Certification and Required Affirmations, the bidder will be notified by the Agency and will be given four (4) calendar days from receipt of notification to cure the specified deficiencies and return a completed Schedule B to the Agency. Failure to do so will result in a determination that the Bid is non-responsive. Receipt of notification is defined as the date notice is emailed or faxed (if the bidder has provided an email address or fax number), or no later than five (5) calendar days from the date of mailing or upon delivery, if delivered.

Impact on LBE Requirements: If Participation Goals have been established for the participation of M/WBEs, the contractor is not required to comply with the Locally Based Enterprise Program (“LBE”). The LBE Program is set forth in Article 67 of the Contract.

NOTICE TO ALL PROSPECTIVE CONTRACTORS

PARTICIPATION BY MINORITY-OWNED AND WOMEN-OWNED BUSINESS ENTERPRISES IN CITY PROCUREMENT

ARTICLE I. M/WBE PROGRAM

Local Law No. 129 of 2005 added and Local Law 1 of 2013 amended Section 6-129 of the Administrative Code of the City of New York (hereinafter "Section 6-129"). Section 6-129 establishes the program for participation in City procurement ("M/WBE Program") by minority-owned business enterprises ("MBEs") and women-owned business enterprises ("WBEs"), certified in accordance with Section 1304 of the New York City Charter. As stated in Section 6-129, the intent of the program is to address the impact of discrimination on the City's procurement process, and to promote the public interest in avoiding fraud and favoritism in the procurement process, increasing competition for City business, and lowering contract costs. The contract provisions contained herein are pursuant to Section 6-129, and the rules of the Department of Small Business Services ("DSBS") promulgated thereunder.

If this Contract is subject to the M/WBE Program established by Section 6-129, the specific requirements of MBE and/or WBE participation for this Contract are set forth in Schedule B of the Contract (entitled the "M/WBE Utilization Plan"), and are detailed below. The Contractor must comply with all applicable MBE and WBE requirements for this Contract.

All provisions of Section 6-129 are hereby incorporated in the Contract by reference and all terms used herein that are not defined herein shall have the meanings given such terms in Section 6-129. Article I, Part A, below, sets forth provisions related to the participation goals for construction, standard and professional services contracts. Article I, Part B, below, sets forth miscellaneous provisions related to the M/WBE Program.

PART A

PARTICIPATION GOALS FOR CONSTRUCTION, STANDARD AND PROFESSIONAL SERVICES CONTRACTS OR TASK ORDERS

1. The MBE and/or WBE Participation Goals established for this Contract or Task Orders issued pursuant to this Contract, ("Participation Goals"), as applicable, are set forth on Schedule B, Part I to this Contract (see Page 1, line 1 Total Participation Goals) or will be set forth on Schedule B, Part I to Task Orders issued pursuant to this Contract, as applicable.

The Participation Goals represent a percentage of the total dollar value of the Contract or Task Order, as applicable, that may be achieved by awarding subcontracts to firms certified with New York City Department of Small Business Services as MBEs and/or WBEs, and/or by crediting the participation of prime contractors and/or qualified joint ventures as provided in Section 3 below, unless the goals have been waived or modified by Agency in accordance with Section 6-129 and Part A, Sections 10 and 11 below, respectively.

2. If Participation Goals have been established for this Contract or Task Orders issued pursuant to this Contract, Contractor agrees or shall agree as a material term of the Contract that Contractor shall be subject to the Participation Goals, unless the goals are waived or modified by Agency in accordance with Section 6-129 and Part A, Sections 10 and 11 below, respectively.

3. If Participation Goals have been established for this Contract or Task Order issued pursuant to this Contract, a Contractor that is an MBE and/or WBE shall be permitted to count its own participation toward fulfillment of the relevant Participation Goal, provided that in accordance with Section 6-129 the value of Contractor's participation shall be determined by subtracting from the total value of the Contract or Task Order, as applicable, any amounts that the Contractor pays to direct subcontractors (as defined in Section 6-129(c)(13)), and provided further that a Contractor that is certified as both an MBE and a WBE may count its own participation either toward the goal for MBEs or the goal for WBEs, but not both.

A Contractor that is a qualified joint venture (as defined in Section 6-129(c)(30)) shall be permitted to count a percentage of its own participation toward fulfillment of the relevant **Participation Goal**. In accordance with Section 6-129, the value of Contractor's participation shall be determined by subtracting from the total value of the Contract or Task Order, as applicable, any amounts that Contractor pays to direct subcontractors, and then multiplying the remainder by the percentage to be applied to total profit to determine the amount to which an MBE or WBE is entitled pursuant to the joint venture agreement, provided that where a participant in a joint venture is certified as both an MBE and a WBE, such amount shall be counted either toward the goal for MBEs or the goal for WBEs, but not both.

4. A. If **Participation Goals** have been established for this Contract, a prospective contractor shall be required to submit with its bid or proposal, as applicable, a completed Schedule B, M/WBE Utilization Plan, Part II (see Pages 2-4) indicating: (a) whether the contractor is an MBE or WBE, or qualified joint venture; (b) the percentage of work it intends to award to direct subcontractors; and (c) in cases where the contractor intends to award direct subcontracts, a description of the type and dollar value of work designated for participation by MBEs and/or WBEs, and the time frames in which such work is scheduled to begin and end. In the event that this M/WBE Utilization Plan indicates that the bidder or proposer, as applicable, does not intend to meet the **Participation Goals**, the bid or proposal, as applicable, shall be deemed non-responsive, unless Agency has granted the bidder or proposer, as applicable, a pre-award waiver of the Participation Goals in accordance with Section 6-129 and Part A, Section 10 below.

B. (i) If this Contract is for a master services agreement or other requirements type contract that will result in the issuance of Task Orders that will be individually registered ("Master Services Agreement") and is subject to M/WBE **Participation Goals**, a prospective contractor shall be required to submit with its bid or proposal, as applicable, a completed Schedule B, M/WBE Participation Requirements for Master Services Agreements That Will Require Individually Registered Task Orders, Part II (page 2) indicating the prospective contractor's certification and required affirmations to make all reasonable good faith efforts to meet participation goals established on each individual Task Order issued pursuant to this Contract, or if a partial waiver is obtained or such goals are modified by the Agency, to meet the modified **Participation Goals** by soliciting and obtaining the participation of certified MBE and/or WBE firms. In the event that the Schedule B indicates that the bidder or proposer, as applicable, does not intend to meet the **Participation Goals** that may be established on Task Orders issued pursuant to this Contract, the bid or proposal, as applicable, shall be deemed nonresponsive.

(ii) **Participation Goals** on a Master Services Agreement will be established for individual Task Orders issued after the Master Services Agreement is awarded. If **Participation Goals** have been established on a Task Order, a contractor shall be required to submit a Schedule B - M/WBE Utilization Plan For Independently Registered Task Orders That Are Issued Pursuant to Master Services Agreements, Part II (see Pages 2-4) indicating: (a) whether the contractor is an MBE or WBE, or qualified joint venture; (b) the percentage of work it intends to award to direct subcontractors; and (c) in cases where the contractor intends to award direct subcontracts, a description of the type and dollar value of work designated for participation by MBEs and/or WBEs, and the time frames in which such work is scheduled to begin and end. The contractor must engage in good faith efforts to meet the **Participation Goals** as established for the Task Order unless Agency has granted the contractor a pre-award waiver of the Participation Goals in accordance with Section 6-129 and Part A, Section 10 below.

C. **THE BIDDER/PROPOSER MUST COMPLETE THE SCHEDULE B INCLUDED HEREIN (SCHEDULE B, PART II). A SCHEDULE B SUBMITTED BY THE BIDDER/PROPOSER WHICH DOES NOT INCLUDE THE VENDOR CERTIFICATION AND REQUIRED AFFIRMATIONS (SEE SECTION V OF PART II) WILL BE DEEMED TO BE NON-RESPONSIVE, UNLESS A FULL WAIVER OF THE PARTICIPATION GOALS IS GRANTED (SCHEDULE B, PART III). IN THE EVENT THAT THE CITY DETERMINES THAT THE BIDDER/PROPOSER HAS SUBMITTED A SCHEDULE B WHERE THE VENDOR CERTIFICATION AND REQUIRED AFFIRMATIONS ARE COMPLETED BUT OTHER ASPECTS OF THE SCHEDULE B ARE NOT COMPLETE, OR CONTAIN A COPY OR COMPUTATION ERROR THAT IS AT ODDS WITH THE VENDOR CERTIFICATION AND AFFIRMATIONS, THE BIDDER/PROPOSER WILL BE NOTIFIED BY THE AGENCY AND WILL BE GIVEN FOUR (4) CALENDAR DAYS FROM RECEIPT OF NOTIFICATION TO CURE THE SPECIFIED DEFICIENCIES AND RETURN A COMPLETED SCHEDULE B TO THE AGENCY. FAILURE TO DO**

SO WILL RESULT IN A DETERMINATION THAT THE BID/PROPOSAL IS NON-RESPONSIVE. RECEIPT OF NOTIFICATION IS DEFINED AS THE DATE NOTICE IS E-MAILED OR FAXED (IF THE BIDDER/PROPOSER HAS PROVIDED AN E-MAIL ADDRESS OR FAX NUMBER), OR NO LATER THAN FIVE (5) CALENDAR DAYS FROM THE DATE OF MAILING OR UPON DELIVERY, IF DELIVERED.

5. Where an M/WBE Utilization Plan has been submitted, the Contractor shall, within 30 days of issuance by Agency of a notice to proceed, submit a list of proposed persons or entities to which it intends to award subcontracts within the subsequent 12 months. In the case of multiyear contracts, such list shall also be submitted every year thereafter. The Agency may also require the Contractor to report periodically about the contracts awarded by its direct subcontractors to indirect subcontractors (as defined in Section 6-129(c)(22)). **PLEASE NOTE: If this Contract is a public works project subject to GML §101(5) (i.e., a contract valued at or below \$3M for projects in New York City) or if the Contract is subject to a project labor agreement in accordance with Labor Law §222, and the bidder is required to identify at the time of bid submission its intended subcontractors for the Wicks trades (plumbing and gas fitting; steam heating, hot water heating, ventilating and air conditioning (HVAC); and electric wiring), the Contractor must identify all those to which it intends to award construction subcontracts for any portion of the Wicks trade work at the time of bid submission, regardless of what point in the life of the contract such subcontracts will occur. In identifying intended subcontractors in the bid submission, bidders may satisfy any Participation Goals established for this Contract by proposing one or more subcontractors that are MBEs and/or WBEs for any portion of the Wicks trade work. In the event that the Contractor's selection of a subcontractor is disapproved, the Contractor shall have a reasonable time to propose alternate subcontractors.**

6. MBE and WBE firms must be certified by DSBS in order for the Contractor to credit such firms' participation toward the attainment of the **Participation Goals**. Such certification must occur prior to the firms' commencement of work. A list of MBE and WBE firms may be obtained from the DSBS website at www.nyc.gov/buycertified, by emailing DSBS at buyer@sbs.nyc.gov, by calling (212) 513-6356, or by visiting or writing DSBS at 110 William St., New York, New York, 10038, 7th floor. Eligible firms that have not yet been certified may contact DSBS in order to seek certification by visiting www.nyc.gov/getcertified, emailing MWBE@sbs.nyc.gov, or calling the DSBS certification helpline at (212) 513-6311. A firm that is certified as both an MBE and a WBE may be counted either toward the goal for MBEs or the goal for WBEs, but not both. No credit shall be given for participation by a graduate MBE or graduate WBE, as defined in Section 6-129(c)(20).

7. Where an M/WBE Utilization Plan has been submitted, the Contractor shall, with each voucher for payment, and/or periodically as Agency may require, submit statements, certified under penalty of perjury, which shall include, but not be limited to: the total amount the Contractor paid to its direct subcontractors, and, where applicable pursuant to Section 6-129(j), the total amount direct subcontractors paid to indirect subcontractors; the names, addresses and contact numbers of each MBE or WBE hired as a subcontractor by the Contractor, and, where applicable, hired by any of the Contractor's direct subcontractors; and the dates and amounts paid to each MBE or WBE. The Contractor shall also submit, along with its voucher for final payment: the total amount it paid to subcontractors, and, where applicable pursuant to Section 6-129(j), the total amount its direct subcontractors paid directly to their indirect subcontractors; and a final list, certified under penalty of perjury, which shall include the name, address and contact information of each subcontractor that is an MBE or WBE, the work performed by, and the dates and amounts paid to each.

8. If payments made to, or work performed by, MBEs or WBEs are less than the amount specified in the Contractor's M/WBE Utilization Plan, Agency shall take appropriate action, in accordance with Section 6-129 and Article II below, unless the Contractor has obtained a modification of its M/WBE Utilization Plan in accordance with Section 6-129 and Part A, Section 11 below.

9. Where an M/WBE Utilization Plan has been submitted, and the Contractor requests a change order the value of which exceeds the greater of 10 percent of the Contract or Task Order, as applicable, or \$500,000, Agency shall review the scope of work for the Contract or Task Order, as applicable, and the scale and types of work involved in the change order, and determine whether the **Participation Goals** should be modified.

10. Pre-award waiver of the **Participation Goals**. (a) A bidder or proposer, or contractor with respect to a Task Order, may seek a pre-award full or partial waiver of the **Participation Goals** in accordance with Section 6-129, which requests that Agency change one or more **Participation Goals** on the grounds that the **Participation Goals** are unreasonable in light of the availability of certified firms to perform the services required, or by demonstrating that it has legitimate business reasons for proposing a lower level of subcontracting in its M/WBE Utilization Plan.

(b) To apply for a full or partial waiver of the **Participation Goals**, a bidder, proposer, or contractor, as applicable, must complete Part III (Page 5) of Schedule B and submit such request no later than seven (7) calendar days prior to the date and time the bids, proposals, or Task Orders are due, in writing to the Agency by email at zhangji@ddc.nyc.gov or via facsimile at (718) 391-1886. Bidders, proposers, or contractors, as applicable, who have submitted requests will receive an Agency response by no later than two (2) calendar days prior to the due date for bids, proposals, or Task Orders; provided, however, that if that date would fall on a weekend or holiday, an Agency response will be provided by close-of-business on the business day before such weekend or holiday date.

(c) If the Agency determines that the **Participation Goals** are unreasonable in light of the availability of certified firms to perform the services required, it shall revise the solicitation and extend the deadline for bids and proposals, or revise the Task Order, as applicable.

(d) Agency may grant a full or partial waiver of the **Participation Goals** to a bidder, proposer or contractor, as applicable, who demonstrates—before submission of the bid, proposal or Task Order, as applicable—that it has legitimate business reasons for proposing the level of subcontracting in its M/WBE Utilization Plan. In making its determination, Agency shall consider factors that shall include, but not be limited to, whether the bidder, proposer or contractor, as applicable, has the capacity and the bona fide intention to perform the Contract without any subcontracting, or to perform the Contract without awarding the amount of subcontracts represented by the **Participation Goals**. In making such determination, Agency may consider whether the M/WBE Utilization Plan is consistent with past subcontracting practices of the bidder, proposer or contractor, as applicable, whether the bidder, proposer or contractor, as applicable, has made efforts to form a joint venture with a certified firm, and whether the bidder, proposer, or contractor, as applicable, has made good faith efforts to identify other portions of the Contract that it intends to subcontract.

11. Modification of M/WBE Utilization Plan. (a) A Contractor may request a modification of its M/WBE Utilization Plan after award of this Contract. **PLEASE NOTE: If this Contract is a public works project subject to GML §101(5) (i.e., a contract valued at or below \$3M for projects in New York City) or if the Contract is subject to a project labor agreement in accordance with Labor Law §222, and the bidder is required to identify at the time of bid submission its intended subcontractors for the Wicks trades (plumbing and gas fitting; steam heating, hot water heating, ventilating and air conditioning (HVAC); and electric wiring), the Contractor may request a Modification of its M/WBE Utilization Plan as part of its bid submission.** The Agency may grant a request for Modification of a Contractor's M/WBE Utilization Plan if it determines that the Contractor has established, with appropriate documentary and other evidence, that it made reasonable, good faith efforts to meet the **Participation Goals**. In making such determination, Agency shall consider evidence of the following efforts, as applicable, along with any other relevant factors:

- (i) The Contractor advertised opportunities to participate in the Contract, where appropriate, in general circulation media, trade and professional association publications and small business media, and publications of minority and women's business organizations;
- (ii) The Contractor provided notice of specific opportunities to participate in the Contract, in a timely manner, to minority and women's business organizations;
- (iii) The Contractor sent written notices, by certified mail or facsimile, in a timely manner, to advise MBEs or WBEs that their interest in the Contract was solicited;
- (iv) The Contractor made efforts to identify portions of the work that could be substituted for portions originally designated for participation by MBEs and/or WBEs in the M/WBE Utilization Plan, and for which the Contractor claims an inability to retain MBEs or WBEs;

- (v) The Contractor held meetings with MBEs and/or WBEs prior to the date their bids or proposals were due, for the purpose of explaining in detail the scope and requirements of the work for which their bids or proposals were solicited;
- (vi) The Contractor made efforts to negotiate with MBEs and/or WBEs as relevant to perform specific subcontracts, or act as suppliers or service providers;
- (vii) Timely written requests for assistance made by the Contractor to Agency's M/WBE liaison officer and to DSBS;
- (viii) Description of how recommendations made by DSBS and Agency were acted upon and an explanation of why action upon such recommendations did not lead to the desired level of participation of MBEs and/or WBEs.

Agency's M/WBE officer shall provide written notice to the Contractor of the determination.

(b) The Agency may modify the **Participation Goals** when the scope of the work has been changed by the Agency in a manner that affects the scale and types of work that the Contractor indicated in its M/WBE Utilization Plan would be awarded to subcontractors.

12. If this Contract is for an indefinite quantity of construction, standard or professional services or is a requirements type contract and the Contractor has submitted an M/WBE Utilization Plan and has committed to subcontract work to MBEs and/or WBEs in order to meet the **Participation Goals**, the Contractor will not be deemed in violation of the M/WBE Program requirements for this Contract with regard to any work which was intended to be subcontracted to an MBE and/or WBE to the extent that the Agency has determined that such work is not needed.

13. If **Participation Goals** have been established for this Contract or a Task Order issued pursuant to this Contract, at least once annually during the term of the Contract or Task Order, as applicable, Agency shall review the Contractor's progress toward attainment of its M/WBE Utilization Plan, including but not limited to, by reviewing the percentage of work the Contractor has actually awarded to MBE and/or WBE subcontractors and the payments the Contractor made to such subcontractors.

14. If **Participation Goals** have been established for this Contract or a Task Order issued pursuant to this Contract, Agency shall evaluate and assess the Contractor's performance in meeting those goals, and such evaluation and assessment shall become part of the Contractor's overall contract performance evaluation.

PART B: MISCELLANEOUS

1. The Contractor shall take notice that, if this solicitation requires the establishment of an M/WBE Utilization Plan, the resulting contract may be audited by DSBS to determine compliance with Section 6-129. See §6-129(e)(10). Furthermore, such resulting contract may also be examined by the City's Comptroller to assess compliance with the M/WBE Utilization Plan.

2. Pursuant to DSBS rules, construction contracts that include a requirement for an M/WBE Utilization Plan shall not be subject to the law governing Locally Based Enterprises set forth in Section 6-108.1 of the Administrative Code of the City of New York.

3. DSBS is available to assist contractors and potential contractors in determining the availability of MBEs and/or WBEs to participate as subcontractors, and in identifying opportunities that are appropriate for participation by MBEs and/or WBEs in contracts.

4. Prospective contractors are encouraged to enter into qualified joint venture agreements with MBEs and/or WBEs as defined by Section 6-129(c)(30).

5. By submitting a bid or proposal the Contractor hereby acknowledges its understanding of the M/WBE Program requirements set forth herein and the pertinent provisions of Section 6-129, and any rules promulgated thereunder, and if awarded this Contract, the Contractor hereby agrees to comply with the M/WBE Program requirements of this Contract and pertinent provisions of Section 6-129, and any rules promulgated thereunder, all of which shall be deemed to be material terms of this Contract. The Contractor hereby agrees to make all reasonable, good faith efforts to solicit and obtain the participation of MBEs and/or WBEs to meet the required **Participation Goals**.

ARTICLE II. ENFORCEMENT

1. If Agency determines that a bidder or proposer, as applicable, has, in relation to this procurement, violated Section 6-129 or the DSBS rules promulgated pursuant to Section 6-129, Agency may disqualify such bidder or proposer, as applicable, from competing for this Contract and the Agency may revoke such bidder's or proposer's prequalification status, if applicable.

2. Whenever Agency believes that the Contractor or a subcontractor is not in compliance with Section 6-129 or the DSBS rules promulgated pursuant to Section 6-129, or any provision of this Contract that implements Section 6-129, including, but not limited to any **M/WBE Utilization Plan**, Agency shall send a written notice to the Contractor describing the alleged noncompliance and offering the Contractor an opportunity to be heard. Agency shall then conduct an investigation to determine whether such Contractor or subcontractor is in compliance.

3. In the event that the Contractor has been found to have violated Section 6-129, the DSBS rules promulgated pursuant to Section 6-129, or any provision of this Contract that implements Section 6-129, including, but not limited to, any **M/WBE Utilization Plan**, Agency may determine that one of the following actions should be taken:

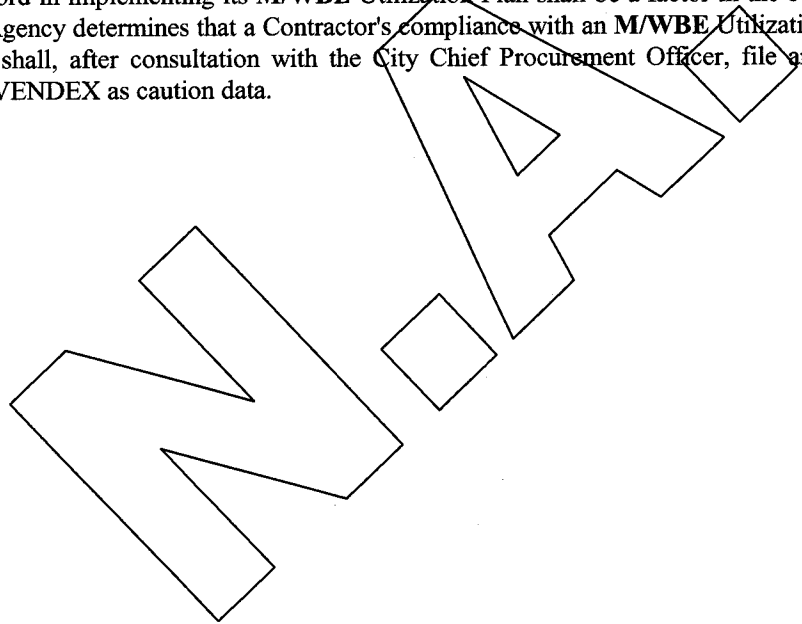
- (a) entering into an agreement with the Contractor allowing the Contractor to cure the violation;
- (b) revoking the Contractor's pre-qualification to bid or make proposals for future contracts;
- (c) making a finding that the Contractor is in default of the Contract;
- (d) terminating the Contract;
- (e) declaring the Contractor to be in breach of Contract;
- (f) withholding payment or reimbursement;
- (g) determining not to renew the Contract;
- (h) assessing actual and consequential damages;
- (i) assessing liquidated damages or reducing fees, provided that liquidated damages may be based on amounts representing costs of delays in carrying out the purposes of the M/WBE Program, or in meeting the purposes of the Contract, the costs of meeting utilization goals through additional procurements, the administrative costs of investigation and enforcement, or other factors set forth in the Contract;
- (j) exercising rights under the Contract to procure goods, services or construction from another contractor and charge the cost of such contract to the Contractor that has been found to be in noncompliance; or
- (k) taking any other appropriate remedy.

4. If an **M/WBE Utilization Plan** has been submitted, and pursuant to this Article II, Section 3, the Contractor has been found to have failed to fulfill its **Participation Goals** contained in its **M/WBE Utilization Plan** or the **Participation Goals** as modified by Agency pursuant to Article I, Part A, Section 11, Agency may assess liquidated damages in the amount of ten percent (10%) of the difference between the dollar amount of work required to be awarded to MBE and/or WBE firms to meet the **Participation Goals** and the dollar amount the Contractor actually awarded and paid, and/or credited, to MBE and/or WBE firms. In view of the difficulty of accurately ascertaining the loss which the City will suffer by reason of Contractor's failure to meet the **Participation Goals**, the foregoing amount is hereby fixed and agreed as the liquidated damages that the City will suffer by reason of such failure, and not as a penalty. Agency may deduct and retain out of any monies which may become due under this Contract the amount of any such liquidated damages; and in case the amount which may become due under this Contract shall be less than the amount of liquidated damages suffered by the City, the Contractor shall be liable to pay the difference.

5. Whenever Agency has reason to believe that an MBE and/or WBE is not qualified for certification, or is participating in a contract in a manner that does not serve a commercially useful function (as defined in Section 6-129(c)(8)), or has violated any provision of Section 6-129, Agency shall notify the Commissioner of DSBS who shall determine whether the certification of such business enterprise should be revoked.

6. Statements made in any instrument submitted to Agency pursuant to Section 6-129 shall be submitted under penalty of perjury and any false or misleading statement or omission shall be grounds for the application of any applicable criminal and/or civil penalties for perjury. The making of a false or fraudulent statement by an MBE and/or WBE in any instrument submitted pursuant to Section 6-129 shall, in addition, be grounds for revocation of its certification.

7. The Contractor's record in implementing its **M/WBE** Utilization Plan shall be a factor in the evaluation of its performance. Whenever Agency determines that a Contractor's compliance with an **M/WBE** Utilization Plan has been unsatisfactory, Agency shall, after consultation with the City Chief Procurement Officer, file an advice of caution form for inclusion in VENDEX as caution data.



Tax ID #: _____

APT E- 85017B0049
PIN #: _____

SCHEDULE B – M/WBE Utilization Plan

Part I: M/WBE Participation Goals

Part I to be completed by contracting agency

Contract Overview

APT E- Pin # 85017B0049 FMS Project ID#: HWD10105
 Project Title/ Agency PIN # ATLANTIC AVENUE SAFETY IMPROVEMENTS / 8502017HW0034C
 Bid/Proposal Response Date _____
 Contracting Agency Department of Design and Construction
 Agency Address 30-30 Thomson Ave. City Long Island City State NY Zip Code 11101
 Contact Person Lea Case Title MWBE Liaison & Compliance Analyst
 Telephone # (718) 391-1003 Email casele@ddc.nyc.gov

Project Description (attach additional pages if necessary)

ATLANTIC AVENUE SAFETY IMPROVEMENTS
 FROM GEORGIA AVENUE TO LOGAN STREET
 INCLUDING SEWER, WATER MAIN, STREET LIGHTING AND
 TRAFFIC SIGNAL WORK
 Together With All Work Incidental Thereto
 BOROUGH OF BROOKLYN
 CITY OF NEW YORK

M/WBE Participation Goals for Services

Enter the percentage amount for each group or for an unspecified goal. Please note that there are no goals for Asian Americans in Professional Services.

Prime Contract Industry: Construction

Group	Percentage
<u>Unspecified*</u>	<u>EXEMPT %</u>
or	
<u>Black American</u>	<u>UNSPECIFIED*</u>
<u>Hispanic American</u>	<u>UNSPECIFIED*</u>
<u>Asian American</u>	<u>UNSPECIFIED*</u>
<u>Women</u>	<u>UNSPECIFIED*</u>
Total Participation Goals	EXEMPT % Line 1

**Note: For this procurement, individual ethnicity and gender goals are not specified. The Total Participation Goal for construction contracts may be met by using either Black-American, Hispanic-American, Asian American, or Women certified firms or any combination of such firms.*

Tax ID #: _____

APT E-
PIN #: _____

85017B0049

SCHEDULE B - Part II: M/WBE Participation Plan

Part II to be completed by the bidder/proposer.

Please note: For Non-M/WBE Prime Contractors who will NOT subcontract any services and will self-perform the entire contract, you must obtain a FULL waiver by completing the Waiver Application on pages 17 and 18 and timely submitting it to the contracting agency pursuant to the Notice to Prospective Contractors. Once a FULL WAIVER is granted, it must be included with your bid or proposal and you do not have to complete or submit this form with your bid or proposal.

Section I: Prime Contractor Contact Information

Tax ID # _____	FMS Vendor ID # _____
Business Name _____	Contact Person _____
Address _____	
Telephone # _____	Email _____

Section II: M/WBE Utilization Goal Calculation: Check the applicable box and complete subsection.

PRIME CONTRACTOR ADOPTING AGENCY M/WBE PARTICIPATION GOALS

For Prime Contractors (including Qualified Joint Ventures and M/WBE firms) adopting Agency M/WBE Participation Goals.

Calculate the total dollar value of your total bid that you agree will be awarded to M/WBE subcontractors for services and/or credited to an M/WBE prime contractor or Qualified Joint Venture.

Please review the Notice to Prospective Contractors for more information on how to obtain credit for M/WBE participation.

Total Bid/Proposal Value	Agency Total Participation Goals (Line 1, Page 13)	Calculated M/WBE Participation Amount
\$ _____	X	= \$ Line 2

PRIME CONTRACTOR OBTAINED PARTIAL WAIVER APPROVAL: ADOPTING MODIFIED M/WBE PARTICIPATION GOALS

For Prime Contractors (including Qualified Joint Ventures and M/WBE firms) adopting Modified M/WBE Participation Goals.

Calculate the total dollar value of your total bid that you agree will be awarded to M/WBE subcontractors for services and/or credited to an M/WBE prime contractor or Qualified Joint Venture.

Please review the Notice to Prospective Contractors for more information on how to obtain credit for M/WBE participation.

Total Bid/Proposal Value	Adjusted Participation Goal (From Partial Waiver)	Calculated M/WBE Participation Amount
\$ _____	X	= \$ Line 3

Section III: M/WBE Utilization Plan: How Proposer/Bidder Will Fulfill M/WBE Participation Goals. Please review the Notice to Prospective Contractors for more information on how to obtain credit for M/WBE participation. Check applicable box. The Proposer or Bidder will fulfill the M/WBE Participation Goals:

As an M/WBE Prime Contractor that will self-perform and/or subcontract to other M/WBE firms a portion of the contract the value of which is at least the amount located on Lines 2 or 3 above, as applicable. The value of any work subcontracted to non-M/WBE firms will not be credited towards fulfillment of M/WBE Participation Goals. Please check all that apply to Prime Contractor:

MBE WBE

As a Qualified Joint Venture with an M/WBE partner, in which the value of the M/WBE partner's participation and/or the value of any work subcontracted to other M/WBE firms is at least the amount located on Lines 2 or 3 above, as applicable. The value of any work subcontracted to non M/WBE firms will not be credited towards fulfillment of M/WBE Participation Goals.

As a non M/WBE Prime Contractor that will enter into subcontracts with M/WBE firms the value of which is at least the amount located on Lines 2 or 3 above, as applicable.

Section IV: General Contract Information

What is the expected percentage of the total contract dollar value that you expect to award in subcontracts for services, regardless of M/WBE status? % _____

Enter brief description of the type(s) and dollar value of subcontracts for all/any services you plan on subcontracting if awarded this contract. For each item, indicate whether the work is designated for participation by MBEs and/or WBEs and the time frame in which such work is scheduled to begin and end. Use additional sheets if necessary.

✓ Scopes of Subcontract Work

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____

Tax ID #: _____

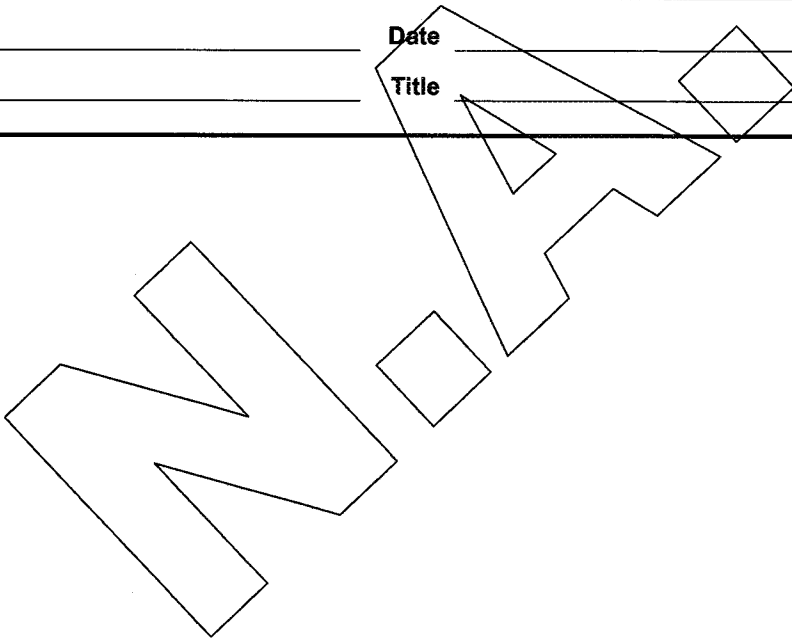
APT E-
PIN #: _____

Section V: Vendor Certification and Required Affirmations

I hereby:

- 1) acknowledge my understanding of the M/WBE participation requirements as set forth herein and the pertinent provisions of Section 6-129 of the Administrative Code of the City of New York ("Section 6-129"), and the rules promulgated thereunder;*
- 2) affirm that the information supplied in support of this M/WBE Utilization Plan is true and correct;*
- 3) agree, if awarded this Contract, to comply with the M/WBE participation requirements of this Contract, the pertinent provisions of Section 6-129, and the rules promulgated thereunder, all of which shall be deemed to be material terms of this Contract;*
- 4) agree and affirm that it is a material term of this Contract that the Vendor will award the total dollar value of the M/WBE Participation Goals to certified MBEs and/or WBEs, unless a full waiver is obtained or such goals are modified by the Agency; and*
- 5) agree and affirm, if awarded this Contract, to make all reasonable, good faith efforts to meet the M/WBE Participation Goals, or If a partial waiver is obtained or such goals are modified by the Agency, to meet the modified Participation Goals by soliciting and obtaining the participation of certified MBE and/or WBE firms.*

Signature _____	Date _____
Print Name _____	Title _____



SCHEDULE B – PART III – REQUEST FOR WAIVER OF M/WBE PARTICIPATION REQUIREMENT

Contract Overview

Tax ID # _____ FMS Vendor ID # _____
 Business Name _____
 Contact Name _____ Telephone # _____ Email _____
 Type of Procurement Competitive Sealed Bids Other Bid/Response Due Date _____
 APT E-PIN # (for this procurement): _____ Contracting Agency: _____

M/WBE Participation Goals as described in bid/solicitation documents

_____ % Agency M/WBE Participation Goal

Proposed M/WBE Participation Goal as anticipated by vendor seeking waiver
 _____ % of the total contract value anticipated in good faith by the bidder/proposer to be subcontracted for services and/or credited to an M/WBE Prime Contractor or Qualified Joint Venture.

Basis for Waiver Request: Check appropriate box & explain in detail below (attach additional pages if needed)

- Vendor does not subcontract services, and has the capacity and good faith intention to perform all such work itself with its own employees.
- Vendor subcontracts *some* of this type of work but at a *lower* % than bid/solicitation describes, and has the capacity and good faith intention to do so on this contract. (Attach subcontracting plan outlining services that the vendor will self-perform and subcontract to other vendors or consultants.)
- Vendor has other legitimate business reasons for proposing the M/WBE Participation Goal above. Explain under separate cover.

References

List 3 most recent contracts performed for NYC agencies (if any). Include information for each subcontract awarded in performance of such contracts. Add more pages if necessary.

CONTRACT NO.	AGENCY	DATE COMPLETED
Total Contract Amount \$ _____	Total Amount Subcontracted \$ _____	
Item of Work Subcontracted and Value of subcontract _____	Item of Work Subcontracted and Value of subcontract _____	Item of Work Subcontracted and Value of subcontract _____
CONTRACT NO. _____	AGENCY _____	DATE COMPLETED _____
Total Contract Amount \$ _____	Total Amount Subcontracted \$ _____	
Item of Work Subcontracted and Value of subcontract _____	Item of Work Subcontracted and Value of subcontract _____	Item of Work Subcontracted and Value of subcontract _____
CONTRACT NO. _____	AGENCY _____	DATE COMPLETED _____
Total Contract Amount \$ _____	Total Amount Subcontracted \$ _____	
Item of Work Subcontracted and Value of subcontract _____	Item of Work Subcontracted and Value of subcontract _____	Item of Work Subcontracted and Value of subcontract _____

List 3 most recent contracts performed for other entities. Include information for each subcontract awarded in performance of such contracts. Add more pages if necessary.

(Complete ONLY if vendor has performed fewer than 3 New York City contracts.)

TYPE OF Contract _____ ENTITY _____ DATE COMPLETED _____
 Manager at entity that hired vendor (Name/Phone No./Email) _____
 Total Contract Amount \$ _____ Total Amount Subcontracted \$ _____
 Type of Work Subcontracted _____

TYPE OF Contract _____ AGENCY/ENTITY _____ DATE COMPLETED _____
 Manager at agency/entity that hired vendor (Name/Phone No./Email) _____
 Total Contract Amount \$ _____ Total Amount Subcontracted \$ _____
 Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____

TYPE OF Contract _____ AGENCY/ENTITY _____ DATE COMPLETED _____
 Manager at entity that hired vendor (Name/Phone No./Email) _____
 Total Contract Amount \$ _____ Total Amount Subcontracted \$ _____
 Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____

VENDOR CERTIFICATION: I hereby affirm that the information supplied in support of this waiver request is true and correct, and that this request is made in good faith.

Signature: _____ Date: _____
 Print Name: _____ Title: _____

Shaded area below is for agency completion only

AGENCY CHIEF OF PURCHASING OFFICER APPROVAL
 Signature: _____ Date: _____

CITY CHIEF PROCUREMENT OFFICER APPROVAL
 Signature: _____ Date: _____

Waiver Determination
 Full Waiver Approved
 Waiver Denied
 Partial Waiver Approved
 Revised Participation Goal

APPRENTICESHIP PROGRAM REQUIREMENTS

Bidders are advised that the Apprenticeship Program Requirements set forth below apply to each contract for which a check mark is indicated before the word "Yes". Compliance with these requirements will be determined solely by the City.

YES NO

(1) Apprenticeship Program Requirements

Notice to Bidders: Please be advised that, pursuant to the authority granted to the City under Labor Law Section 816-b, the Department of Design and Construction hereby requires that the contractor awarded a contract as a result of this Invitation for Bids, and any of its subcontractors with subcontracts worth two million dollars or over, have, prior to entering into such contract or subcontract, apprenticeship agreements appropriate for the type and scope of work to be performed that have been registered with, and approved by, the New York State Commissioner of Labor. In addition, the contractor and its subcontractors will be required to show that such apprenticeship program/s have successfully passed the two year Probation period following the initial registration date of such program/s with the New York State Department of Labor.

The failure to prove, upon request, that these requirements have been met shall result in the contract not being awarded to the contractor or the subcontract not being approved.

Please be further advised that, pursuant to Labor Law Section 220, the allowable ratio of apprentices to journeypersons in any craft classification shall not be greater than the ratio permitted to the contractor as to its workforce on any job under the registered apprenticeship program.

(2) Apprenticeship Program Questionnaire

The bidder must submit a completed and signed Apprenticeship Program Questionnaire. The Questionnaire is set forth on the following page of the Bid Booklet.

APPRENTICESHIP PROGRAM QUESTIONNAIRE ("APQ")

Bidder Name: _____

Project ID Number: _____

The Bidder **MUST** complete, sign, and submit this Apprenticeship Program Questionnaire with its bid.

1. Does the bidder have any Apprenticeship Program agreement(s) appropriate for the type and scope of work to be performed? (Note: Participation may be by either direct sponsorship or through collective bargaining agreement(s).)

_____ YES _____ NO

2. Has/have the bidder's Apprenticeship Program agreement(s) been registered with, and approved by the New York State Commissioner of Labor ("NYSDOL Commissioner")?

_____ YES _____ NO

3. Has/have the bidder's Apprenticeship Program successfully passed the two-year Probation period following its initial registration with the New York State Department of Labor ("NYSDOL")?

_____ YES _____ NO

If the answers to Questions 1, 2, and 3 are "Yes". The bidder shall, in the space below (and/or attached herewith where applicable), provide the contact information for such Apprenticeship Program(s) as well as information demonstrating that such Apprenticeship Program(s) have passed the two-year Probation period following its initial registration with the NYSDOL. (The bidder may attach additional pages if necessary).

- **Where the bidder directly sponsors any such apprenticeship Program(s)**, the bidder shall provide the following:
 - The trade classification(s) covered by such program(s), and the date(s) such program(s) was/were approved by the NYSDOL Commissioner; and/or
 - A copy of a letter(s) from the NYSDOL, on NYSDOL's letterhead, executed by an official thereof, which verifies/verify the trade classification(s) covered by such program(s), and the date(s) such program(s) was/were approved by the NYSDOL Commissioner and the Active status of such program(s).
- **Where the bidder participates in any such Apprenticeship Program(s) through its membership in an employer organization(s) that directly sponsors such program(s) or where the employer association(s) participates in such program(s) through collective bargaining**, the bidder shall provide the following:
 - The contact information for the employer organization(s), and the apprenticeable trade(s) covered pursuant to the bidder's affiliation therewith, and the date such program(s) was/were approved by the NYSDOL Commissioner; or
 - A letter(s) from such employer organization(s), on letterhead of such organization(s), executed by an officer, delegate or official thereof, which verifies/verify the trade classification(s) covered by such program(s) was/were approved by the NYSDOL Commissioner, and that the bidder is both a member in good standing of the identified employer organization and is subject to the provisions of the Apprenticeship Program agreement(s) sponsored thereby.

Project ID. _____

The Contractor must indicate its Intrastate and Interstate EMR for the past three years. [Note: For contractors with less than three years of experience, the EMR will be considered to be 1.00].

YEAR	<u>INTRASTATE RATE</u>	<u>INTERSTATE RATE</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

If the Intrastate and/or Interstate EMR for any of the past three years is greater than 1.00, the contractor must attach, to this questionnaire, a written explanation for the rating and identify what corrective action was taken to correct the situation resulting in that rating.

4. OSHA Information:

___ YES ___ NO Contractor has received a willful violation issued by OSHA or New York City Department of Buildings (NYCDOB) within the last three years.

___ YES ___ NO Contractor has had an incident requiring OSHA notification within 8 hours (all work-related fatalities) or an incident requiring OSHA notification within 24 hours (all work-related in-patient hospitalizations, all amputations and all losses of an eye).

The Occupational Safety and Health Act (OSHA) of 1970 requires employers with ten or more employees, on a yearly basis to complete and maintain on file the form entitled "Log of Work-related Injuries and Illnesses". This form is commonly referred to as the OSHA 300 Log (OSHA 200 Log for 2001 and earlier).

The OSHA 300 Log must be submitted for the last three years for contractors with more than ten employees.

The Contractor must indicate the total number of hours worked by its employees, as reflected in payroll records for the past three years.

The contractor must submit the Incident Rate for Lost Time Injuries (the Incident Rate) for the past three years. The Incident Rate is calculated in accordance with the formula set forth below. For each given year, the total number of incidents is the total number of non-fatal injuries and illnesses reported on the OSHA 300 Log. The 200,000 hours represents the equivalent of 100 employees working forty hours a week, fifty weeks per year.

$$\text{Incident Rate} = \frac{\text{Total Number of Incidents} \times 200,000}{\text{Total Number of Hours Worked by Employees}}$$

YEAR	TOTAL NUMBERS OF HOURS WORKED BY EMPLOYEES	INCIDENT RATE
_____	_____	_____
_____	_____	_____
_____	_____	_____

Project ID. _____

If the contractor's Incident Rate for any of the past three years is one point higher than the Incident Rate for the type of construction it performs (listed below), the contractor must attach, to this questionnaire, a written explanation for the relatively high rate.

General Building Construction	8.5
Residential Building Construction	7.0
Nonresidential Building Construction	10.2
Heavy Construction, except building	8.7
Highway and Street Construction	9.7
Heavy Construction, except highways	8.3
Plumbing, Heating, HVAC	11.3
Painting and Paper Hanging	6.9
Electrical Work	9.5
Masonry, Stonework and Plastering	10.5
Carpentry and Floor Work	12.2
Roofing, Siding, and Sheet Metal	10.3
Concrete Work	8.6
Specialty Trade Contracting	8.6

5. Safety Performance on Previous DDC Project(s)

YES NO Contractor previously audited by the DDC Office of Site Safety.
DDC Project Number(s): _____, _____, _____

YES NO Accident on previous DDC Project(s).
DDC Project Number(s): _____, _____, _____

YES NO Fatality or Life-altering Injury on DDC Project(s) within the last three years.
[Examples of a life-altering injury include loss of limb, loss of a sense (e.g., sight, hearing), or loss of neurological function].
DDC Project Number(s): _____, _____, _____

Date: _____ By: _____
(Signature of Owner, Partner, Corporate Officer)

Title: _____

Pre-Award Process

The bidder is advised that as part of the pre-award review of its bid, it may be required to submit the information described in Sections (A) through (D) below. If required, such information must be submitted by the bidder within five (5) business days following receipt of notification from DDC that it is among the low bidders. Such notification from DDC will be by facsimile or in writing and will specify the types of information must be submitted. The types of information the bidder may be required to submit are described below. In the event the bidder fails to submit the required information within the specified time frame, its bid may be rejected as nonresponsive.

(A) **Project Reference Form:** If required, the bidder must complete and submit the Project Reference Form set forth on pages 27 through 29 of this Bid Booklet. The Project Reference Form consists of 3 parts: (1) Contracts Completed by the Bidder, (2) Contracts Currently Under Construction by the Bidder, and (3) Pending Contracts Not Yet Started by the Bidder.

(B) **Copy of License:** If required, the bidder must submit a copy of the license under which the bidder will be performing the work. Such license must clearly show the following: (1) Name of the Licensee, (2) License Number, and (3) Expiration date of the License. A copy of the license will be required from bidders for the following contracts: Plumbing Work, Electrical Work and Asbestos Abatement.

(C) **Financial Information:** If required, the bidder must submit the financial information described below:

- (1) **Audited Financial Statements:** Financial statements (Balance Sheet and Income Statement) of the entity submitting the bid, as audited by an independent auditor licensed to practice as a certified public accountant (CPA). Audited financial statements for the three most recent fiscal years must be submitted. Each such financial statement must include the auditor's standard report.

If the bidder does not have audited financial statements, it must submit an affidavit attesting to the fact that the bidder does not have such statements. In addition, the bidder must submit the following documentation covering the three most recent fiscal years: signed federal tax returns, unaudited financial statements, and a "certified review letter" from a certified public accountant (CPA) verifying the unaudited financial statements.

Unless the most recent audited or unaudited financial statement was issued within ninety (90) days, the bidder must submit interim financial information that includes data on financial position and results of operation (income data) for the current fiscal year. Such information may be summarized on a monthly or quarterly basis or at other intervals.

- (2) **Schedule of Aged Accounts Receivable,** including portion due within ninety (90) days.

(D) **Project Specific Information:** If required, the bidder must submit the project specific information described below:

- (1) Statement indicating the number of years of experience the bidder has had and in what type of construction.
- (2) Resumes of all key personnel to be involved in the project, including the proposed project superintendent.
- (3) List of significant pieces of equipment expected to be used for the contract, and whether such equipment is owned or leased.
- (4) Description of work expected to be subcontracted, and to what firms, if known.
- (5) List of key material suppliers.
- (6) Preliminary bar chart time schedule
- (7) Contractor's expected means of financing the project. This should be based on the assumption that the contractor is required to finance 2X average monthly billings throughout the contract period.
- (8) Any other issues the contractor sees as impacting his ability to complete the project according to the contract.

In addition to the information described in Sections (A) through (D) above, the bidder shall submit such additional information as the Commissioner may require, including without limitation, an explanation or justification for specific unit price items.

The bidder is further advised that it may be required to attend a pre-award meeting with DDC representatives. If such a meeting is convened, the bidder will be advised as to any additional material to be provided.

A. PROJECT REFERENCES – CONTRACTS COMPLETED BY THE BIDDER

List all contracts substantially completed within the last 4 years, up to a maximum of 10, in descending order of date of substantial completion.

Project & Location	Contract Type	Contract Amount (\$000)	Date Completed	Owner Reference & Tel. No.	Architect/Engineer Reference & Tel. No. if different from owner

B. PROJECT REFERENCES – CONTRACTS CURRENTLY UNDER CONSTRUCTION BY THE BIDDER

List all contracts currently under construction even if they are not similar to the contract being awarded.

Project & Location	Contract Type	Contract Amount (\$000)	Subcontracted to Others (\$000)	Uncompleted Portion (\$000)	Date Scheduled to Complete	Owner Reference & Tel. No.	Architect/Engineer Reference & Tel. No. if different from owner

C. PROJECT REFERENCES – PENDING CONTRACTS NOT YET STARTED BY THE BIDDER

List all contracts awarded to or won by the bidder but not yet started.

Project & Location	Contract Type	Contract Amount (\$000)	Date Scheduled to Start	Owner Reference & Tel. No.	Architect/Engineer Reference & Tel. No. if different from owner

(NO TEXT ON THIS PAGE)

**OFFICE OF THE MAYOR
BUREAU OF LABOR SERVICES
CONTRACT CERTIFICATE**

To be completed if the contract is less than \$1,000,000

Contractor: _____

Address: _____

Telephone Number: _____

Name and Title of Signatory: _____

Contracting Agency or Owner: _____

Project Number: _____

Proposed Contract Amount: _____

Description and Address of Proposed Contract: _____

Names of Subcontractors in the amount of 750,000 or more on this contract (if not known at this time, so state indicating that trades will be subcontracted):

I, (fill in name of person signing) _____, hereby affirm that I am authorized by the above-named contractor to certify that said contractor's proposed contract with the above-named owner or city agency is less than \$1,000,000. This affirmation is made in accordance with Executive Order No. 50 (1980) as amended and its implementing regulations.

_____ Date

_____ Signature

WILLFUL OR FRAUDULENT FALSIFICATION OF ANY DATA OR INFORMATION SUBMITTED HERewith MAY RESULT IN THE TERMINATION OF ANY CONTRACT BETWEEN THE CITY AND THE BIDDER OR CONTRACTOR AND BAR THE BIDDER OR CONTRACTOR FROM PARTICIPATION IN ANY CITY CONTRACT FOR A PERIOD OF UP TO THREE YEARS. FURTHER, SUCH FALSIFICATION MAY RESULT IN CRIMINAL PROSECUTION.

(NO TEXT ON THIS PAGE)

VENDEX COMPLIANCE

(A) **Vendex Fees:** Pursuant to Procurement Policy Board Rule 2-08(f)(2), the contractor will be charged a fee for the administration of the VENDEX system, including the Vendor Name Check process, if a Vendor Name Check review is required to be conducted by the Department of Investigation. The contractor shall also be required to pay the applicable required fees for any of its subcontractors for which Vendor Name Check reviews are required. The fee(s) will be deducted from payments made to the contractor under the contract. For contracts with an estimated value of less than or equal to \$1,000,000, the fee will be \$175 per Vendor Name Check review. For contracts with an estimated value of greater than \$1,000,000, the fee will be \$350 per Vendor Name Check review.

(B) **Confirmation of Vendex Compliance:** The Bidder shall submit this Confirmation of Vendex Compliance to the Department of Design and Construction, Contracts Section, 30-30 Thomson Avenue – First Floor, Long Island City, NY 11101.

Bid Information: The Bidder shall complete the bid information set forth below.

Name of Bidder: _____
Bidder's Address: _____
Bidder's Telephone Number: _____
Bidder's Fax Number: _____
Date of Bid Opening: _____
PROJECT ID: _____

Vendex Compliance: To demonstrate compliance with Vendex requirements, the Bidder shall complete either Section (1) or Section (2) below, whichever applies.

(1) **Submission of Vendex Questionnaires to MOCS:** By signing in the space provided below, the Bidder certifies that as of the date specified below, the Bidder has submitted Vendex Questionnaires to the Mayor's Office of Contract Services, Attn: VENDEX, 253 Broadway, 9th Floor, New York, New York 10007.

Date of Submission: _____

By: _____
(Signature of Partner or corporate officer)

Print Name: _____

(2) **Submission of Certification of No Change to DDC:** By signing in the space provided below, the Bidder certifies that it has read the instructions in a "Vendor's Guide to Vendex" and that such instructions do not require the Bidder to submit Vendex Questionnaires. The Bidder has completed **TWO ORIGINALS** of the Certification of No Change set forth on the next page of this Bid Booklet.

By: _____
(Signature of Partner or corporate officer)

Print Name: _____

(NO TEXT ON THIS PAGE)

Certificate of No Change Form

- Please submit two completed forms. Copies will not be accepted.
- Please send both copies to the agency that requested it, unless you are advised to send it directly to the Mayor's Office of Contract Services (MOCS).
- A materially false statement willfully or fraudulently made in connection with this certification, and/or the failure to conduct appropriate due diligence in verifying the information that is the subject of this certification, may result in rendering the submitting entity non-responsible for the purpose of contract award.
- A materially false statement willfully or fraudulently made in connection with this certification may subject the person making the false statement to criminal charges

I, _____, being duly sworn, state that I have read
Enter Your Name

and understand all the items contained in the vendor questionnaire and any submission of change as identified on page one of this form and certify that as of this date, these items have not changed. I further certify that, to the best of my knowledge, information and belief, those answers are full, complete, and accurate; and that, to the best of my knowledge, information, and belief, those answers continue to be full, complete, and accurate.

In addition, I further certify on behalf of the submitting vendor that the information contained in the principal questionnaire(s) and any submission of change identified on page two of this form have not changed and have been verified and continue, to the best of my knowledge, to be full, complete and accurate.

I understand that the City of New York will rely on the information supplied in this certification as additional inducement to enter into a contract with the submitting entity.

Vendor Questionnaire *This section is required.*

This refers to the vendor questionnaire(s) submitted for the vendor doing business with the City.

Name of Submitting Entity: _____

Vendor's Address: _____

Vendor's EIN or TIN: _____ Requesting Agency: _____

Are you submitting this Certification as a parent? (Please circle one) Yes No

Signature date on the last full vendor questionnaire signed for the submitting vendor: _____

Signature date on change submission for the submitting vendor: _____



Principal Questionnaire

This section refers to the most recent principal questionnaire submissions.

Principal Name	Date of signature on last full Principal Questionnaire	Date(s) of signature on submission of change
1		
2		
3		
4		
5		
6		

Check if additional changes were submitted and attach a document with the date of additional submissions.

Certification *This section is required.*

This form must be signed and notarized. Please complete this twice. Copies will not be accepted.

Certified By:

Name (Print)

Title

Name of Submitting Entity

Signature

Date

Notarized By:

Notary Public

County License Issued

License Number

Sworn to before me on: _____
Date

Certificate of No Change Form

- Please submit two completed forms. Copies will not be accepted.
- Please send both copies to the agency that requested it, unless you are advised to send it directly to the Mayor's Office of Contract Services (MOCS).
- A materially false statement willfully or fraudulently made in connection with this certification, and/or the failure to conduct appropriate due diligence in verifying the information that is the subject of this certification, may result in rendering the submitting entity non-responsible for the purpose of contract award.
- A materially false statement willfully or fraudulently made in connection with this certification may subject the person making the false statement to criminal charges

I, _____, being duly sworn, state that I have read
Enter Your Name

and understand all the items contained in the vendor questionnaire and any submission of change as identified on page one of this form and certify that as of this date, these items have not changed. I further certify that, to the best of my knowledge, information and belief, those answers are full, complete, and accurate; and that, to the best of my knowledge, information, and belief, those answers continue to be full, complete, and accurate.

In addition, I further certify on behalf of the submitting vendor that the information contained in the principal questionnaire(s) and any submission of change identified on page two of this form have not changed and have been verified and continue, to the best of my knowledge, to be full, complete and accurate.

I understand that the City of New York will rely on the information supplied in this certification as additional inducement to enter into a contract with the submitting entity.

Vendor Questionnaire *This section is required.*

This refers to the vendor questionnaire(s) submitted for the vendor doing business with the City.

Name of Submitting Entity: _____

Vendor's Address: _____

Vendor's EIN or TIN: _____ Requesting Agency: _____

Are you submitting this Certification as a parent? (Please circle one) Yes No

Signature date on the last full vendor questionnaire signed for the submitting vendor: _____

Signature date on change submission for the submitting vendor: _____

Principal Questionnaire

This section refers to the most recent principal questionnaire submissions.



Principal Name	Date of signature on last full Principal Questionnaire	Date(s) of signature on submission of change
1		
2		
3		
4		
5		
6		

Check if additional changes were submitted and attach a document with the date of additional submissions.

Certification *This section is required.*

This form must be signed and notarized. Please complete this twice. Copies will not be accepted.

Certified By:

Name (Print)

Title

Name of Submitting Entity

Signature

Date

Notarized By:

Notary Public

County License Issued

License Number

Sworn to before me on: _____
Date

IRAN DIVESTMENT ACT COMPLIANCE RIDER

FOR NEW YORK CITY CONTRACTORS

The Iran Divestment Act of 2012, effective as of April 12, 2012, is codified at State Finance Law (“SFL”) §165-a and General Municipal Law (“GML”) §103-g. The Iran Divestment Act, with certain exceptions, prohibits municipalities, including the City, from entering into contracts with persons engaged in investment activities in the energy sector of Iran. Pursuant to the terms set forth in SFL §165-a and GML §103-g, a person engages in investment activities in the energy sector of Iran if:

- (a) The person provides goods or services of twenty million dollars or more in the energy sector of Iran, including a person that provides oil or liquefied natural gas tankers, or products used to construct or maintain pipelines used to transport oil or liquefied natural gas, for the energy sector of Iran; or
- (b) The person is a financial institution that extends twenty million dollars or more in credit to another person, for forty-five days or more, if that person will use the credit to provide goods or services in the energy sector in Iran and is identified on a list created pursuant to paragraph (b) of subdivision three of Section 165-a of the State Finance Law and maintained by the Commissioner of the Office of General Services.

A bid or proposal shall not be considered for award nor shall any award be made where the bidder or proposer fails to submit a signed and verified bidder’s certification.

Each bidder or proposer must certify that it is not on the list of entities engaged in investment activities in Iran created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law. In any case where the bidder or proposer cannot certify that they are not on such list, the bidder or proposer shall so state and shall furnish with the bid or proposal a signed statement which sets forth in detail the reasons why such statement cannot be made. The City of New York may award a bid to a bidder who cannot make the certification on a case by case basis if:

- (1) The investment activities in Iran were made before the effective date of this section (i.e., April 12, 2012), the investment activities in Iran have not been expanded or renewed after the effective date of this section and the person has adopted, publicized and is implementing a formal plan to cease the investment activities in Iran and to refrain from engaging in any new investments in Iran; or
- (2) The City makes a determination that the goods or services are necessary for the City to perform its functions and that, absent such an exemption, the City would be unable to obtain the goods or services for which the contract is offered. Such determination shall be made in writing and shall be a public document.

**BIDDER'S CERTIFICATION OF COMPLIANCE WITH
IRAN DIVESTMENT ACT**

Pursuant to General Municipal Law §103-g, which generally prohibits the City from entering into contracts with persons engaged in investment activities in the energy sector of Iran, the bidder/proposer submits the following certification:

[Please Check One]

BIDDER'S CERTIFICATION

- By submission of this bid or proposal, each bidder/proposer and each person signing on behalf of any bidder/proposer certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief, that each bidder/proposer is not on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law.

- I am unable to certify that my name and the name of the bidder/proposer does not appear on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law. I have attached a signed statement setting forth in detail why I cannot so certify.

SIGNATURE

PRINTED NAME

TITLE

Sworn to before me this _____ day of _____, 20____

Notary Public

Dated:

**THE CITY OF NEW YORK
DEPARTMENT OF SMALL BUSINESS SERVICES
DIVISION OF LABOR SERVICES
CONTRACT COMPLIANCE UNIT
110 WILLIAMS STREET
NEW YORK, NEW YORK 10038
PHONE: (212) 513-6323
FAX: (212) 618-8879**

CONSTRUCTION

EMPLOYMENT

REPORT

(NO TEXT ON THIS PAGE)

The City of New York
 Department of Small Business Services
 Division of Labor Services
 Contract Compliance Unit
 110 William Street
 New York, New York 10038
 Phone: (212) 513 - 6323
 Fax: (212) 618-8879

**CONSTRUCTION EMPLOYMENT REPORT
 INSTRUCTIONS**

WHO MUST FILE A CONSTRUCTION EMPLOYMENT REPORT

A Construction Employment Report (ER) must be filed if you meet the following conditions:

CONTRACT FUNDING SOURCE	CONTRACTOR	CONTRACT VALUE	SUBMISSION REQUIREMENT
Federal/Federally assisted	Prime and subcontractors	\$10,000 or greater	Construction Employment Report
City and state funded	Prime contractor	\$1,000,000 or greater	
	Subcontractor	\$750,000 or greater	
			Less than \$750,000

Prime Contractor:

- A general contractor or construction manager selected to perform work on a construction project funded (in whole or in part) by the federal government with a proposed contract value of \$10,000 or more.
- A general contractor or construction manager selected to perform work on a construction project funded or assisted by the City of New York with a proposed contract value of \$1,000,000 or more.

Subcontractor:

- A subcontractor selected to perform work on a construction project funded (in whole or in part) by the federal government with a proposed contract value of \$10,000 or more.
- A subcontractor selected to perform work on a construction project funded or assisted by the City of New York with a proposed contract value of \$750,000 or more.
- A subcontractor selected to perform work on a construction project funded or assisted by the City of New York with a proposed contract value of less than \$750,000 must submit a "Less than \$750,000" certificate.

WHERE TO FILE

Employment Reports must be filed with the City agency awarding the contract. If you are a contractor or subcontractor who will be working for a private developer in receipt of funding or assistance from the City, the ER must be filed with the City agency with jurisdiction over the developer's project.

DLS REVIEW PROCESS

In accordance with Executive Order 50 (EO 50), upon receipt by DLS of a completed ER, DLS conducts a review of the contractor's current employment policies, practices and procedures, as well as perform a statistical analysis of the contractor's workforce, if necessary. The process is as follows:

1. Within five (5) business days, DLS will review the ER for completeness and accuracy. If any information is omitted or incorrect, or if necessary documents are not submitted, the submission shall be deemed incomplete and DLS will inform the contractor. The substantive compliance review does not commence until the submission is complete. **An incomplete submission will delay the review process and may preclude or interrupt the contract approval.**
2. If the ER submission is complete, the compliance review will proceed, resulting in one of the following:

Certificate of Approval

The contractor is found to be in compliance with all applicable laws and regulations. The approval is valid for 36 months.

Continued Approval Certificate

The contractor has been issued a Certificate of Approval in the previous 36 months which is good for the applicable contract.

Conditional Certificate of Compliance

The contractor is required to take corrective actions in order to be in compliance with EO 50. The contractor must meet the conditions within one month of the issue of the Conditional Certificate.

Determination of Nonperformance

The contractor has failed to take the required corrective actions stipulated in the Conditional Certificate. A determination of nonperformance may prevent a contractor from receiving an award of a contract.

HOW TO COMPLETE THE EMPLOYMENT REPORT

Contents

General Information

Part I: Contractor/Subcontractor Information

Part II: Employment Policies and Practices

Part III: Contract Bid Information and Projected and Current Workforce Forms

Signature Page

PART I: CONTRACTOR/SUBCONTRACTOR INFORMATION

- Questions 7 – 11: Please provide the required contact information for your company. All contracts must have a designated Equal Employment Officer.
- Question 12: If you are a subcontractor, you must state the name of the contractor for whom you are providing the construction services.
- Question 13: Please provide the number of permanent employees in your company.
- Question 14a-g: The Project Identification Number (PIN) and the Contract Registration ID Number (CT#) can be obtained from the City agency. Provide a description of the trade work you will perform on this project and the address where the work will be performed. Subcontractors can obtain this information from the contract they have with the prime contractor.
- Questions 15 – 18: If your company has received a valid Certificate of Approval within the past 36 months, been audited by the United States Department of Labor, Office of Federal Contract Compliance Programs (OFCCP), or if your company has submitted an ER for a different contract for which you have not yet received a compliance certificate, then you only need to complete and submit the following:
- General Information section
 - Part I - Contractor/Subcontractor Information
 - Form B - Projected Workforce
 - Signature Page

If your company is currently waiting for an approval on another contract previously submitted, be certain to identify the date on which you submitted the completed Employment Report, the name of the City contracting agency with which the contract was made, and the name and telephone number of the person to whom the Employment Report was submitted.

If your company was issued a Conditional Certificate of Approval, all required corrective actions must have been taken or DLS will not issue a Continued Certificate.

- Question 18: If the company was audited by the OFCCP, also provide the following:
- Identify the reviewing OFCCP office by its name and address
 - If an unconditional certificate of compliance was issued by the OFCCP, attach a copy of the certificate in lieu of completing Parts II and III;
 - Include copies of all corrective actions and documentation of OFCCP's performance; and
 - Provide a copy of all stated OFCCP findings.

Question 19: Please provide a copy of any Collective Bargaining Agreement(s) which is negotiated through an employer trade association on behalf of your organization or any of its affiliates.

PART II: EMPLOYMENT POLICIES AND PRACTICES

Remember to label all documents with the question number for which they are submitted.

Questions 20a – j: You must respond to the questions as to whether or not your firm has documents reflecting written policies, benefits and procedures. If so, then you must identify by name each document in which the policy(ies), procedure(s) and benefit(s) is located and submit copies of all of the document(s). If your firm follows unwritten practices or procedures, include an explanation of how they operate. Please submit the most current document(s), including all applicable amendments. Label each document and/or unwritten practice according to the question to which it corresponds (e.g. 20a, 20b, etc.)

Questions 21a – h: Inquires about the manner/methods by which you comply with the requirements of the Immigration Reform and Control Act of 1986 (IRCA).

Question 22: Inquires into where and how I-9 forms are maintained and stored.

Questions 23a – e: Inquires into whether or not there is a requirement that an applicant or employee be subjected to a medical examination at any given time. Copies of the medical information questionnaire and instructions must be submitted with the Employment Report.

Question 24: Indicate the existence and location of all statements of your firm's Equal Employment Opportunity policy and attach a copy of each statement.

Question 25: Submit any current Affirmative Action Plan(s) created pursuant to Executive Order 11246.

Question 26: If your firm or collective bargaining agreement has an internal grievance procedure, indicate this and submit a copy of the policy and procedure. If unwritten, explain its nature and operation. Explain how your firm's procedure addresses EEO complaints.

Question 27: If your employees have used the procedure in the last three (3) years, please submit an explanation in the format indicated below:

1. Number of complaint(s)	2. Nature of the complaint(s)	3. Position(s) of the complainant(s)	4. Was an investigation conducted? Y/N	5. Current status of the disposition
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Question 28: Indicate whether in the past three (3) years complaints have been filed with a court of law or administrative agency, naming your company as a defendant (or respondent) in a complaint alleging violation of any anti-discrimination or affirmative action laws. If yes, develop and submit a log to show, for each administrative/and or judicial action filed, the following information:

1. Name(s) of complainant(s)	2. Administrative agency or court in which action was filed	3. Nature of the complaint(s)	4. Current status	5. If not pending, the complaint's disposition
------------------------------	---	-------------------------------	-------------------	--

Question 29: Identify each job for which a physical qualification exists. Identify and explain the physical qualification(s) for each stated job. Submit job descriptions for each job and the reasons for the qualifications.

Question 30: Identify each job for which there exists any qualification related to age, race, color, national origin, sex, creed, disability, marital status, sexual orientation or citizenship status. Identify and explain the specific related qualification for each job stated. Submit job descriptions for each job and the reasons for the qualifications.

PART III: CONTRACT BID INFORMATION AND PROJECTED AND CURRENT WORKFORCE FORMS

FORM A: CONTRACT BID INFORMATION – USE OF SUBCONTRACTORS/TRADES

Your projections for the utilization of subcontractors on the proposed contract are to be provided in this section. A chart has been provided for the identification of subcontractors. Information is to be provided to the extent known at the time the ER is filed for review by DLS. If the subcontractor's name is unknown, then write "unknown". Under "ownership", enter the appropriate race/ethnic and gender code. If the contract is federally funded or assisted and the subcontractor is being utilized in accordance with applicable federal requirements with respect to Minority Business Enterprise or Woman Business Enterprise requirements, enter the appropriate code. This will also apply to state funded contracts with similar requirements for minority and female owned businesses.

FORM B: PROJECTED WORKFORCE FOR WORK TO BE PERFORMED ON THIS PROJECT

For each trade to be engaged by your company for this project, enter the projected workforce for Males and Females by trade classification in the charts provided.

FORM C: CURRENT WORKFORCE FOR WORK TO BE PERFORMED ON THIS PROJECT

For each trade *currently* engaged by your company for all work performed in NYC, enter the current workforce for Males and Females by trade classification in the charts provided.

SIGNATURE PAGE

The signatory of this Employment Report and all other documents submitted to DLS must be an official authorized to enter into a binding legal agreement. The signature page must be completed in its entirety and notarized. Only original signatures will be accepted.

The City of New York Department of Small Business Services
Division of Labor Services Contract Compliance Unit
110 William Street, New York, New York 10038
Phone: (212) 513 - 6323
Fax: (212) 618-8879

CONSTRUCTION EMPLOYMENT REPORT

GENERAL INFORMATION

1. Your contractual relationship in this contract is: Prime contractor Subcontractor
- 1a. Are M/WBE goals attached to this project? Yes No
2. Please check one of the following if your firm would like information on how to certify with the City of New York as a:
- Minority Owned Business Enterprise Locally Based Business Enterprise
 Women Owned Business Enterprise Emerging Business Enterprise
 Disadvantaged Business Enterprise
- 2a. If you are certified as an **MBE, WBE, LBE, EBE** or **DBE**, what city/state agency are you certified with? _____ Are you DBE certified? Yes No
3. Please indicate if you would like assistance from SBS in identifying certified M/WBEs for contracting opportunities: Yes No
4. Is this project subject to a project labor agreement? Yes No
5. Are you a Union contractor? Yes No If yes, please list which local(s) you affiliated with _____
6. Are you a Veteran owned company? Yes No

PART I: CONTRACTOR/SUBCONTRACTOR INFORMATION

7. _____
Employer Identification Number or Federal Tax I.D. Email Address
8. _____
Company Name
9. _____
Company Address and Zip Code
10. _____
Chief Operating Officer Telephone Number
11. _____
Designated Equal Opportunity Compliance Officer Telephone Number
(If same as Item #10, write "same")
12. _____
Name of Prime Contractor and Contact Person
(If same as Item #8, write "same")

13. Number of employees in your company: _____

14. Contract information:

(a) _____
Contracting Agency (City Agency)

(b) _____
Contract Amount

(c) _____
Procurement Identification Number (PIN)

(d) _____
Contract Registration Number (CT#)

(e) _____
Projected Commencement Date

(f) _____
Projected Completion Date

(g) Description and location of proposed contract:

15. Has your firm been reviewed by the Division of Labor Services (DLS) within the past 36 months and issued a Certificate of Approval? Yes___ No___

If yes, attach a copy of certificate.

16. Has DLS within the past month reviewed an Employment Report submission for your company and issued a Conditional Certificate of Approval? Yes___ No___

If yes, attach a copy of certificate.

NOTE: DLS WILL NOT ISSUE A CONTINUED CERTIFICATE OF APPROVAL IN CONNECTION WITH THIS CONTRACT UNLESS THE REQUIRED CORRECTIVE ACTIONS IN PRIOR CONDITIONAL CERTIFICATES OF APPROVAL HAVE BEEN TAKEN.

17. Has an Employment Report already been submitted for a different contract (not covered by this Employment Report) for which you have not yet received compliance certificate?
Yes___ No___ If yes,

Date submitted: _____

Agency to which submitted: _____

Name of Agency Person: _____

Contract No: _____

Telephone: _____

18. Has your company in the past 36 months been audited by the United States Department of Labor, Office of Federal Contract Compliance Programs (OFCCP)? Yes___ No___

If yes,

(a) Name and address of OFCCP office.

(b) Was a Certificate of Equal Employment Compliance issued within the past 36 months?
Yes ___ No ___

If yes, attach a copy of such certificate.

(c) Were any corrective actions required or agreed to? Yes ___ No ___

If yes, attach a copy of such requirements or agreements.

(d) Were any deficiencies found? Yes ___ No ___

If yes, attach a copy of such findings.

19. Is your company or its affiliates a member or members of an employers' trade association which is responsible for negotiating collective bargaining agreements (CBA) which affect construction site hiring? Yes ___ No ___

If yes, attach a list of such associations and all applicable CBA's.

PART II: DOCUMENTS REQUIRED

20. For the following policies or practices, attach the relevant documents (e.g., printed booklets, brochures, manuals, memoranda, etc.). If the policy(ies) are unwritten, attach a full explanation of the practices. See instructions.

- ___ (a) Health benefit coverage/description(s) for all management, nonunion and union employees (whether company or union administered)
- ___ (b) Disability, life, other insurance coverage/description
- ___ (c) Employee Policy/Handbook
- ___ (d) Personnel Policy/Manual
- ___ (e) Supervisor's Policy/Manual
- ___ (f) Pension plan or 401k coverage/description for all management, nonunion and union employees, whether company or union administered
- ___ (g) Collective bargaining agreement(s).
- ___ (h) Employment Application(s)
- ___ (i) Employee evaluation policy/form(s).
- ___ (j) Does your firm have medical and/or non-medical (i.e. education, military, personal, pregnancy, child care) leave policy?

21. To comply with the Immigration Reform and Control Act of 1986 when and of whom does your firm require the completion of an I-9 Form?

- (a) Prior to job offer Yes___ No___
- (b) After a conditional job offer Yes___ No___
- (c) After a job offer Yes___ No___
- (d) Within the first three days on the job Yes___ No___
- (e) To some applicants Yes___ No___
- (f) To all applicants Yes___ No___
- (g) To some employees Yes___ No___
- (h) To all employees Yes___ No___

22. Explain where and how completed I-9 Forms, with their supportive documentation, are maintained and made accessible.

23. Does your firm or any of its collective bargaining agreements require job applicants to take a medical examination? Yes___ No___

If yes, is the medical examination given:

- (a) Prior to a job offer Yes___ No___
- (b) After a conditional job offer Yes___ No___
- (c) After a job offer Yes___ No___
- (d) To all applicants Yes___ No___
- (e) Only to some applicants Yes___ No___

If yes, list for which applicants below and attach copies of all medical examination or questionnaire forms and instructions utilized for these examinations.

24. Do you have a written equal employment opportunity (EEO) policy? Yes___ No___

If yes, list the document(s) and page number(s) where these written policies are located.

25. Does the company have a current affirmative action plan(s) (AAP)

- ___ Minorities and Women
- ___ Individuals with handicaps
- ___ Other. Please specify _____

26. Does your firm or collective bargaining agreement(s) have an internal grievance procedure with respect to EEO complaints? Yes___ No___

If yes, please attach a copy of this policy.

If no, attach a report detailing your firm's unwritten procedure for handling EEO complaints.

27. Has any employee, within the past three years, filed a complaint pursuant to an internal grievance procedure or with any official of your firm with respect to equal employment opportunity? Yes___ No___

If yes, attach an internal complaint log. See instructions.

28. Has your firm, within the past three years, been named as a defendant (or respondent) in any administrative or judicial action where the complainant (plaintiff) alleged violation of any anti-discrimination or affirmative action laws? Yes___ No___

If yes, attach a log. See instructions.

29. Are there any jobs for which there are physical qualifications? Yes___ No___

If yes, list the job(s), submit a job description and state the reason(s) for the qualification(s).

30. Are there any jobs for which there are age, race, color, national origin, sex, creed, disability, marital status, sexual orientation, or citizenship qualifications? Yes___ No___

If yes, list the job(s), submit a job description and state the reason(s) for the qualification(s).

SIGNATURE PAGE

I, (print name of authorized official signing) _____ hereby certify that the information submitted herewith is true and complete to the best of my knowledge and belief and submitted with the understanding that compliance with New York City's equal employment requirements, as contained in Chapter 56 of the City Charter, Executive Order No. 50 (1980), as amended, and the implementing Rules and Regulations, is a contractual obligation. I also agree on behalf of the company to submit a certified copy of payroll records to the Division of Labor Services on a monthly basis.

Contractor's Name

Name of person who prepared this Employment Report

Title

Name of official authorized to sign on behalf of the contractor

Title

Telephone Number

Signature of authorized official

Date

If contractors are found to be underutilizing minorities and females in any given trade based on Chapter 56 Section 3H, the Division of Labor Services reserves the right to request the contractor's workforce data and to implement an employment program.

Contractors who fail to comply with the above mentioned requirements or are found to be in noncompliance may be subject to the withholding of final payment.

Willful or fraudulent falsifications of any data or information submitted herewith may result in the termination of the contract between the City and the bidder or contractor and in disapproval of future contracts for a period of up to five years. Further, such falsification may result in civil and/or criminal prosecution.

To the extent permitted by law and consistent with the proper discharge of DLS' responsibilities under Charter Chapter 56 of the City Charter and Executive Order No. 50 (1980) and the implementing Rules and Regulations, all information provided by a contractor to DLS shall be confidential.

Only original signatures accepted.

Sworn to before me this _____ day of _____ 20 _____

Notary Public

Authorized Signature

Date

FORM A. CONTRACT BID INFORMATION: USE OF SUBCONTRACTORS/TRADES

1. Do you plan to subcontract work on this contract? Yes ___ No ___
2. If yes, complete the chart below.

NOTE: All proposed subcontractors with a subcontract in excess of \$750,000 must complete an Employment Report for review and approval before the contract may be awarded and work commences.

SUBCONTRACTOR'S NAME*	OWNERSHIP (ENTER APPROPRIATE CODE LETTERS BELOW)	WORK TO BE PERFORMED BY SUBCONTRACTOR	TRADE PROJECTED FOR USE BY SUBCONTRACTOR	PROJECTED DOLLAR VALUE OF SUBCONTRACT

*If subcontractor is presently unknown, please enter the trade (craft name).

- OWNERSHIP CODES**
W: White
B: Black
H: Hispanic
A: Asian
N: Native American
F: Female

FORM B: PROJECTED WORKFORCE

TRADE CLASSIFICATION CODES

- (J) Journeylevel Workers
- (H) Helper
- (A) Apprentice
- (TRN) Trainee
- (TOT) Total by Column

For each trade to be engaged by your company for this project, enter the projected workforce for Males and Females by trade classification on the charts below.

Trade:	MALES					FEMALES				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.
J										
H										
A										
TRN										
TOT										

Total (Col. #1-10):

Total Minority, Male & Female
(Col. #2,3,4,5,7,8,9, & 10):

Total Female
(Col. #6 - 10):

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

FORM B: PROJECTED WORKFORCE

Trade: _____

Union Affiliation, if applicable _____

Total (Col. #1-10): _____

Total Minority, Male & Female
(Col. #2,3,4,5,7,8,9, & 10): _____

Total Female
(Col. #6 - 10): _____

MALES

(1) White Non Hisp.	(2) Black Non Hisp.	(3) Hisp.	(4) Asian	(5) Native Amer.

J
H
A
TRN
TOT

FEMALES

(6) White Non Hisp.	(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) Native Amer.

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

FORM C: CURRENT WORKFORCE

TRADE CLASSIFICATION CODES

- (J) Journeylevel Workers
- (H) Helper
- (A) Apprentice
- (TRN) Trainee
- (TOT) Total by Column

For each trade currently engaged by your company for all work performed in New York City, enter the current workforce for Males and Females by trade classification on the charts below.

Trade:	MALES					FEMALES										
	(1)		(2)		(3)	(4)		(5)	(6)		(7)		(8)	(9)		(10)
	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.		
J																
H																
A																
TRN																
TOT																

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

FORM C: CURRENT WORKFORCE

Trade: _____

Union Affiliation, if applicable _____

Total (Col. #1-10): _____

Total Minority, Male & Female
(Col. #2,3,4,5,7,8,9, & 10): _____

Total Female
(Col. #6 - 10): _____

MALES

	(1)		(2)		(3)		(4)		(5)	
	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Hisp.	Asian	Native Amer.	
J										
H										
A										
TRN										
TOT										

FEMALES

	(6)		(7)		(8)		(9)		(10)	
	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Hisp.	Asian	Native Amer.	
J										
H										
A										
TRN										
TOT										

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

(NO TEXT ON THIS PAGE)

The City of New York Department of Small Business Services
Division of Labor Services Contract Compliance Unit
110 William Street, New York, New York 10038
Phone: (212) 513 - 6323
Fax: (212) 618-8879

CONSTRUCTION EMPLOYMENT REPORT

GENERAL INFORMATION

1. Your contractual relationship in this contract is: Prime contractor ___ Subcontractor x
- 1a. Are M/WBE goals attached to this project? Yes ___ No ___
2. Please check one of the following if your firm would like information on how to certify with the City of New York as a:

<input type="checkbox"/> Minority Owned Business Enterprise	<input type="checkbox"/> Locally Based Business Enterprise
<input type="checkbox"/> Women Owned Business Enterprise	<input type="checkbox"/> Emerging Business Enterprise
<input type="checkbox"/> Disadvantaged Business Enterprise	
- 2a. If you are certified as an **MBE, WBE, LBE, EBE** or **DBE**, what city/state agency are you certified with? _____ Are you DBE certified? Yes ___ No ___
3. Please indicate if you would like assistance from SBS in identifying certified M/WBEs for contracting opportunities: Yes ___ No ___
4. Is this project subject to a project labor agreement? Yes ___ No ___
5. Are you a Union contractor? Yes ___ No ___ If yes, please list which local(s) you affiliated with _____
6. Are you a Veteran owned company? Yes ___ No ___

PART I: CONTRACTOR/SUBCONTRACTOR INFORMATION

7. _____
Employer Identification Number or Federal Tax I.D. Email Address
8. _____
Company Name
9. _____
Company Address and Zip Code
10. _____
Chief Operating Officer Telephone Number
11. _____
Designated Equal Opportunity Compliance Officer Telephone Number
(If same as Item #10, write "same")
12. _____
Name of Prime Contractor and Contact Person
(If same as Item #8, write "same")

13. Number of employees in your company: _____

14. Contract information:

(a) _____
Contracting Agency (City Agency)

(b) _____
Contract Amount

(c) _____
Procurement Identification Number (PIN)

(d) _____
Contract Registration Number (CT#)

(e) _____
Projected Commencement Date

(f) _____
Projected Completion Date

(g) Description and location of proposed contract:

15. Has your firm been reviewed by the Division of Labor Services (DLS) within the past 36 months and issued a Certificate of Approval? Yes___ No___

If yes, attach a copy of certificate.

16. Has DLS within the past month reviewed an Employment Report submission for your company and issued a Conditional Certificate of Approval? Yes___ No___

If yes, attach a copy of certificate.

NOTE: DLS WILL NOT ISSUE A CONTINUED CERTIFICATE OF APPROVAL IN CONNECTION WITH THIS CONTRACT UNLESS THE REQUIRED CORRECTIVE ACTIONS IN PRIOR CONDITIONAL CERTIFICATES OF APPROVAL HAVE BEEN TAKEN.

17. Has an Employment Report already been submitted for a different contract (not covered by this Employment Report) for which you have not yet received compliance certificate?
Yes___ No___ If yes,

Date submitted: _____

Agency to which submitted: _____

Name of Agency Person: _____

Contract No: _____

Telephone: _____

18. Has your company in the past 36 months been audited by the United States Department of Labor, Office of Federal Contract Compliance Programs (OFCCP)? Yes___ No___

If yes,

(a) Name and address of OFCCP office.

(b) Was a Certificate of Equal Employment Compliance issued within the past 36 months?
Yes___ No___

If yes, attach a copy of such certificate.

(c) Were any corrective actions required or agreed to? Yes___ No___

If yes, attach a copy of such requirements or agreements.

(d) Were any deficiencies found? Yes___ No___

If yes, attach a copy of such findings.

19. Is your company or its affiliates a member or members of an employers' trade association which is responsible for negotiating collective bargaining agreements (CBA) which affect construction site hiring? Yes___ No___

If yes, attach a list of such associations and all applicable CBA's.

PART II: DOCUMENTS REQUIRED

20. For the following policies or practices, attach the relevant documents (e.g., printed booklets, brochures, manuals, memoranda, etc.). If the policy(ies) are unwritten, attach a full explanation of the practices. See instructions.

- ___ (a) Health benefit coverage/description(s) for all management, nonunion and union employees (whether company or union administered)
- ___ (b) Disability, life, other insurance coverage/description
- ___ (c) Employee Policy/Handbook
- ___ (d) Personnel Policy/Manual
- ___ (e) Supervisor's Policy/Manual
- ___ (f) Pension plan or 401k coverage/description for all management, nonunion and union employees, whether company or union administered
- ___ (g) Collective bargaining agreement(s).
- ___ (h) Employment Application(s)
- ___ (i) Employee evaluation policy/form(s).
- ___ (j) Does your firm have medical and/or non-medical (i.e. education, military, personal, pregnancy, child care) leave policy?

21. To comply with the Immigration Reform and Control Act of 1986 when and of whom does your firm require the completion of an I-9 Form?

- (a) Prior to job offer Yes___ No___
- (b) After a conditional job offer Yes___ No___
- (c) After a job offer Yes___ No___
- (d) Within the first three days on the job Yes___ No___
- (e) To some applicants Yes___ No___
- (f) To all applicants Yes___ No___
- (g) To some employees Yes___ No___
- (h) To all employees Yes___ No___

22. Explain where and how completed I-9 Forms, with their supportive documentation, are maintained and made accessible.

23. Does your firm or any of its collective bargaining agreements require job applicants to take a medical examination? Yes___ No___

If yes, is the medical examination given:

- (a) Prior to a job offer Yes___ No___
- (b) After a conditional job offer Yes___ No___
- (c) After a job offer Yes___ No___
- (d) To all applicants Yes___ No___
- (e) Only to some applicants Yes___ No___

If yes, list for which applicants below and attach copies of all medical examination or questionnaire forms and instructions utilized for these examinations.

24. Do you have a written equal employment opportunity (EEO) policy? Yes___ No___

If yes, list the document(s) and page number(s) where these written policies are located.

25. Does the company have a current affirmative action plan(s) (AAP)

____ Minorities and Women

____ Individuals with handicaps

____ Other. Please specify _____

26. Does your firm or collective bargaining agreement(s) have an internal grievance procedure with respect to EEO complaints? Yes___ No___

If yes, please attach a copy of this policy.

If no, attach a report detailing your firm's unwritten procedure for handling EEO complaints.

27. Has any employee, within the past three years, filed a complaint pursuant to an internal grievance procedure or with any official of your firm with respect to equal employment opportunity? Yes___ No___

If yes, attach an internal complaint log. See instructions.

28. Has your firm, within the past three years, been named as a defendant (or respondent) in any administrative or judicial action where the complainant (plaintiff) alleged violation of any anti-discrimination or affirmative action laws? Yes___ No___

If yes, attach a log. See instructions.

29. Are there any jobs for which there are physical qualifications? Yes___ No___

If yes, list the job(s), submit a job description and state the reason(s) for the qualification(s).

30. Are there any jobs for which there are age, race, color, national origin, sex, creed, disability, marital status, sexual orientation, or citizenship qualifications? Yes___ No___

If yes, list the job(s), submit a job description and state the reason(s) for the qualification(s).

SIGNATURE PAGE

I, (print name of authorized official signing) _____ hereby certify that the information submitted herewith is true and complete to the best of my knowledge and belief and submitted with the understanding that compliance with New York City's equal employment requirements, as contained in Chapter 56 of the City Charter, Executive Order No. 50 (1980), as amended, and the implementing Rules and Regulations, is a contractual obligation. I also agree on behalf of the company to submit a certified copy of payroll records to the Division of Labor Services on a monthly basis.

Contractor's Name

Name of person who prepared this Employment Report Title

Name of official authorized to sign on behalf of the contractor Title

Telephone Number

Signature of authorized official Date

If contractors are found to be underutilizing minorities and females in any given trade based on Chapter 56 Section 3H, the Division of Labor Services reserves the right to request the contractor's workforce data and to implement an employment program.

Contractors who fail to comply with the above mentioned requirements or are found to be in noncompliance may be subject to the withholding of final payment.

Willful or fraudulent falsifications of any data or information submitted herewith may result in the termination of the contract between the City and the bidder or contractor and in disapproval of future contracts for a period of up to five years. Further, such falsification may result in civil and/or criminal prosecution.

To the extent permitted by law and consistent with the proper discharge of DLS' responsibilities under Charter Chapter 56 of the City Charter and Executive Order No. 50 (1980) and the implementing Rules and Regulations, all information provided by a contractor to DLS shall be confidential.

Only original signatures accepted.

Sworn to before me this _____ day of _____ 20 _____

Notary Public Authorized Signature Date

FORM A. CONTRACT BID INFORMATION: USE OF SUBCONTRACTORS/TRADES

1. Do you plan to subcontract work on this contract? Yes ___ No ___
2. If yes, complete the chart below.

NOTE: All proposed subcontractors with a subcontract in excess of \$750,000 must complete an Employment Report for review and approval before the contract may be awarded and work commences.

SUBCONTRACTOR'S NAME*	OWNERSHIP (ENTER APPROPRIATE CODE LETTERS BELOW)	WORK TO BE PERFORMED BY SUBCONTRACTOR	TRADE PROJECTED FOR USE BY SUBCONTRACTOR	PROJECTED DOLLAR VALUE OF SUBCONTRACT

***If subcontractor is presently unknown, please enter the trade (craft name).**

OWNERSHIP CODES

- W: White
- B: Black
- H: Hispanic
- A: Asian
- N: Native American
- F: Female

FORM B: PROJECTED WORKFORCE

TRADE CLASSIFICATION CODES

- (J) Journeylevel Workers
- (H) Helper
- (TOT) Total by Column
- (A) Apprentice (TRN) Trainee

For each trade to be engaged by your company for this project, enter the projected workforce for Males and Females by trade classification on the charts below.

Trade:	MALES						FEMALES						
	(1) White Non Hisp.		(2) Black Non Hisp.		(3) Hisp.	(4) Asian	(5) Native Amer.	(6) White Non Hisp.		(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) Native Amer.
J													
H													
A													
TRN													
TOT													

Trade: _____

Union Affiliation, if applicable _____

Total (Col. #1-10): _____

Total Minority, Male & Female (Col. #2,3,4,5,7,8,9, & 10): _____

Total Female (Col. #6 - 10): _____

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

FORM B: PROJECTED WORKFORCE

Trade: _____

Union Affiliation, if applicable _____

Total (Col. #1-10): _____

Total Minority, Male & Female
(Col. #2,3,4,5,7,8,9, & 10): _____

Total Female
(Col. #6 - 10): _____

MALES

	(1)		(2)		(3)		(4)		(5)	
	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	Asian	Asian	Native Amer.	Native Amer.
J										
H										
A										
TRN										
TOT										

FEMALES

	(6)		(7)		(8)		(9)		(10)	
	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	Asian	Asian	Native Amer.	Native Amer.
J										
H										
A										
TRN										
TOT										

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

FORM C: CURRENT WORKFORCE

TRADE CLASSIFICATION CODES

- (J) Journeylevel Workers
- (H) Helper
- (A) Apprentice
- (TRN) Trainee
- (TOT) Total by Column

For each trade currently engaged by your company for all work performed in New York City, enter the current workforce for Males and Females by trade classification on the charts below.

Trade:	MALES					FEMALES				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.
J										
H										
A										
TRN										
TOT										

Trade: _____

Union Affiliation, if applicable _____

Total (Col. #1-10): _____

Total Minority, Male & Female
(Col. #2,3,4,5,7,8,9, & 10): _____

Total Female
(Col. #6 - 10): _____

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

FORM C: CURRENT WORKFORCE

Trade: _____

Union Affiliation, if applicable _____

Total (Col. #1-10): _____

Total Minority, Male & Female
(Col. #2,3,4,5,7,8,9, & 10): _____

Total Female
(Col. #6 - 10): _____

MALES

(1) White Non Hisp.	(2) Black Non Hisp.	(3) Hisp.	(4) Asian	(5) Native Amer.
J				
H				
A				
TRN				
TOT				

FEMALES

(6) White Non Hisp.	(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) Native Amer.
J				
H				
A				
TRN				
TOT				

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

(NO TEXT ON THIS PAGE)

The City of New York Department of Small Business Services
Division of Labor Services Contract Compliance Unit
110 William Street, New York, New York 10038
Phone: (212) 513 - 6323 Fax: (212) 618-8879

Date _____

File Number _____

**LESS THAN \$750,000 SUBCONTRACT CERTIFICATE
(CITY, STATE AND ICIP ONLY)**

Are you currently certified as one of the following? Please check yes or no:

MBE Yes ___ No ___ WBE Yes ___ No ___ LBE Yes ___ No ___

DBE Yes ___ No ___ EBE Yes ___ No ___

If you are certified as an MBE, WBE, LBE, EBE or DBE, what city/state agency are you certified with?

Please check one of the following if your firm would like information on how to certify with the City of New York as a:

___ Minority Owned Business Enterprise

___ Locally based Business Enterprise

___ Women Owned Business Enterprise

___ Emerging Business Enterprise

___ Disadvantaged Business Enterprise

Company Name _____

Employer Identification Number or Federal Tax I.D. _____

Company Address and Zip Code _____

Contact Person (First Name, Last Name) _____

Telephone Number _____

Fax Number _____

E-mail Address _____

Description and location of proposed subcontract: _____

Are you a Union contractor? Yes ___ No ___ If yes, please list which local(s) you affiliated with

Are you a Veteran owned company? Yes ___ No ___

Procurement Identification Number (PIN)
(City contracts only)

Contract Registration Number (CT#)
(City contracts only)

Block and Lot Number
(ICIP projects only)

Contract Amount

I, (print name of authorized official signing) _____ hereby certify that I am authorized by the above-named subcontractor to certify that said subcontractor's proposed contract with the above named owner or City agency is less than \$750,000. This affirmation is made in accordance with NYC Charter Chapter 56, Executive Order No. 50 (1980) and the implementing Rules.

Willful or fraudulent falsifications of any data or information submitted herewith may result in the termination of the contract between the City and the bidder or contractor and in disapproval of future contracts for a period of up to five years. Further, such falsification may result in civil and/or criminal prosecution.

Signature of authorized official

Date

Only original signatures accepted.		
Sworn to before me this _____	day of _____	20____
Notary Public	Authorized Signature	Date

ATTACH TO CONTRACT DOCUMENTS

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

PROJECT ID: HWD10105
ATLANTIC AVENUE SAFETY IMPROVEMENTS

FROM GEORGIA AVENUE TO LOGAN STREET

INCLUDING SEWER, WATER MAIN, STREET LIGHTING AND
TRAFFIC SIGNAL WORK
Together With All Work Incidental Thereto

BOROUGH OF BROOKLYN
CITY OF NEW YORK

ADDENDUM NO. 1

DATED: March 2, 2017

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

- (1) Refer to the Bid and Contract Documents, Volume 1 of 3;
Insert the attached SPECIAL NOTICE TO BIDDERS following the cover of the BID BOOKLET, Volume 1 of 3.
- (2) Refer to the Bid and Contract Documents, Volume 1 of 3, Attachment 1, Page A-1 ;
Delete Page A-1 in its entirety.
Insert the attached Page A-1R.
- (3) Refer to the Bid and Contract Documents, Volume 1 of 3, Page 2;
Delete Page 2 in its entirety.
Insert the attached Page 2-R.
- (4) Refer to the Bid and Contract Documents, Volume 1 of 3, Attachment 1 BID INFORMATION, Page A-4;
Insert the attached Pages A-5 through A-9 following Page A-4.
- (5) Refer to the Bid and Contract Documents, Volume 3 of 3, SCHEDULE A Pages SA-1 and SA-2;
Delete Pages SA-1 and SA-2 in its entirety.
Insert the attached Pages SA-1R and SA-2R.

(6) Refer to the Bid and Contract Documents, Volume 3 of 3, TF-PAGES;
Insert the attached FTA-PAGES FEDERAL TRANSIT ADMINISTRATION PROJECTS,
FEDERAL TRANSIT ADMINISTRATION ATTACHMENTS package following TF-
PAGES (78 Sheets).

END OF ADDENDUM NO. 1

By signing in the space provided below, the bidder acknowledges receipt
of this Addendum consisting of two(2) pages and nighty one (91) pages of attachment.

THIS ADDENDUM MUST BE SIGNED BY ALL BIDDERS AND ATTACHED TO THEIR BID

Tully Construction Co., Inc.

Purnima Dharia.

PURNIMA DHARIA, P.E.
Assistant Commissioner / Design I

Name of Bidder

By: _____

Peter K. Tully - President



**Department of
Design and
Construction**

**INFRASTRUCTURE DIVISION
BUREAU OF DESIGN**

VOLUME 1 OF 3

PROJECT ID: HWD10105

ATLANTIC AVENUE SAFETY IMPROVEMENTS

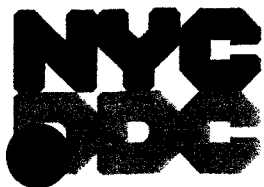
FROM GEORGIA AVENUE TO LOGAN STREET

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING AND
TRAFFIC SIGNAL WORK
Together With All Work Incidental Thereto**

**BOROUGH OF BROOKLYN
CITY OF NEW YORK**

Contractor.

Dated _____, 20____



**Department of
Design and
Construction**

**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

30-30 THOMSON AVENUE
LONG ISLAND CITY, NEW YORK 11101-3045
TELEPHONE (718) 391-1000
WEBSITE www1.nyc.gov/site/ddc/index.page

VOLUME 2 OF 3

**INFORMATION FOR BIDDERS
CONTRACT
PERFORMANCE AND PAYMENT BONDS
PREVAILING WAGE SCHEDULE**

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND
REQUIRED FOR:

PROJECT ID: HWD10105

ATLANTIC AVENUE SAFETY IMPROVEMENTS

FROM GEORGIA AVENUE TO LOGAN STREET

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING AND
TRAFFIC SIGNAL WORK**

Together With All Work Incidental Thereto

**BOROUGH OF BROOKLYN
CITY OF NEW YORK**

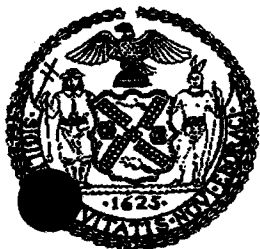
FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY

HENNINGSON, DURHAM AND RICHARDSON, INC.

NOVEMBER 1, 2016

NYSDOT PIN X761.15
Fed. Aid Project No. _____

Bid Opening 11:00 A.M. on
Location 1st Floor Bid Room, 30-30 Thomson Ave., Long Island City, N.Y. 11101



17-077



**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

30-30 THOMSON AVENUE
LONG-ISLAND-CITY, NEW YORK 11101-3045
TELEPHONE (718) 391-1000
WEBSITE www.nyc.gov/buildnyc

VOLUME 2 OF 3

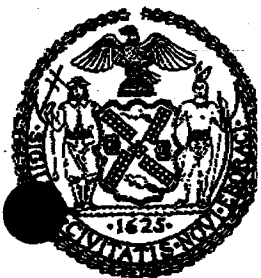
**INFORMATION FOR BIDDERS
CONTRACT
PERFORMANCE AND PAYMENT BONDS
PREVAILING WAGE SCHEDULE**

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND REQUIRED FOR:

PROJECT ID:

FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY

January 30, 2016



HIRING AND EMPLOYMENT RIDER:

HIRENYC AND REPORTING REQUIREMENTS

Introduction

This Rider shall apply to all contracts for goods, services, and construction with a value of one million dollars (\$1,000,000.00) or more, provided, however, that certain requirements of the Rider shall only apply as indicated below. This Rider addresses the HireNYC process, including reporting obligations under the HireNYC process, and certain other reporting requirements imposed by law. In general, the HireNYC process under this Rider requires the Contractor to enroll with the HireNYC portal for the City of New York ("the City") found within the Department of Small Business Services's ("SBS") website, to disclose all entry to mid-level job opportunities described in this Rider arising from this contract and located in New York City, and to agree to interview qualified candidates from HireNYC for those opportunities.

HireNYC Requirements

A. Enrollment

The Contractor shall enroll with the HireNYC system, found at www.nyc.gov/sbs, within thirty (30) days after the registration of this Contract pursuant to Section 328 of the New York City Charter. The Contractor shall provide information about the business, designate a primary contact and say whether it intends to hire for any entry to mid-level job opportunities arising from this contract and located in New York City, and, if so, the approximate start date of the first hire.

B. Job Posting Requirements

Once enrolled in HireNYC, the Contractor agrees to update the HireNYC portal with all entry to mid-level job opportunities arising from this contract and located in New York City, if any, which shall be defined as jobs requiring no more than an associate degree, as provided by the New York State Department of Labor (see Column F of <https://labor.ny.gov/stats/2012-2022-NYS-Employment-Prospects.xls>). The information to be updated includes the types of entry and mid-level positions made available from the work arising from the contract and located in New York City, the number of positions, the anticipated schedule of initiating the hiring process for these positions, and the contact information for the Contractor's representative charged with overseeing hiring. The Contractor must update the HireNYC portal with any hiring needs arising from the contract and located in New York City, and the requirements of the jobs to be filled, no less than three weeks prior to the intended first day of employment for each new position, except with the permission of SBS, not to be unreasonably withheld, and must also update the HireNYC portal as set forth below.

After enrollment through HireNYC and submission of relevant information, SBS will work with the Contractor to develop a recruitment plan which will outline the candidate screening process,

and will provide clear instructions as to when, where, and how interviews will take place. HireNYC will screen applicants based on employer requirements and refer applicants whom it believes are qualified to the Contractor for interviews. The Contractor must interview referred applicants whom it believes are qualified.

After completing an interview of a candidate referred by HireNYC, the Contractor must provide feedback via the portal within twenty (20) business days to indicate which candidates were interviewed and hired, if any. In addition, the Contractor shall provide the start date of new hires, and additional information reasonably related to such hires, within twenty (20) business days after the start date. In the event the Contractor does not have any job openings covered by this Rider in any given year, the Contractor shall be required to provide an annual update to HireNYC to that effect. For this purpose, the reporting year shall run from the date of the registration of the contract and each anniversary date.

These requirements do not limit the Contractor's ability to assess the qualifications of prospective workers, and to make final hiring and retention decisions. No provision of this Rider shall be interpreted so as to require the Contractor to employ any particular worker.

In addition, the provisions of this Rider shall not apply to positions that the Contractor intends to fill with employees employed pursuant to the job retention provision of Section 22-505 of the Administrative Code of the City of New York. The Contractor shall not be required to report such openings with HireNYC. However, the Contractor shall enroll with the HireNYC system pursuant to Section A, above, and, if such positions subsequently become open, then the remaining provisions of this Rider will apply.

C. Breach and Liquidated Damages

If the Contractor fails to comply with the terms of the contract and this Rider (1) by not enrolling its business with HireNYC; (2) by not informing HireNYC, as required, of open positions; or (3) by failing to interview a qualified candidate, the contracting agency may assess liquidated damages in the amount of two-thousand five hundred dollars (\$2,500.00) per breach. For all other events of noncompliance with the terms of this Rider, the agency may assess liquidated damages in the amount of five hundred dollars (\$500) per breach.

Furthermore, in the event the Contractor breaches the requirements of this Rider during the term of the contract, the City may hold the Contractor in default of this contract.

Audit Compliance

In addition to the auditing requirements set forth in other parts of the contract, the Contractor shall permit SBS and the City to inspect any and all records concerning or relating to job openings or the hiring of individuals for work arising from the contract and located in New York City. The Contractor shall permit an inspection within seven (7) business days of the request.

Other Reporting Requirements

The Contractor shall report to the City, on a monthly basis, all information reasonably requested by the City that is necessary for the City to comply with any reporting requirements imposed by law or rule, including any requirement that the City maintain a publicly accessible database. In addition, the Contractor agrees to comply with all reporting requirements imposed by law or rule, or as otherwise requested by the City.

Construction Requirements

Construction contractors shall comply with the HireNYC requirements set forth above for all non-trades jobs (e.g., for an administrative position arising out of the work of the contract and located in New York City) as set forth above.

In addition, construction contractors shall reasonably cooperate with SBS and the City on specific outreach events, including Hire on the Spot events, for the hiring of trades workers for the work of this contract.

Further, this contract shall be subject to a project labor agreement if so required elsewhere in this contract.

Federal Hiring Requirements

The Contractor shall comply with all federal hiring requirements as may be set forth elsewhere in this contract, including, as applicable:

- Section 3 of the HUD Act of 1968, which requires, to the greatest extent feasible, economic opportunities for 30 percent of new hires be given to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- Executive Order 11246, which prohibits discrimination in employment due to race, color, religion, sex or national origin, and requires the implementation of goals for minority and female participation for work involving any Construction trade.

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PAID SICK LEAVE LAW CONTRACT RIDER

Introduction and General Provisions

The Earned Sick Time Act, also known as the Paid Sick Leave Law ("PSLL"), requires covered employees who annually perform more than 80 hours of work in New York City to be provided with paid sick time.¹ Contractors of the City of New York or of other governmental entities may be required to provide sick time pursuant to the PSLL.

The PSLL became effective on April 1, 2014, and is codified at Title 20, Chapter 8, of the New York City Administrative Code. It is administered by the City's Department of Consumer Affairs ("DCA"); DCA's rules promulgated under the PSLL are codified at Chapter 7 of Title 6 of the Rules of the City of New York ("Rules").

Contractor agrees to comply in all respects with the PSLL and the Rules, and as amended, if applicable, in the performance of this agreement. Contractor further acknowledges that such compliance is a material term of this agreement and that failure to comply with the PSLL in performance of this agreement may result in its termination.

Contractor must notify the Agency Chief Contracting Officer of the City agency or other entity with whom it is contracting in writing within ten (10) days of receipt of a complaint (whether oral or written) regarding the PSLL involving the performance of this agreement. Additionally, Contractor must cooperate with DCA's education efforts and must comply with DCA's subpoenas and other document demands as set forth in the PSLL and Rules.

The PSLL is summarized below for the convenience of Contractor. Contractor is advised to review the PSLL and Rules in their entirety. On the website www.nyc.gov/PaidSickLeave there are links to the PSLL and the associated Rules as well as additional resources for employers, such as Frequently Asked Questions, timekeeping tools and model forms, and an event calendar of upcoming presentations and webinars at which Contractor can get more information about how to comply with the PSLL. Contractor acknowledges that it is responsible for compliance with the PSLL notwithstanding any inconsistent language contained herein.

Pursuant to the PSLL and the Rules:

Applicability, Accrual, and Use

An employee who works within the City of New York for more than eighty hours in any consecutive 12-month period designated by the employer as its "calendar year" pursuant to the PSLL ("Year") must be provided sick time. Employers must provide a minimum of one hour of sick time for every 30 hours worked by an employee and compensation for such sick time must

¹ Pursuant to the PSLL, if fewer than five employees work for the same employer, as determined pursuant to New York City Administrative Code §20-912(g), such employer has the option of providing such employees uncompensated sick time.

be provided at the greater of the employee's regular hourly rate or the minimum wage. Employers are not required to provide more than forty hours of sick time to an employee in any Year.

An employee has the right to determine how much sick time he or she will use, provided that employers may set a reasonable minimum increment for the use of sick time not to exceed four hours per day. In addition, an employee may carry over up to forty hours of unused sick time to the following Year, provided that no employer is required to allow the use of more than forty hours of sick time in a Year or carry over unused paid sick time if the employee is paid for such unused sick time and the employer provides the employee with at least the legally required amount of paid sick time for such employee for the immediately subsequent Year on the first day of such Year.

An employee entitled to sick time pursuant to the PSLL may use sick time for any of the following:

- such employee's mental illness, physical illness, injury, or health condition or the care of such illness, injury, or condition or such employee's need for medical diagnosis or preventive medical care;
- such employee's care of a family member (an employee's child, spouse, domestic partner, parent, sibling, grandchild or grandparent, or the child or parent of an employee's spouse or domestic partner) who has a mental illness, physical illness, injury or health condition or who has a need for medical diagnosis or preventive medical care;
- closure of such employee's place of business by order of a public official due to a public health emergency; or
- such employee's need to care for a child whose school or childcare provider has been closed due to a public health emergency.

An employer must not require an employee, as a condition of taking sick time, to search for a replacement. However, an employer may require an employee to provide: reasonable notice of the need to use sick time; reasonable documentation that the use of sick time was needed for a reason above if for an absence of more than three consecutive work days; and/or written confirmation that an employee used sick time pursuant to the PSLL. However, an employer may not require documentation specifying the nature of a medical condition or otherwise require disclosure of the details of a medical condition as a condition of providing sick time and health information obtained solely due to an employee's use of sick time pursuant to the PSLL must be treated by the employer as confidential.

If an employer chooses to impose any permissible discretionary requirement as a condition of using sick time, it must provide to all employees a written policy containing those requirements, using a delivery method that reasonably ensures that employees receive the policy. If such employer has not provided its written policy, it may not deny sick time to an employee because of non-compliance with such a policy.

Sick time to which an employee is entitled must be paid no later than the payday for the next regular payroll period beginning after the sick time was used.

Exemptions and Exceptions

Notwithstanding the above, the PSLL does not apply to any of the following:

- an independent contractor who does not meet the definition of employee under section 190(2) of the New York State Labor Law;
- an employee covered by a valid collective bargaining agreement in effect on April 1, 2014 until the termination of such agreement;
- an employee in the construction or grocery industry covered by a valid collective bargaining agreement if the provisions of the PSLL are expressly waived in such collective bargaining agreement;
- an employee covered by another valid collective bargaining agreement if such provisions are expressly waived in such agreement and such agreement provides a benefit comparable to that provided by the PSLL for such employee;
- an audiologist, occupational therapist, physical therapist, or speech language pathologist who is licensed by the New York State Department of Education and who calls in for work assignments at will, determines his or her own schedule, has the ability to reject or accept any assignment referred to him or her, and is paid an average hourly wage that is at least four times the federal minimum wage;
- an employee in a work study program under Section 2753 of Chapter 42 of the United States Code;
- an employee whose work is compensated by a qualified scholarship program as that term is defined in the Internal Revenue Code, Section 117 of Chapter 20 of the United States Code; or
- a participant in a Work Experience Program (WEP) under section 336-c of the New York State Social Services Law.

Retaliation Prohibited

An employer may not threaten or engage in retaliation against an employee for exercising or attempting in good faith to exercise any right provided by the PSLL. In addition, an employer may not interfere with any investigation, proceeding, or hearing pursuant to the PSLL.

Notice of Rights

An employer must provide its employees with written notice of their rights pursuant to the PSLL. Such notice must be in English and the primary language spoken by an employee, provided that DCA has made available a translation into such language. Downloadable notices are available on DCA's website at <http://www.nyc.gov/html/dca/html/law/PaidSickLeave.shtml>.

Any person or entity that willfully violates these notice requirements is subject to a civil penalty in an amount not to exceed fifty dollars for each employee who was not given appropriate notice.

Records

An employer must retain records documenting its compliance with the PSLL for a period of at least three years, and must allow DCA to access such records in furtherance of an investigation related to an alleged violation of the PSLL.

Enforcement and Penalties

Upon receiving a complaint alleging a violation of the PSLL, DCA has the right to investigate such complaint and attempt to resolve it through mediation. Within 30 days of written notification of a complaint by DCA, or sooner in certain circumstances, the employer must provide DCA with a written response and such other information as DCA may request. If DCA believes that a violation of the PSLL has occurred, it has the right to issue a notice of violation to the employer.

DCA has the power to grant an employee or former employee all appropriate relief as set forth in New York City Administrative Code 20-924(d). Such relief may include, among other remedies, treble damages for the wages that should have been paid, damages for unlawful retaliation, and damages and reinstatement for unlawful discharge. In addition, DCA may impose on an employer found to have violated the PSLL civil penalties not to exceed \$500 for a first violation, \$750 for a second violation within two years of the first violation, and \$1,000 for each succeeding violation within two years of the previous violation.

More Generous Policies and Other Legal Requirements

Nothing in the PSLL is intended to discourage, prohibit, diminish, or impair the adoption or retention of a more generous sick time policy, or the obligation of an employer to comply with any contract, collective bargaining agreement, employment benefit plan or other agreement providing more generous sick time. The PSLL provides minimum requirements pertaining to sick time and does not preempt, limit or otherwise affect the applicability of any other law, regulation, rule, requirement, policy or standard that provides for greater accrual or use by employees of sick leave or time, whether paid or unpaid, or that extends other protections to employees. The PSLL may not be construed as creating or imposing any requirement in conflict with any federal or state law, rule or regulation.

NOTICE TO BIDDERS

Please be advised that the City of New York has issued a new Standard Construction Contract. The new Contract, which is incorporated in this bid, is significantly different from the 2008 version previously used by the City. A listing of some of the significant changes is provided below. This notice is only a partial listing. Please refer to the Contract itself for a full understanding of the changes and the actual text of the changes that were made. The text of the revised Standard Construction Contract is the controlling document should there be any discrepancies between this notice and the Standard Construction Contract.

Significant changes include the following:

ARTICLE 11 DAMAGES CAUSED BY DELAYS

In 2008, the City embarked on a pilot project to test the use of new construction contract language altering the allocation of the risk of project delays, as between the City and the contractor. The City has determined to make the pilot project language the standard language for all City construction contracts. Accordingly, there is now one Standard City Construction Contract that is to be used by all agencies for all bids released after the release of the new contract. The damages for delay language is Article 11. Please note that changes have been made to the damages for delay provisions from the pilot to the adopted version.

ARTICLE 22 INSURANCE

Changes have been made to the insurance provisions, including incorporating requirements that the insurance provided comply with recent NYC Department of Buildings regulations specifying required dollar limits for CGL insurance for certain projects and requiring proof of builder's risk insurance prior to Work commencing rather than within 10 days of award.

ARTICLE 26 EXTRA WORK

The percentage paid for overhead for Extra Work pursuant to Section 26.1.11 is increased from 10% to 12% and the calculation of Worker's Compensation insurance costs reimbursed for Extra Work has been clarified.

ARTICLE 37 LABOR LAW REQUIREMENTS
ARTICLE 38 PAYROLL REPORTS

The provisions governing Labor Law provisions have been tightened, including requirements the employee identification cards include a photo (unless the requirement is waived), a prohibition on cash payments to employees and subcontractors, and clear enforcement authority requirements.

ARTICLE 70 ELECTRONIC FILING

A provision is added to make mandatory the electronic filing of certain alteration permits with the Department of Buildings.

Other significant changes include the following:

ARTICLE 7 INDEMNIFICATION

Changes have been made to the indemnification provisions.

ARTICLE 14 FINAL ACCEPTANCE OF WORK
ARTICLE 44 SUBSTANTIAL COMPLETION PAYMENT

The Commissioner is no longer required to issue a substantial completion determination in addition to the already existing requirement that the Engineer issue a substantial completion determination and reach an agreement on a punch list of remaining work. Now, the Engineer, when issuing the punch list to the Contractor, must also include a proposed schedule for the completion of the punch list. The Contractor may propose an alternative schedule that is subject to the approval of the Engineer. If the Contractor fails to respond to the Engineer's proposed schedule, the Engineer's schedule is deemed accepted.

ARTICLE 15 LIQUIDATED DAMAGES

The contract is revised to match Schedule A to provide that liquidated damages are available only until substantial completion.

ARTICLE 17 SUBCONTRACTS

The requirements for prior approval of subcontractors, and for contractors to be responsible for the actions of their subcontractors, have been tightened. The requirement that the Contractor list subcontractors in the City's Payee Information Portal has been added; the provision was previously attached as a rider.

ARTICLE 19 SECURITY DEPOSIT

The provisions governing the return of bid deposits are clarified.

ARTICLE 20 PAYMENT GUARANTEE

The Payment Guaranty provisions, which apply when the City does not require the Contractor to obtain payment bonds, has been significantly revised to track the requirements of State Finance law 137.

ARTICLE 28 RECORDKEEPING FOR EXTRA OR DISPUTED WORK

The recordkeeping requirement that currently apply to payments for Time & Materials for extra work are expressly made applicable to regular work that is paid for on a T & M basis.

ARTICLE 35 EMPLOYEES

The whistleblower provisions of local law are added to the construction contract. They previously have been attached as a rider.

ARTICLE 38 PAYROLL REPORTS
ARTICLE 77 RECORDS RETENTION

Requirements that records be maintained for six years and directions on how such records must be made available.

ARTICLE 42 PARTIAL PAYMENTS

Increased flexibility has been provided for when contractors may submit invoices.

ARTICLE 62 TAX EXEMPTION

The provisions identifying the State tax exemption for municipalities are revised to more clearly describe State law.

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**NEW YORK CITY STANDARD CONSTRUCTION CONTRACT (DEC. 2013)
INSURANCE RIDER**

[Instructions to Agencies: Please attach this Insurance Rider to the December 2013 version of the New York City Standard Construction Contract. This rider shall not be used with subsequent versions of the New York City Standard Construction Contract.]

The following provisions supersede the corresponding provisions in the December 2013 version of the New York City Standard Construction Contract:

1. Section 22.1.1(c) provides as follows:

22.1.1(c) If the Work requires a permit from the Department of Buildings pursuant to 1 RCNY Section 101-08, the Contractor shall provide Commercial General Liability Insurance with limits of at least those required by 1 RCNY section 101-08 or greater limits provided by the Agency in Schedule A. If the Work does not require such a permit, the minimum limits shall be those provided for in Schedule A.

2. Section 22.3.3 provides as follows:

22.3.3 For policies provided pursuant to all of Article 22.1 other than Article 22.1.2, the Contractor shall submit one or more Certificates of Insurance on forms acceptable to the Commissioner. All such Certificates of Insurance shall certify (a) the issuance and effectiveness of such policies of insurance, each with the specified minimum limits (b) for insurance secured pursuant to Article 22.1.1 that the City and any other entity specified in Schedule A is an Additional Insured thereunder; (c) in the event insurance is required pursuant to Article 22.1.6 and/or Article 22.1.7, that the City is an Additional Insured thereunder; and (d) the company code issued to the insurance company by the National Association of Insurance Commissioners (the NAIC number). All such Certificates of Insurance shall be accompanied by the required additional insured endorsements and either a duly executed "Certification by Insurance Broker or Agent" in the form contained in Part III of Schedule A or copies of all policies referenced in such Certificate of Insurance as certified by an authorized representative of the issuing insurance carrier. If any policy is not available at the time of submission, certified binders may be submitted until such time as the policy is available, at which time a certified copy of the policy shall be submitted.

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CITY OF NEW YORK

**DEPARTMENT OF
DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURES**

INFORMATION FOR BIDDERS

JUNE 2015

(NO TEXT ON THIS PAGE)

*CITY OF NEW YORK CITY
DEPARTMENT OF DESIGN AND CONSTRUCTION
INFORMATION FOR BIDDERS*

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INFORMATION FOR BIDDERS

1. Description and Location of Work

The description and location of the work for which bids are requested are specified in Attachment 1, "Bid Information". Attachment 1 is included as page A-1 of the Bid Booklet.

2. Time and Place for Receipt of Bids

Sealed bids shall be received on or before the date and hour specified in Attachment 1, at which time they will be publicly opened and read aloud in the presence of the Commissioner or his or her representative, and any bidders who may desire to be present.

3. Definitions

The definitions set forth in the Procurement Policy Board Rules shall apply to this Invitation For Bids.

4. Invitation For Bids and Contract Documents

(A) Except for titles, sub-titles, headings, running headlines, tables of contents and indices (all of which are printed herein merely for convenience) the following, except for such portions thereof as may be specifically excluded, shall be deemed to be part of the Contract and the Invitation for Bids.

- (1) All provisions required by law to be inserted in this Contract, whether actually inserted or not
- (2) The Contract Drawings and Specifications
- (3) The General Conditions, the General Requirements and the Special Conditions, if any
- (4) The Contract
- (5) The Information for Bidders; Request for Proposals; Notice of Solicitation and Proposal For Bids; Bid or Proposal, and, if used, the Bid Booklet
- (6) The Budget Director's Certificate; all Addenda issued prior to the receipt of the bids; the Notice of Award; Performance and Payment Bonds, if required; and the Notice to Proceed with the Work.

(B) For particulars as to this procurement, including quantity and quality of the purchase, extent of the work or labor to be performed, delivery and performance schedule, and any other special instructions, prospective bidders are referred to the Invitation For Bids Documents. A copy of such documents can be obtained at the location set forth in Attachment 1.

(C) Deposit for Copy of Invitation For Bids Documents: Prospective bidders may obtain a copy of the Invitation For Bids Documents by complying with the conditions set forth in the Notice of Solicitation. The deposit must be in the form of a check or money order made payable to the City of New York, and drawn upon a state or national bank or trust company, or a check of such bank or trust company signed by a duly authorized officer thereof.

(D) Return of Invitation For Bids Documents: All Invitation For Bids Documents must be returned to the Department upon request. If the bidder elects not to submit a bid thereunder, the

Invitation For Bids Documents shall be returned to the Department, along with a statement that no bid will be submitted.

(E) Return of Deposit: Such deposit will be returned within 30 days after the award of the contract or the rejection of all bids as set forth in the advertisement, provided the Invitation For Bids Documents are returned to the location specified in Attachment 1, in physical condition satisfactory to the Commissioner.

(F) Additional Copies: Additional copies of the Invitation For Bids Documents may be obtained, subject to the conditions set forth in the advertisement for bids.

5. Pre-Bid Conference

A pre-bid conference shall be held as set forth in Attachment 1. Nothing stated at the pre-bid conference shall change the terms or conditions of the Invitation For Bids Documents, unless a change is made by written amendment as provided in Section 9 below. Failure to attend a mandatory pre-bid conference shall constitute grounds for the rejection of the bid.

6. Agency Contact

Any questions or correspondence relating to this bid solicitation shall be addressed to the Agency Contact person specified in Attachment 1.

7. Bidder's Oath

(A) The bid shall be properly signed by an authorized representative of the bidder and the bid shall be verified by the written oath of the authorized representative who signed the bid, that the several matters stated and information furnished therein are in all aspects true.

(B) A materially false statement willfully or fraudulently made in connection with the bid or any of the forms completed and submitted with the bid may result in the termination of any Contract between the City and the Bidder. As a result, the Bidder may be barred from participating in future City contracts as well as be subject to possible criminal prosecution.

8. Examination and Viewing of Site

(A) Pre-Bidding (Investigation) Viewing of Site -Bidders must carefully view and examine the site of the proposed work, as well as its adjacent area, and seek other usual sources of information, for they will be conclusively presumed to have full knowledge of any and all conditions on, about or above the site relating to or affecting in any way the performance of the work to be done under the Contract which were or should have been indicated to a reasonably prudent bidder. To arrange a date for visiting the work site, bidders are to contact the Agency Contact person specified in Attachment 1.

(B) Should the contractor encounter during the progress of the work subsurface conditions at the site materially differing from any shown on the Contract Drawings or indicated in the Specifications or such subsurface conditions as could not reasonably have been anticipated by the contractor and were not anticipated by the City, which conditions will materially affect the cost of the work to be done under the

Contract, the attention of the Commissioner must be called immediately to such conditions before they are disturbed. The Commissioner shall thereupon promptly investigate the conditions. If he finds that they do so materially differ, or that they could not have been reasonably anticipated by the contractor and were not anticipated by the City, the Contract may be modified with his written approval.

9. Examination of Proposed Contract

(A) Request for Interpretation or Correction: Prospective bidders must examine the Contract Documents carefully and before bidding must request the Commissioner in writing for an interpretation or correction of every patent ambiguity, inconsistency or error therein which should have been discovered by a reasonably prudent bidder. Such interpretation or correction, as well as any additional contract provisions the Commissioner may decide to include, will be issued in writing by the Commissioner as an addendum to the Contract, which will be transmitted to each person recorded as having received a copy of the Contract Documents from the Department. Transmission of such addendum will be by mail, e-mail, facsimile or hand delivery. Such addendum will also be posted at the place where the Contract Documents are available for the inspection of prospective bidders. Upon transmission as provided for herein, such addendum shall become a part of the Contract Documents, and binding on all bidders, whether or not actual notice of such addendum is shown.

(B) Only Commissioner's Interpretation or Correction Binding: Only the written interpretation or correction so given by the Commissioner shall be binding, and prospective bidders are warned that no other officer, agent or employee of the City is authorized to give information concerning, or to explain or interpret, the Contract.

(C) Documents given to a subcontractor for the purpose of soliciting the subcontractor's bid shall include either a copy of the bid cover sheet or a separate information sheet setting forth the project name, the Contract number (if available), the contracting agency and the Project's location.

10. Form of Bid

Each bid must be submitted upon the prescribed form and must contain: a) the name, residence and place of business of the person or persons making the same; b) the names of all persons interested therein, and if no other person is so interested, such fact must be distinctly stated; c) a statement to the effect that it is made without any connection with any other person making a bid for the same purpose and that it is in all respects fair and without collusion or fraud; d) a statement that no Council member or other officer or employee or person whose salary is payable in whole or part from the City Treasury is directly or indirectly interested therein or in the supplies, materials or equipment and work or labor to which it relates, or in any portion of the profits thereof; e) a statement that the bidder is not in arrears to the City or to any agency upon a debt or contract or taxes, and is not a defaulter as surety or otherwise upon any obligation to the City to any agency thereof, except as set forth in the bid.

THE BID SHALL BE TYPEWRITTEN OR WRITTEN LEGIBLY IN INK. THE BID SHALL BE SIGNED IN INK. ERASURES OR ALTERATIONS SHALL BE INITIALED BY THE SIGNER IN INK. FAILURE TO CONFORM TO THE REQUIREMENTS OF THIS SECTION 10 SHALL RESULT IN THE REJECTION OF THE BID.

11. Irrevocability of Bid

The prices set forth in the bid cannot be revoked and shall be effective until the award of the Contract, unless the bid is withdrawn as provided for in Sections 15 and 18 below.

12. Acknowledgment of Amendments

The receipt of any amendment to the Contract Documents shall be acknowledged by the bidder in its bid submission.

13. Bid Samples and Descriptive Literature

Bid samples and descriptive literature shall not be submitted by the bidder, unless expressly requested elsewhere in the Contract or Contract Documents. Any unsolicited bid samples or descriptive literature which are submitted shall not be examined or tested and shall not be deemed to vary any of the provisions of this Contract.

14. Proprietary Information/Trade Secrets

(A) The bidder shall identify those portions of the bid which it deems to be confidential, proprietary information or trade secrets, and provide justification why such materials shall not be disclosed by the City. All such materials shall be clearly indicated by stamping the pages on which such information appears, at the top and bottom thereof with the word "Confidential". Such materials stamped "Confidential" must be easily separable from the non-confidential sections of the bid.

(B) All such materials so indicated shall be reviewed by the Agency and any decision not to honor a request for confidentiality shall be communicated in writing to the bidder. For those bids which are unsuccessful, all such confidential materials shall be returned to the bidder. Prices, makes and model or catalog numbers of the items offered, deliveries, and terms of payment shall be publicly available after bid opening, regardless of any designation of confidentiality made by the bidder.

15. Pre-Opening Modification or Withdrawal of Bids

Bids may be modified or withdrawn by written notice received in the office designated in Attachment 1, before the time and date set for the bid opening. If a bid is withdrawn in accordance with this Section, the bid security, if any, shall be returned to the bidder.

16. Bid Evaluation and Award

In accordance with the New York City Charter, the Procurement Policy Board Rules and the terms and conditions of this Invitation For Bids, this Contract shall be awarded, if at all, to the responsible bidder whose bid meets the requirements and evaluation criteria set forth in the Invitation For Bids, and whose bid price is either the most favorable bid price or, if the Invitation For Bids so states, the most favorable evaluated bid price. A bid may not be evaluated for any requirement or criterion that is not disclosed in the Invitation For Bids.

Restriction: No negotiations with any bidder shall be allowed to take place except under the circumstances and in the manner set forth in Section 21. Nothing in this Section shall be deemed to permit a contract award to a bidder submitting a higher quality item than that designated in the Invitation For Bids, if that bid is not also the most favorable bid.

17. Late Bids, Late Withdrawals and Late Modifications

Any bid received at the place designated in the solicitation after the time and date set for receipt of bids is late and shall not be considered. Any request for withdrawal or modification received at the place designated in the solicitation after the time and date set for receipt of bids is late and shall not be considered. The exception to this provision is that a late modification of a successful bid that makes the bid terms more favorable to the City shall be considered at any time it is received.

18. Withdrawal of Bids.

Except as provided for in Section 15, above, a bidder may not withdraw its bid before the expiration of forty-five (45) days after the date of the opening of bids; thereafter, a bidder may withdraw its bid only in writing and in advance of an actual award. If within sixty (60) days after the execution of the Contract, the Commissioner fails to fix the date for commencement of work by written notice to the bidder, the bidder, at his option, may ask to be relieved of his obligation to perform the work called for by written notice to the Commissioner. If such notice is given to the Commissioner, and the request to withdraw is granted, the bidder waives all claims in connection with this Contract.

19. Mistake in Bids

(A) Mistake Discovered Before Bid Opening: A bidder may correct mistakes discovered before the time and date set for bid opening by withdrawing or correcting the bid as provided in Section 15 above.

(B) Mistakes Discovered Before Award

(1) In accordance with General Municipal Law (Section 103, subdivision 11), where a unilateral error or mistake is discovered in a bid, such bid may be withdrawn upon written approval of the Agency Chief Contracting Officer if the following conditions are met:

- (a) The mistake is known or made known to the agency prior to the awarding of the Contract or within 3 days after the opening of the bid, whichever period is shorter; and
- (b) The price bid was based upon an error of such magnitude that enforcement would be unconscionable; and
- (c) The bid was submitted in good faith and the bidder submits credible evidence that the mistake was a clerical error as opposed to a judgment error; and
- (d) The error in the bid is actually due to an unintentional and substantial arithmetic error or an unintentional omission of a substantial quantity of work, labor, material or services made directly in the compilation of the bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of the original work paper, documents, or materials used in the preparation of the bid sought to be withdrawn; and
- (e) It is possible to place the agency in the same position as existed prior to the bid.

(2) Unless otherwise required by law, the sole remedy for a bid mistake in accordance with this Article shall be withdrawal of the bid, and the return of the bid bond, or other security, if any, to the bidder. Thereafter, the agency may, in its discretion, award the Contract to the next lowest bidder or rebid the Contract. Any amendment to or reformation of a bid or a Contract to rectify such an error or mistake

therein is strictly prohibited.

(3) If the mistake and the intended correct bid are clearly evident on the face of the bid document, the bid shall be corrected to the intended correct bid and may not be withdrawn. Examples of mistakes that may be corrected are typographical errors, errors in extending unit prices, transposition errors and arithmetical errors.

20. Low Tie Bids

(A) When two or more low responsive bids from responsible bidders are identical in price, meeting all the requirements and criteria set forth in the Invitation For Bids, the Agency Chief Contracting Officer will break the tie in the following manner and order of priority:

- (1) Award to a certified New York City small, minority or woman-owned business entity bidder;
- (2) Award to a New York City bidder;
- (3) Award to a certified New York State small, minority or woman-owned business bidder;
- (4) Award to a New York State bidder.

(B) If two or more bidders still remain equally eligible after application of paragraph (A) above, award shall be made by a drawing by lot limited to those bidders. The bidders involved shall be invited to attend the drawing. A witness shall be present to verify the drawing and shall certify the results on the bid tabulation sheet.

21. Rejection of Bids

(A) Rejection of Individual Bids: The Agency may reject a bid if:

- (1) The bidder fails to furnish any of the information required pursuant to Section 24 or 28 hereof; or if
- (2) The bidder is determined to be not responsible pursuant to the Procurement Policy Board Rules; or if
- (3) The bid is determined to be non-responsive pursuant to the Procurement Policy Board Rules; or if
- (4) The bid, in the opinion of the Agency Chief Contracting Officer, contains unbalanced bid prices and is thus non-responsive, unless the bidder can show that the prices are not unbalanced for the probable required quantity of items, or if the imbalance is corrected pursuant to Section 15.

(B) Rejection of All Bids: The Agency, upon written approval by the Agency Chief Contracting Officer, may reject all bids and may elect to resolicit bids if in its sole opinion it shall deem it in the best interest of the City so to do.

(C) Rejection of All Bids and Negotiation With All Responsible Bidders: The Agency Head may determine that it is appropriate to cancel the Invitation For Bids after bid opening and before award and to complete the acquisition by negotiation. This determination shall be based on one of the following reasons:

- (1) All otherwise acceptable bids received are at unreasonable prices, or only one bid is received and the Agency Chief Contracting Officer cannot determine the reasonableness of the bid price, or no responsive bid has been received from a responsible bidder; or
- (2) In the judgment of the Agency Chief Contracting Officer, the bids were not independently arrived at in open competition, were collusive, or were submitted in bad faith.

(D) When the Agency has determined that the Invitation for Bids is to be canceled and that use of negotiation is appropriate to complete the acquisition, the contracting officer may negotiate and award the Contract without issuing a new solicitation, subject to the following conditions:

- (1) prior notice of the intention to negotiate and a reasonable opportunity to negotiate have been given by the contracting officer to each responsible bidder that submitted a bid in response to the Invitation for Bids;
- (2) the negotiated price is the lowest negotiated price offered by a responsible bidder; and
- (3) the negotiated price is lower than the lowest rejected bid price of a responsible bidder that submitted a bid in response to the Invitation for Bids.

22. Right to Appeal Determinations of Non-Responsiveness or Non-Responsibility and Right to Protest Solicitations and Award

The bidder has the right to appeal a determination of non-responsiveness or non-responsibility and has the right to protest a solicitation and award. For further information concerning these rights, the bidder is directed to the Procurement Policy Board Rules.

23. Affirmative Action and Equal Employment Opportunity

This Invitation For Bids is subject to applicable provisions of Federal, State and Local Laws and executive orders requiring affirmative action and equal employment opportunity.

24. VENDEX Questionnaires

(A) Requirement: Pursuant to Administrative Code Section 6-116.2 and the PPB Rules, bidders may be obligated to complete and submit VENDEX Questionnaires. Generally, if this bid is \$100,000 or more, or if this bid when added to the sum total of all contracts, concessions and franchises the bidder has received from the City and any subcontracts received from City contractors over the past twelve months, equals or exceeds \$100,000, Vendex Questionnaires must be completed. If required, Vendex Questionnaires must be completed and submitted before any award of contract may be made or before approval is given for a proposed subcontractor. Non-compliance with these submission requirements may result in the disqualification of the bid, disapproval of a subcontractor, subsequent withdrawal of approval for the use of an approved subcontractor, or the cancellation of the contract after its award.

(B) Submission: Vendex Questionnaires must be submitted directly to the Mayor's Office of Contract Services, ATTN: Vendex, 253 Broadway, 9th Floor, New York, New York 10007. In addition, the bidder must submit a Confirmation of Vendex Compliance to the agency. A form for this confirmation is set forth in the Bid Booklet.

(C) Obtaining Forms: Vendex Questionnaires, as well as detailed instructions, may be obtained at www.nyc.gov/vendex. The bidder may also obtain Vendex forms and instructions by contacting the

Agency Chief Contracting Office or the contract person for this contract.

25. Complaints About the Bid Process

The New York City Comptroller is charged with the audit of contracts in New York City. Any vendor who believes that there has been unfairness, favoritism or impropriety in the bid process should inform the Comptroller, Office of Contract Administration, One Centre Street, Room 835, New York, New York; telephone number (212)669-2797.

26. Bid, Performance and Payment Security

(A) Bid Security: Each bid must be accompanied by bid security in an amount and type specified in Attachment 1 (page A-1 of the Bid Booklet). The bid security shall assure the City of New York of the adherence of the bidder to its proposal, the execution of the Contract, and the furnishing of Performance and Payment Bonds by the bidder, if required in Attachment 1. Bid security shall be returned to the bidder as follows:

- (1) Within ten (10) days after the bid opening, the Comptroller will be notified to return the deposits of all but the three (3) lowest bidders. Within five (5) days after the award, the Comptroller will be notified to return the deposits of the remaining two unsuccessful bidders.
- (2) Within five (5) days after the execution of the Contract and acceptance of the Contractor's bonds, the Comptroller will be notified to return the bid security of the successful bidder or, if performance and payment bonds are not required, only after the sum retained under Article 21 of the Contract equals the amount of the bid security.
- (3) Where all bids are rejected, the Comptroller will be notified to return the deposit of the three (3) lowest bidders at the time of rejection.

(B) Performance and Payment Security: Performance and Payment Security must be provided in an amount and type specified in Attachment 1 (page A-1 of the Bid Booklet). The performance and payment security shall be delivered by the contractor prior to or at the time of execution of the Contract. If a contractor fails to deliver the required performance and payment security, its bid security shall be enforced, and an award of Contract may be made to the next lowest responsible and responsive bidder, or the contract may be rebid.

(C) Acceptable Types of Security: Acceptable types of security for bids, performance, and payment shall be limited to the following:

- (1) a one-time bond in a form satisfactory to the City;
- (2) a bank certified check or money order;
- (3) obligations of the City of New York; or
- (4) other financial instruments as determined by the Office of Construction in consultation with the Comptroller.

Whenever the successful bidder deposits obligations of the City of New York as performance and payment security, the Comptroller may sell and use the proceeds thereof for any purpose for which the principal or surety on such bond would be liable under the terms of the Contract. If the money is deposited with the Comptroller, the successful bidder shall not be entitled to receive interest on such money from the City.

(D) Form of Bonds: Security provided in the form of bonds must be prepared on the form of bonds authorized by the City of New York. Forms for bid, performance, and payment bonds are included in the Invitation for Bids Documents. Such bonds must have as surety thereunder such surety company or companies as are: (1) approved by the City of New York; (2) authorized to do business in the State of New York, and (3) approved by the Department of the Treasury of the United States. Premiums for any required bonds must be included in the base bid.

The bidder is advised that submission of a bid bond where the surety on such bond fails to meet the criteria set forth herein, shall result in the rejection of the bid as non-responsive.

The Department of the Treasury of the United States advises that information concerning approved surety companies may be obtained as follows: (1) from the Government Printing Office at 202-512-1800; (2) through the Internet at <http://www.fms.treas.gov/c570/index.html>, and (3) through a computerized public bulletin board, which can be accessed by using your computer modem and dialing 202-874-6887.

(E) Power of Attorney: Attorneys in fact who sign bid, performance, or payment bonds must file with each bond a certified copy of their power of attorney to sign said bonds.

27. Failure to Execute Contract

In the event of failure of the successful bidder to execute the Contract and furnish the required security within ten (10) days after notice of the award of the Contract, the deposit of the successful bidder or so much thereof as shall be applicable to the amount of the award made shall be retained by the City, and the successful bidder shall be liable for and hereby agrees to pay on demand the difference between the price bid and the price for which such Contract shall be subsequently awarded, including the cost of any required reletting and less the amount of such deposit. No plea of mistake in such accepted bid shall be available to the bidder for the recovery of the deposit or as a defense to any action based upon such accepted bid. Further, should the bidder's failure to comply with this Section cause any funding agency, body or group (Federal, State, City, Public, Private, etc.) to terminate, cancel or reduce the funding on this project, the bidder in such event shall be liable also to the City for the amount of actual funding withdrawn by such agency on this project, less the amount of the forfeited deposit.

28. Bidder Responsibilities and Qualifications

(A) Bidders must include with their bids all information necessary for a determination of bidder responsibility, as set forth in the Specifications.

(B) The Agency may require any bidder or prospective bidder to furnish all books of account, records, vouchers, statements or other information concerning the bidder's financial status for examination as may be required by the Agency to ascertain the bidder's responsibility and capability to perform the Contract. If required, a bidder must also submit a sworn statement setting forth such information as the Agency may require concerning present and proposed plant and equipment, the personnel and qualifications of his working organizations, prior experience and performance record.

(C) Oral Examination on Qualifications: In addition thereto, and when directed by the Agency, the bidder, or a responsible officer, agent or employee of the bidder, must submit to an oral examination to be conducted by the Agency in relation to his proposed tentative plan and schedule of

operations, and such other matters as the Agency may deem necessary in order to determine the bidder's ability and responsibility to perform the work in accordance with the Contract. Each person so examined must sign and verify a stenographic transcript of such examination noting thereon such corrections as such person may desire to make.

(D) If the bidder fails or refuses to supply any of the documents or information set forth in paragraph (B) hereof or fails to comply with any of the requirements thereof, the Agency may reject the bid.

29. Employment Report

In accordance with Executive Order No. 50 (1980) as modified by Executive Order 108 (1986), the filing of a completed Employment Report (ER) is a requirement of doing business with the City of New York for construction contractors with contracts of \$1,000,000 or more and subcontractors with construction subcontracts of \$750,000 or more. The required forms and information are included in the Bid Booklet.

30. Labor Law Requirements

(A) General: The successful bidder will be required to comply strictly with all Federal, State and local labor laws and regulations.

(B) New York State Labor Law: This Contract is subject to New York State Labor Law Section 220, which requires that construction workers on the site be paid prevailing wages and supplements. The Contractor is reminded that all wage provisions of this Contract will be enforced strictly and failure to comply will be considered when evaluating performance. Noncompliance may result in the contractor being debarred by the City from future contracts. Complaints filed with the Comptroller may result in decisions which may debar a contractor from bidding contracts with any state governmental entity and other political subdivisions.

(C) Records: The Contractor is expected to submit accurate payroll reports and other required documents and verify attendance and job classifications being utilized in compliance with the law, Contract provisions and agency procedures.

31. Insurance

(A) Bidders are advised that the insurance requirements contained herein are regarded as material terms of the Contract. As required by Article 22 of the Contract, the contractor must effect and maintain with companies licensed and authorized to do business in the State of New York, the types of insurance set forth therein, when required by and in the amounts set forth in Schedule A of the General Conditions. Such required insurance must be provided from the date the contractor is ordered to commence work and up to the date of final acceptance of all required work.

(B) The contractor must, within ten days of receipt of the notice of award, submit the following insurance documentation: (a) original certificate of insurance for general liability in the amount required by Schedule A of the General Conditions, and (b) original certificates of insurance or other proof of coverage for workers' compensation and disability benefits, as required by Section 57 of the New York State Workers' Compensation Law and Section 220 of the Disability Benefits Law.

32. Lump Sum Contracts

(A) Comparison of Bids: Bids on Lump Sum Contracts will be compared on the basis of the lump sum price bid, adjusted for alternate prices bid, if any.

(B) Lump Sum Bids for "General Construction Work" which include excavation shall include all necessary excavation work defined in the Specifications as being included in the lump sum bid. The bidder shall also bid a unit price for the additional cost of excavating material which is defined in the Specifications as excavation for which additional payment will be made. The total estimated additional cost of removing such material will be taken as the quantity set forth in the Engineer's Estimate multiplied by the unit price bid. This total estimated cost of additional excavation shall be added to the lump sum bid for the General Construction Work for the purpose of comparing bids to determine the low bidder.

(C) Variations from Engineer's Estimate: The Engineer's Estimate of the quantity of excavation for which additional payment will be made is approximate only and is given solely to be used as a uniform basis for the comparison of bids and such estimate is not to be considered as part of this contract. The quantities actually required to complete the contract work may be more or less than the quantities in the Engineer's Estimate and, if so, no action for damages or for loss of profits shall accrue to the contractor by reason thereof.

33. Unit Price Contracts

(A) Comparison of Bids: Bids on Unit Price Contracts will be compared on the basis of a total estimated price, arrived at by taking the sum of the estimated quantities of such items, in accordance with the Engineer's Estimate of Quantities set forth in the Bid Schedule, multiplied by the corresponding unit prices, and including any lump sum bids on individual items.

(B) Variations from Engineer's Estimate: Bidders are warned that the Engineer's Estimate of Quantities on the various items of work and materials is approximate only, given solely to be used as a uniform basis for the comparison of bids, and is not be considered part of this contract. The quantities actually required to complete the contract work may be less or more than so estimated, and if so, no action for damages or for loss of profits shall accrue to the contractor by reason thereof.

(C) Overruns: The terms and conditions applicable to overruns of unit price items are set forth in Article 26 of the Contract.

34. Excise Tax

Bidders are referred to the Specifications for information on Federal Excise Tax exemptions.

35. Licenses and Permits

The successful bidder will be required to obtain all necessary licenses and permits necessary to perform the work.

36. Multiple Prime Contractors

If more than one prime contractor will be involved on this project, all contractors are required to examine the Invitation for Bid packages for all other parts of the project.

37. Locally Based Enterprise Requirements (LBE)

This Contract is subject to the requirements of Administrative Code, Section 6-108.1, and the regulations promulgated thereunder. No construction contract will be awarded unless and until these requirements have been complied with in their entirety. The bidder is advised of the provisions set forth below, as well as the provisions with respect to the Locally Based Enterprise Program contained in Article 67 of the Contract. The contractor is advised that:

(A) If any portion of the Contract is subcontracted, not less than ten percent of the total dollar amount of the contract shall be awarded to locally based enterprises ("LBEs"); except, where less than ten percent of the total dollar amount of the Contract is subcontracted, such lesser percentage shall be so awarded.

(B) No contractor shall require performance and payment bonds from LBE subcontractors.

(C) No Contract shall be awarded unless the contractor first identifies in its bid:

(1) the percentage, dollar amount and type of work to be subcontracted; and

(2) the percentage, dollar amount and type of work to be subcontracted to LBEs.

(D) Within ten calendar days after notification of low bid, the apparent low bidder shall submit an "LBE Participation Schedule" to the contracting agency. If such schedule does not identify sufficient LBE subcontractors to meet the requirements of Administrative Code Section 6-108.1, the apparent low bidder shall submit documentation of its good faith efforts to meet such requirements.

(1) The "LBE Participation Schedule" shall include:

(a) the name and address of each LBE that will be given a subcontract,

(b) the percentage, dollar amount and type of work to be subcontracted to the LBE, and

(c) the dates when the LBE subcontract work will commence and end.

(2) The following documents shall be attached to the "LBE Participation Schedule":

(a) verification letters from each subcontractor listed in the "LBE Participation Schedule" stating that the LBE will enter into a formal agreement for work,

(b) certification documents of any proposed LBE subcontractor which is not on the LBE certified list, and

(c) copies of the certification letter of any proposed subcontractor which is an LBE.

(3) Documentation of good faith efforts to achieve the required LBE percentage shall include as appropriate but not limited to the following:

(a) attendance at prebid meetings, when scheduled by the agency, to advise bidders of contract requirements;

- (b) advertisement where appropriate in general circulation media, trade association publications and small business media of the specific subcontracts that would be at least equal to the percentage goal for LBE utilization specified by the contractor;
- (c) written notification to association of small, minority and women contractors soliciting specific subcontractors;
- (d) written notification by certified mail to LBE firms that their interest in the contract is solicited for specific work items and their estimated values;
- (e) demonstration of efforts made to select portions of the work for performance by LBE firms in order to increase the likelihood of achieving the stated goal;
- (f) documented efforts to negotiate with LBE firms for specific subcontracts, including at a minimum:
 - (i) The names, address and telephone numbers of LBE firms that are contacted;
 - (ii) A description of the information provided to LBE firms regarding the plans and specifications for portions of the work to be performed;
 - (iii) Documentation showing that no reasonable price can be obtained from LBE firms;
 - (iv) A statement of why agreements with LBE firms were not reached;
- (g) a statement of the reason for rejecting any LBE firm which the contractor deemed to be unqualified; and
- (h) documentation of efforts made to assist the LBE firms contacted that needed assistance in obtaining required insurance.

(E) Unless otherwise waived by the Commissioner with the approval of the Office of Economic and Financial Opportunity, failure of a proposed contractor to provide the information required by paragraphs (C) and (D) above may render the bid non-responsive and the Contract may not be awarded to the bidder. If the contractor states that it will subcontract a specific portion of the work, but can demonstrate despite good faith efforts it cannot achieve its required LBE percentage for subcontracted work until after award of Contract, the Contract may be awarded, subject to a letter of compliance from the contractor stating that it will comply with Administrative Code Section 6-108.1 and subject to approval by the Commissioner. If the contractor has not met its required LBE percentage prior to award, the contractor shall demonstrate that a good faith effort has been made subsequent to award to obtain LBEs on each subcontract until it meets the required percentage.

(F) When a bidder indicates prior to award that no work will be subcontracted, no work may be subcontracted without the prior written approval of the Commissioner, which shall be granted only if the contractor in good faith seeks LBE subcontractors at least six weeks prior to the start of work.

(G) The contractor may not substitute or change any LBE which was identified prior to award of the contract without the written permission of the Commissioner. The contractor shall make a written application to the Commissioner for permission to make such substitution or change, explaining why the contractor needs to change its LBE subcontractor and how the contractor will meet its LBE subcontracting requirement. Copies of such application must be served on the originally identified LBE by certified mail return receipt requested, as well as the proposed substitute LBE. The Commissioner shall determine whether or not to grant the contractor's request for substitution.

38. Bid Submission Requirements

The following forms, all of which are contained in the Bid Booklet, are to be completed and submitted with the bid:

- (1) Bid Schedule and Bid Form, including Affirmation
- (2) Bid Security (if required, see Attachment 1 on Page A-1)
- (3) M/WBE Subcontractor Utilization Plan (if participation goals have been established)

**FAILURE TO SUBMIT ITEMS (1), (2) AND (3)
WILL RESULT IN THE DISQUALIFICATION OF THE BID.**

- (4) Safety Questionnaire
- (5) Construction Employment Report (if bid is \$1,000,000 or more)
- (6) Contract Certificate (if bid is less than \$1,000,000)
- (7) Confirmation of Vendex Compliance
- (8) Special Experience Requirements (if applicable to this contract)
- (9) Apprenticeship Program Questionnaire (if applicable)

**FAILURE TO SUBMIT ITEMS (4) THROUGH (9)
MAY RESULT IN THE DISQUALIFICATION OF THE BID.**

39. Comptroller's Certificate

This Contract shall not be binding or of any force unless it is registered by the Comptroller in accordance with Section 328 of the City Charter and the Procurement Policy Board Rules. This Contract shall continue in force only after annual appropriation of funds by the City of New York and certification as hereinabove set forth.

40. Procurement Policy Board Rules

This Invitation For Bids is subject to the Rules of the Procurement Policy Board of the City of New York. In the event of a conflict between said Rules and a provision of this Invitation For Bids, the Rules shall take precedence.

41. DDC Safety Requirements

The DDC Safety Requirements apply to the work to be performed pursuant to the Contract. The DDC Safety Requirements are set forth on the following pages.

CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
SAFETY REQUIREMENTS

June 2015

THE DDC SAFETY REQUIREMENTS INCLUDE THE FOLLOWING SECTIONS:

- I. POLICY ON SITE SAFETY
- II. PURPOSE
- III. DEFINITIONS
- IV. RESPONSIBILITIES
- V. SAFETY QUESTIONNAIRE
- VI. SAFETY PROGRAM AND SITE SAFETY PLAN
- VII. KICK-OFF/PRE-CONSTRUCTION MEETINGS AND SAFETY REVIEW
- VIII. EVALUATION DURING WORK IN PROGRESS
- IX. SAFETY PERFORMANCE EVALUATION

City of New York Department of Design and Construction: Safety Requirements
Safety and Site Support- Quality Assurance and Construction Safety

I. POLICY ON SITE SAFETY

The City of New York Department of Design and Construction (DDC) is committed to a policy of injury and illness prevention and risk management for construction work that will ensure the safety and health of the workers engaged in the projects and the protection of the general public. Therefore, it is DDC's policy that work carried out by Contractors on DDC jobsites must, at a minimum, comply with applicable federal, state and city laws, rules and regulations, including without limitation:

- U. S. Department of Labor 29 Code of Federal Regulations (CFR) Part 1926 and applicable Sub-parts of Part 1910 – U.S. Occupational Safety and Health Administration (OSHA); New York State Department of Labor Industrial Code Rule 23 – Protection in Construction, Demolition and Excavation;
- New York City Construction Codes, Title 28
- NYC Department of Transportation Title 34 Chapter 2 – Highway Rules
- New York State Department of Labor Industrial Code Rule 16 NYCRR Part 753
- Title 15 of the Rules of the City of New York, Chapter 13 Citywide Construction Dust Mitigation
- Manual on Uniform Traffic Control Devices (MUTCD)
- Title 15 of the Rules of the City of New York, Chapter 28 Citywide Construction Noise Mitigation

II. PURPOSE

The purpose of this policy is to ensure that Contractors perform their work and supervise their employees in accordance with all applicable federal, state and city rules and regulations. Further, Contractors will be expected to minimize or eliminate jobsite and public hazards, through a planning, inspection, auditing and corrective action process. The goal is to control risks so that injuries, illnesses and accidents to contractors' employees, DDC employees and the general public, as well as damage to city-owned and private property, are reduced to the lowest level feasible.

III. DEFINITIONS

Agency Chief Contracting Officer (ACCO): The ACCO shall mean the person delegated authority by the Commissioner to organize and supervise the procurement activity of subordinate Agency staff in conjunction with the CCPO.

Competent Person: As defined by OSHA, an individual who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to employees or the general public, and who has authorization to take prompt corrective measures to eliminate them.

Construction Safety Auditor: A representative of the QA&CS Construction Safety Unit who provides inspection and assessment services to enhance health and safety on all DDC construction projects. The activities of the Construction Safety Auditor include performing site surveys, reviewing health and safety plans, reviewing construction permits, and rendering technical advice and assistance to DDC Resident Engineers and Project Managers.

Construction Safety Unit: A part of QA&CS within the Division of Program Management/ Safety & Site Support that assesses contractor safety on DDC jobsites and advises responsible parties of needed corrective actions.

City of New York Department of Design and Construction: Safety Requirements
Safety and Site Support- Quality Assurance and Construction Safety

Construction Superintendent: A representative of the contractor responsible for overseeing performance of the required construction work. This individual must engage in sound construction practices, and is responsible to maintain a safe work site. In the case of a project involving the demolition, alteration or new construction of buildings, the Construction Superintendent must be licensed by the NYC Department of Buildings.

Contractor: For purposes of these Safety Requirements, the term "Contractor" shall mean any person or entity that enters into a contract for the performance of construction work on a DDC project. The term "Contractor" shall include any person or entity which enters into any of the following types of contracts: (1) a prime construction contract for a specific project, (2) a prime construction contract using the Job Order Contracting System ("JOCS Contract"), and (3) a subcontract with a CM/Builder ("First Tier Subcontract").

Daily Safety Job Briefing: Daily jobsite safety meetings, giving to all jobsite personnel by contractor, with the purpose of discussing project specific safety procedures for the scheduled construction work.

Director - Quality Assurance and Construction Safety (QA&CS): Responsible for the operations of the QACS Construction Safety Unit and the DDC Site Safety management programs.

Job Hazard Analysis (JHA): A process of identifying the major job steps and any potential site-specific hazards that may be present during construction and establishing the means and methods to eliminate or control those hazards.

Qualified Person: As defined by OSHA, an individual who, by possession of a recognized degree, certificate, license or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his or her ability to solve problems relating to the subject matter, the work, or the project. Qualified Persons are required under regulation to address issues pertaining, but without limit, to fall protection, scaffold design and trenching and shoring, among others.

Project Site: Those areas indicated in the Contract Documents where the Work is to be performed.

Project Safety Representative: The designated project safety representative shall have completed an authorized 30 hour OSHA Construction Safety Course and other safety training applicable to Contractor's/subcontractor's project work. Except in instances where a dedicated Project Safety Manager is required, a Project Safety Representative may also function as a superintendent, foreman or crew leader on the Project, but must have sufficient experience and authority to undertake corrective actions and must qualify to be a competent person. No work is to be performed on site when a Project Safety Representative is not present.

Project Safety Manager: A dedicated, full-time project safety manager may be a contractual requirement on large projects or projects deemed by DDC to be particularly high risk. This would be in addition or in lieu of a Contractor's Project Safety Representative. This individual shall not have any other assigned duties. This individual shall have received, at a minimum an authorized 30 hour OSHA Construction Safety Course. Other examples of acceptable training are OSHA Safety and Health Standards for the Construction Industry training program (OSHA 510), Certified Safety Professional (CSP), Certified Industrial Hygienist (CIH) or a degree/certificate in a safety and health from a college-level curriculum. A Project Safety Manager shall possess the additional training, years of experience, and skills necessary to thoroughly understand the health and safety hazards and controls for large construction projects, including the full scope of the specific Work.

QA&CS - Quality Assurance and Construction Safety of the New York City Department of Design and Construction.

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Resident Engineer (RE) / Construction Project Manager (CPM): Representative of the Commissioner duly designated by the Commissioner to be his/her representative at the site of the work. (The RE/CPM may be a third-party consultant, including a Construction Management firm, retained by DDC)

Safety Program: Established by the Contractor that covers all operations of that Contractor and establishes the Contractor's overall safety policy, regulatory compliance plan and minimum safety standards. The Safety Program must be submitted prior to the commencement of work at the site and is subject to review and acceptance by the Construction Safety Unit.

Safety Questionnaire: Used by DDC to evaluate Contractor's current and past safety performance. It is required to be completed by all Contractors initially when submitting bids for Construction work, or when being pre-qualified and updated annually or as requested by the DDC.

Site Safety Manager: For certain projects, as defined in NYC Construction Codes – Title 28, the Contractor shall provide a Site Safety Manager with a Site Safety Manager License issued by the NYC Department of Building.

Site Safety Plan: A site-specific safety plan developed by the Contractor for a specific project. The Site Safety Plan must identify hazards associated with the project, and include specific safety procedures and training appropriate and necessary to complete the work. The Site Safety Plan must be submitted prior to the commencement of work at the site and is subject to review and acceptance by the Construction Safety Unit.

Unsafe or Unhealthy Condition: A condition that could be potentially hazardous to the health and safety of personnel or the public, and/or damaging to equipment, machinery, property or the environment.

Weekly Safety Meetings: Weekly documented jobsite safety meetings, given to all jobsite personnel by contractor, with the purpose of discussing general safety topics and job specific requirements encountered at the DDC work site.

Work: The construction required by the Contract Documents whether completed or partially completed, performed by the Contractor/ subcontractors. Work refers to the furnishing of labor, furnishing and incorporating materials and equipment into the construction and providing any service required by the Contract Documents to fulfill the Contractor's obligation to complete the Project.

IV. RESPONSIBILITIES

All persons who manage, perform, and provide support for construction projects shall conduct operations in compliance with the requirements identified in this Policy and all applicable governing regulatory agency requirements and guidelines pertaining to safety in construction.

A. DDC or CM Resident Engineer / Construction Project Manager

- Monitors the issuance of safety- related permits, approvals and drawings and maintains copies on site.
- Monitors construction-related work activities to confirm that they are conducted in accordance with DDC policies and all applicable regulations that pertain to construction safety.
- Maintains documentation and periodically attends weekly safety meetings and daily safety job briefings.
- Notifies the Construction Safety Unit and the ACCO's Insurance and Risk Management Unit of project- related accidents and emergencies, as per DDC's Construction Safety Emergency and Accident Notification and Response Protocol.
- Gathers facts related to all accidents and prepares DDC Construction Accident Report.

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- Notifies the Construction Safety Unit within two (2) hours of the start of an inspection by any outside regulatory agency personnel, including OSHA, NYC DOB or others and forwards a copy of the inspection report within three days of its receipt.
- Monitors the conditions at the site for conformance with the contractor's Site Safety Plan and DDC construction documents.
- Notifies the contractor and DDC in the event that any condition or activity exists that is not in compliance with the contractor's Site Safety Plan, applicable federal, state or local codes or any condition that presents a potential risk of injury to the public or workers or possible damage to property.
- Notifies DDC of any unsafe or unhealthy condition and directs the contractor to provide such labor, materials, equipment and supervision to abate such conditions.
- Escort and assist QA&CS Construction Safety Auditors during the field and record inspections.
- Reports emergency conditions to the Construction Safety Unit immediately.

B. Contractors

- Submit a completed Safety Questionnaire and other safety performance related documentation with its bid or as part of a pre-qualification package.
- Complete a written Job Hazard Analysis (JHA) that identifies safety hazards for project specific work tasks and hazard control methods. A written JHA shall be available at the site for reference and included in the Site Safety Plan submitted by the contractor.
- Submit a Site Safety Plan and Safety Program within 30 days from the Award Date or as otherwise directed. The Site Safety Plan and Safety Program are subject to review and acceptance by the Construction Safety Unit prior to the commencement of work at the site. The Site Safety Plan shall be revised and updated as necessary.
- Develop project specific safety procedures to protect general public during all construction activities for the duration of the project.
- Ensure that all employees are aware of the hazards associated with the project through documented formal and informal training and/or other communications. Conduct and document weekly safety meetings and daily job briefing sessions for the duration of the project. Documentation to be provided to the RE/CPM on a monthly basis.
- Name the Project Safety Representative and Project Safety Manager, if required. The Contractor will be required to identify the Project Safety Representative and Project Safety Manager in the Site Safety Plan. Resumes, outlining the qualification and experience for the Project Safety Representative and Project Safety Manager, shall be available upon request. DDC reserves the right to request that the Contractor replace any Project Safety Representative or Project Safety Manager for any reason at any time during the project.
- Name a Competent Person(s), The Contractor will be required to identify a Competent Person(s) in the Site Safety Plan.
- Comply with all mandated federal, state and local safety and health rules and regulations.
- Comply with all provisions of the Site Safety Plan.
- Conduct applicable safety training prior to the commencement of work at the site. All training records (OSHA 10-hour, flagger, scaffold, fall protection, confined space entry, etc.) shall be provided to the RE/CPM prior to mobilization, included in the Site Safety Plan, kept current during the course of the project, and available for review. Prior to performing any work on DDC project all employees shall have successfully completed, within the previous five calendar years, a 10 Hour OSHA construction safety course.
- As part of the Site Safety Plan, prepare a site specific programs and plans, such as MPT plan, steel erection plan, confined space program, fall protection plan, demolition plan, etc. (if not otherwise provided in the contract documents) and comply with all of its provisions.
- Conduct and document site-specific safety orientation for Contractor personnel to review the hazards associated with the project as identified in the Site Safety Plan and the specific safety procedures and

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controls that will be used to protect workers, the general public and property. The Project Safety Representative and/or Project Safety Manager will conduct this training prior to mobilization and provide documentation to the RE/CPM.

- Provide, replace and adequately maintain at or around the project site, suitable and sufficient signage, lights, barricades and enclosures (fences, sidewalk sheds, netting, bracing, etc.).
- Report unsafe or unhealthy conditions to the RE/CPM as soon as practical, but no more than 24 hours after discovery, and take prompt actions to remove or abate such conditions.
- Report any accidents involving injuries to workers or the general public, as well as property damage, to the RE/CPM within one (1) hour.
- Following an accident, the Contractor shall not remove or alter any equipment, structure, material, or evidence related to the accident. Exception: Immediate emergency procedures taken to secure structures, temporary construction, operations, or equipment that pose a continued imminent danger or facilitate assistance for persons who are trapped or who have sustained bodily injury.
- Notify the RE/CPM within one (1) hour of the start of an inspection by any outside regulatory agency personnel, including OSHA, NYC DOB or others.
- Maintain all records pertaining to all required compliance documents and accident and injury reports.
- Address DDC recommendations on safety, which shall in no way relieve the Contractor of its responsibilities for safety on the project. The Contractor has sole responsibility for safety.

V. SAFETY QUESTIONNAIRE

DDC requires that all Contractors provide information regarding their current and past safety performance and programs. This will be accomplished by the use of the DDC Safety Questionnaire. As a part of the bid submittal package, the contractor must submit a completed DDC Safety Questionnaire listing company workers' compensation experience modification rating and OSHA Incident Rates for the three (3) years prior to the date of the bid opening. DDC may request a Contractor to update its Questionnaire at any time or to provide more detailed information. The Contractor must provide the requested information within 15 days.

The following criteria will be used by DDC in reviewing the Contractor's responsibility, which will be based on the information provided on the questionnaire:

- Criteria 1: OSHA Injury and Illness Rates (I&IR) are no greater than the average for the industry (based on the most current Bureau of Labor Statistics data for the Contractors SIC code); and
- Criteria 2: Insurance workers compensation Experience Modification Rate (EMR) equal to or less than 1.0; and
- Criteria 3: Any willful violations issued by OSHA or NYC DOB within the last three (3) years; and
- Criteria 4: A fatality (worker or member of public) and injuries, requiring OSHA notification, experienced on or near Contractor's worksite within the last three (3) years; and
- Criteria 5: Past safety performance on DDC projects (accidents; status of safety program and site safety plan submittals; etc.)
- Criteria 6: OSHA violation history for the last three (3) years;
- Criteria 7: Contractor shall provide OSHA Injury and Illness Records (currently OSHA 300 and 300A Logs) for the last three (3) years.

If the Contractor fails to meet the basic criteria listed above, the Construction Safety Unit may request, through the ACCO, more details concerning the Contractor's safety experience. DDC may request the Contractor to provide copies of, among other things, accident investigation reports, OSHA records, OSHA and NYC DOB citations, EPA citations and written corrective action plan.

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VI. SAFETY PROGRAM AND SITE SAFETY PLAN

Within thirty (30) days from the Award Date, or as otherwise directed, the Contractor shall submit the following: (1) Safety Program, and (2) Site Safety Plan. The Safety Program shall set forth the Contractor's overall safety policy, regulatory compliance plan and minimum safety standards. The Site Safety Plan shall identify project work scope, safety hazards associated with the project tasks, and include specific safety procedures and training appropriate and necessary to complete the work. The Safety Program and the Site Safety Plan are subject to review and acceptance by the Construction Safety Unit prior to the commencement of work at the site. Failure by the Contractor to submit an acceptable Site Safety Plan and Safety Program shall be grounds for default.

Safety Program: Corporate Safety Program established by the Contractor that includes the Contractor's overall safety policy, regulatory compliance plan and basic safety procedures covering all aspects of construction operations, performed by the Contractor. The Safety Program shall be a written document with a separate section describing each element of the Safety Program. The Safety Program shall have at minimum the following elements applicable to the Contractor's operations:

- Responsibility and Organization – Contractor's company organization chart, including titles, names, contact information, roles and responsibilities for key personnel, etc.
- Safety Training Program – Contractor's corporate training program.
- Hazard Corrective Actions – Criteria for safety inspections, identification of safety non-compliances, implementation and verification of corrective actions, forms to document safety inspections results, etc.
- Accident/Exposure Investigation
- Recordkeeping and Reporting Injuries – Responsible staff; reporting and recording criteria; OSHA 300 and 300A form completion, etc.
- Fire Protection and Prevention Program
- Housekeeping
- Illumination
- Sanitation
- Personal Protective Equipment (PPE) – Company policy for the use of head protection, foot protection, hearing protection, eye and face protection, protective clothing, and any additional protective equipment based on work tasks; PPE inspection and replacement policy.
- Hazard Communication Program
- Employee Emergency Action Plan
- Protection of Underground Facilities and Utilities
- Ionizing/Nonionizing Radiation
- Material Handling, Storage, Use and Disposal
- Tools – Hand and Power
- Signs, Signals, and Barricades
- Scaffold – Local Law 52 requirements, installation, use, inspection, dismantling, training and general safety requirements.
- Welding and Cutting
- Electrical Safety
- Fall Protection
- Cranes, Derrick, Hoists, Elevators, Conveyors
- Excavation Safety
- Concrete and Masonry Construction
- Maintenance and Protection of Traffic
- Steel Erection
- Demolition
- Blasting and the Use of Explosives
- Stairways and Ladders

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- Toxic and Hazardous Substances
- Alcohol and Drug Abuse Policy
- Rodents and Vermin
- Occupational Noise Exposure
- Confined Space Program – General confined Space Program: training requirements, confined space hazard evaluation procedure, atmospheric testing procedure, confined space classification, permit-required procedure, communication procedure, rescue procedure, forms, etc.
- Construction Vehicles/Heavy Equipment
- Dust Control Procedures

Site Safety Plan: The Site Safety Plan shall be a written document and shall apply to all project specific Contractor and subcontractor operations, and shall have at a minimum, the following elements with each element described in a separate section (It may be necessary to modify the basic format for certain unique or high-risk projects, such as tunnels or high-rise construction):

- Project Work Scope – Detailed information regarding work tasks that will be performed by contractor and subcontractors under the project.
- Responsibility and Organization – Contractor's organization chart with responsible staff for the project, including titles, names, contact information, roles and responsibilities.
- Safety Training and Education – OSHA 10 Hours training, requirements for daily safety briefings and weekly safety meetings, any work task specific training, responsible staff for implementation of training program for the project.
- Job Hazard Analysis (JHA) – Project specific Job Hazard Analysis including work tasks, identified hazards, hazard control methods (administrative, engineering, PPE), contractor's name, project id, location, name and signature of a certifying person, hazard assessment date.
- Protection of Public
- Hazard Corrective Actions – Responsible staff, forms, frequency of safety inspections and implementation of corrective actions.
- Accident/Exposure Investigation – Accident/incident notification procedure of DDC project staff. Project specific procedures for accident investigation and implementation of corrective actions.
- First Aid and Medical Attention – Responsible staff, location and inspection of First Aid kit, directions to local hospitals; emergency telephone numbers.
- Project Specific Fire Protection and Prevention Program.
- Project Specific Illumination Procedure.
- Project Specific Sanitation Procedure.
- Personal Protective Equipment (PPE)
- Hazard Communication Program – Responsible staff; training; SDS records, project specific list of chemical; location of the program and SDS records.
- Means of Egress – Information regarding free and unobstructed egress from all parts of the building or structure; exit marking; maintenance of means of egress, etc.
- Employee Emergency Action Plan – Project specific: responsible staff, emergency alarm system, evacuation procedure, procedure to account for employees after evacuation, etc.
- Evacuation Plan – Project specific evacuation plan (drawing/scheme) with exists and evacuation routes.
- Protection of Underground Facilities and Utilities, including responsible staff.
- Ionizing/Nonionizing Radiation – Competent person, license and qualification requirements, type of radiation, employees exposure and protection, etc.
- Material Handling, Storage, Use and Disposal – Project specific information regarding material storage and disposal.
- Signs, Signals, and Barricades – Use of danger/warning signs, sidewalk closure, safety instruction signs, pedestrian fencing and barricades, etc.
- Scaffold – Project specific scaffold types, training, scaffold drawings, competent person, criteria for project specific scaffold, falling object protection.

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- Welding and Cutting – project specific procedure for welding and cutting, including all necessary safety requirements such as fire prevention, personal protective equipment, hot work permits, FDNY certificate requirements.
- Fall Protection – Project specific information regarding selected fall protection systems, fall protection plan.
- Cranes, Derrick, Hoists, Elevators, Conveyors – project specific equipment information including type, rated load capacity, manufacture specification requirements, competent person, exposure to falling load, inspection, recordkeeping, clearance requirements, communication procedure, ground lines, permits.
- Excavation Safety – Competent person, project specific protective system.
- Maintenance and Protection of Traffic Plan – Project specific MPT plan, flagmen training.
- Steel Erection – Site specific erection plan, requirements for applicable written notifications, competent person.
- Demolition – Engineering survey, including written evidence, disconnection of all effected utilities, identification of all hazardous chemicals, materials, gases, etc., floor openings, chutes, inspection and maintenance of all stairs/passageways, removal of materials/debris/structural elements, lock out/tag out, competent person.
- Blasting and the Use of Explosives – Project specific safety procedures, warning signs, training/qualification, transportation, storage and use of explosives, inspection.
- Toxic and Hazardous Substances – Safety procedures for substances to be used on project.
- Noise Mitigation Plan – Completed project specific Noise Mitigation Plan.
- Confined Space Program – Project specific Confined Space Program, responsible staff, training records, equipment information, rescue procedure, list of project specific confined spaces, forms.
- Construction Vehicles/Heavy Equipment – Type of construction vehicles/heavy equipment to be used on site.
- Dust Mitigation Plan – Completed project specific Dust Mitigation Plan.

The most critical component of the Site Safety Plan is the Job Hazard Analysis (JHA) section. The JHA form is a written document prepared by the contractor. The contractor must conduct a site and task assessment JHA to identify the major job steps and any potential safety or environmental hazards related to performance of the work, eliminate or implement controls for the potential hazards, and identify proper personal protective equipment for the task. The JHA shall be communicated to all contractor/subcontractor personnel on site.

The initial Job Hazard Assessment form shall be included in the contractor's Site Safety Plan and the current form shall be available at the construction site for reference.

Certain DDC programs, such as Job Order Contracting System (JOCS), may not necessarily require Site Safety Plans. The JOCS contractor shall submit a Safety Program. The Site Safety Plan requirement for the JOCS contractor will be determined by QA&CS based on a project work scope, construction activities and project location. In addition, certain DDC Operating Units may establish client-specific program or safety requirements. The contractor's Site Safety Plan must address such client-specific program or safety requirements.

VII. KICK-OFF MEETINGS/PRE-CONSTRUCTION AND SAFETY REVIEW

RE/CPM shall invite QA&CS Construction Safety Unit to the construction kick-off meeting. A QA&CS representative will participate in this meeting with the Contractor and RE/CPM prior to the start of the project for the purpose of:

- A. Reviewing the safety issues detailed in the contract.
- B. Reviewing the Site Safety Plan.
- C. Reviewing any new issues or information that was not previously addressed.
- D. Discussing planned inspections and audits of the site by QA&CS personnel.

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VIII. EVALUATION DURING WORK IN PROGRESS

The Contractor's adherence to these Safety Requirements will be monitored throughout the project. This will be accomplished by the following:

- A. Use of a safety checklist by a representative of the Construction Safety Unit or other designated DDC representative or Consultant during regular, unannounced inspections of the job site. Field Exit Conferences will be held with the RE/CPM, Contractor Project Safety Representatives.
- B. The RE/CPM will continually monitor the safety and environmental performance of the contractor's employees and work methods. Deficiencies shall be brought to the attention of the contractor's representative on site for immediate correction. The DDC representative will maintain a written record of these deficiencies and have these records available upon request. Any critical deficiencies shall be immediately reported to QA&CS phone# (718) 391-1624 or (718) 391-1911.
- C. If the Contractor's safety performance during the project is not up to DDC standards (safety performance measure, accident/incident rate, etc.) the Director - QA&CS, or his/her designee will meet with the Contractor's Project Safety Representative and or Project Safety Manager, the DDC Project Manager, the RE/CPM, and the DDC Environmental Specialist (if environmental issues are involved). The purpose of this meeting is to 1) determine the level of non-compliance; 2) explain and clarify the safety/environmental provisions; 3) agree on a future course of action to correct the deficiencies.
- D. If the deficiencies continue to occur with inadequate attention by the contractor, this shall, among other remedies available, be grounds for default.
- E. The contractor shall within 1 hour inform the RE/CPM/CM of all accidents/incidents including all fatalities, any injuries to employees or members of the general public, and property damage (e.g., structural damage, equipment rollovers, utility damage, loads dropped from crane). The RE/CPM shall notify the Construction Safety Unit as per DDC's Construction Safety Emergency and Accident Notification and Response Protocol and shall maintain a record of all contractor accidents/incidents for the project.
- F. The Construction Safety Unit shall be notified within two (2) hours of the start of any NYS-DOL/ NYC-COSH/ OSHA/ EPA inspections.

IX. SAFETY PERFORMANCE EVALUATION

The contractor's safety record, including accident/incident history and DDC safety inspection results, will be considered as part of the Contractor's performance evaluation at the conclusion of the project. Poor safety performance during the course of the project shall be a reason to rate a Contractor unsatisfactory which may be reflected in the City's Vendex system and will be considered for future procurement actions as set forth in the City's Procurement Policy Board Rules.

**NEW YORK CITY STANDARD CONSTRUCTION CONTRACT (DEC. 2013)
INSURANCE RIDER**

The following provisions supersede the corresponding provisions in the December 2013 version of the New York City Standard Construction Contract:

1. Section 22.1.1(c) provides as follows:

Work requires a permit from the Department of Buildings pursuant to the Commercial General

**NEW YORK CITY STANDARD CONSTRUCTION CONTRACT (DEC. 2013)
INSURANCE RIDER**

The following provisions supersede the corresponding provisions in the December 2013 version of the New York City Standard Construction Contract:

1. Section 22.1.1(c) provides as follows:

22.1.1(c) If the Work requires a permit from the Department of Buildings pursuant to 1 RCNY Section 101-08, the Contractor shall provide Commercial General Liability Insurance with limits of at least those required by 1 RCNY section 101-08 or greater limits provided by the Agency in Schedule A. If the Work does not require such a permit, the minimum limits shall be those provided for in Schedule A.

2. Section 22.3.3 provides as follows:

22.3.3 For policies provided pursuant to all of Article 22.1 other than Article 22.1.2, the Contractor shall submit one or more Certificates of Insurance on forms acceptable to the Commissioner. All such Certificates of Insurance shall certify (a) the issuance and effectiveness of such policies of insurance, each with the specified minimum limits (b) for insurance secured pursuant to Article 22.1.1 that the City and any other entity specified in Schedule A is an Additional Insured thereunder; (c) in the event insurance is required pursuant to Article 22.1.6 and/or Article 22.1.7, that the City is an Additional Insured thereunder; and (d) the company code issued to the insurance company by the National Association of Insurance Commissioners (the NAIC number). All such Certificates of Insurance shall be accompanied by the required additional insured endorsements and either a duly executed "Certification by Insurance Broker or Agent" in the form contained in Part III of Schedule A or copies of all policies referenced in such Certificate of Insurance as certified by an authorized representative of the issuing insurance carrier. If any policy is not available at the time of submission, certified binders may be submitted until such time as the policy is available, at which time a certified copy of the policy shall be submitted.

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CITY OF NEW YORK
STANDARD CONSTRUCTION CONTRACT

DECEMBER 2013

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STANDARD CONSTRUCTION CONTRACT**

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WITNESSETH:

The parties, in consideration of the mutual agreements contained herein, agree as follows:

**CHAPTER I
THE CONTRACT AND DEFINITIONS**

ARTICLE 1. THE CONTRACT

1.1 Except for titles, subtitles, headings, running headlines, tables of contents and indices (all of which are printed herein merely for convenience), the following, except for such portions thereof as may be specifically excluded, shall be deemed to be part of this Contract:

- 1.1.1 All provisions required by law to be inserted in this Contract, whether actually inserted or not;
- 1.1.2 The Contract Drawings and Specifications;
- 1.1.3 The General Conditions and Special Conditions, if any;
- 1.1.4 The Contract;
- 1.1.5 The Information for Bidders; Request for Proposals; Notice of Solicitation and Proposal For Bids; Bid or Proposal, and, if used, the Bid Booklet;
- 1.1.6 All Addenda issued prior to the receipt of the bids; the Notice of Award; Performance and Payment Bonds, if required; and the Notice to Proceed or the Order to Work.

1.2 Should any conflict occur in or between the Drawings and Specifications, the Contractor shall be deemed to have estimated the most expensive way of doing the Work, unless the Contractor shall have asked for and obtained a decision in writing from the Commissioner of the Agency that is entering into this Contract, before the submission of its bid, as to what shall govern.

ARTICLE 2. DEFINITIONS

2.1 The following words and expressions, or pronouns used in their stead, shall, wherever they appear in this Contract, be construed as follows, unless a different meaning is clear from the context:

- 2.1.1 "**Addendum**" or "**Addenda**" shall mean the additional Contract provisions and/or technical clarifications issued in writing by the Commissioner prior to the receipt of bids.
- 2.1.2 "**Agency**" shall mean a city, county, borough or other office, position, department, division, bureau, board or commission, or a corporation, institution or agency of government, the expenses of which are paid in whole or in part from the City treasury.
- 2.1.3 "**Agency Chief Contracting Officer**" (ACCO) shall mean a person delegated authority by the Commissioner to organize and supervise the procurement activity of subordinate Agency staff in conjunction with the CCPO, or his/her duly authorized representative.

2.1.4 **"Allowance"** shall mean a sum of money which the Agency may include in the total amount of the Contract for such specific contingencies as the Agency believes may be necessary to complete the Work, *e.g.*, lead or asbestos remediation, and for which the Contractor will be paid on the basis of stipulated unit prices or a formula set forth in the Contract or negotiated between the parties provided, however, that if the Contractor is not directed to use the Allowance, the Contractor shall have no right to such money and it shall be deducted from the total amount of the Contract.

2.1.5 **"City"** shall mean the City of New York.

2.1.6 **"City Chief Procurement Officer" (CCPO)** shall mean a person delegated authority by the Mayor to coordinate and oversee the procurement activity of Mayoral agency staff, including the ACCO and any offices which have oversight responsibility for the procurement of construction, or his/her duly authorized representative.

2.1.7 **"Commissioner"** shall mean the head of the Agency that has entered into this Contract, or his/her duly authorized representative.

2.1.8 **"Comptroller"** shall mean the Comptroller of the City of New York.

2.1.9 **"Contract"** or **"Contract Documents"** shall mean each of the various parts of the contract referred to in Article 1 hereof, both as a whole and severally.

2.1.10 **"Contract Drawings"** shall mean only those drawings specifically entitled as such and listed in the Specifications or in any Addendum, or any drawings furnished by the Commissioner, pertaining or supplemental thereto.

2.1.11 **"Contract Work"** shall mean everything required to be furnished and done by the Contractor by any one or more of the parts of the Contract referred to in Article 1, except Extra Work as hereinafter defined.

2.1.12 **"Contractor"** shall mean the entity which executed this Contract, whether a corporation, firm, partnership, joint venture, individual, or any combination thereof, and its, their, his/her successors, personal representatives, executors, administrators, and assigns, and any person, firm, partnership, joint venture, individual, or corporation which shall at any time be substituted in the place of the Contractor under this Contract.

2.1.13 **"Days"** shall mean calendar days, except where otherwise specified.

2.1.14 **"Engineer"** or **"Architect"** or **"Project Manager"** shall mean the person so designated in writing by the Commissioner in the Notice to Proceed or the Order to Work to act as such in relation to this Contract, including a private Architect or Engineer or Project Manager, as the case may be. Subject to written approval by the Commissioner, the Engineer, Architect or Project Manager may designate an authorized representative.

2.1.15 **"Engineering Audit Officer" (EAO)** shall mean the person so designated by the Commissioner to perform responsible auditing functions hereunder.

2.1.16 **"Extra Work"** shall mean Work other than that required by the Contract at the time of award which is authorized by the Commissioner pursuant to Chapter VI of this Contract.

2.1.17 **"Federal-Aid Contract"** shall mean a contract in which the United States (federal) Government provides financial funding as so designated in the Information for Bidders.

2.1.18 "**Final Acceptance**" shall mean final written acceptance of all the Work by the Commissioner, a copy of which shall be sent to the Contractor.

2.1.19 "**Final Approved Punch List**" shall mean a list, approved pursuant to Article 14.2.2, specifying those items of Work to be completed by the Contractor after Substantial Completion and dates for the completion of each item of Work.

2.1.20 "**Law**" or "**Laws**" shall mean the Constitution of the State of New York, the New York City Charter, the New York City Administrative Code, a statute of the United States or of the State of New York, a local law of the City of New York, any ordinance, rule or regulation having the force of law, or common law.

2.1.21 "**Materialman**" shall mean any corporation, firm, partnership, joint venture, or individual, other than employees of the Contractor, who or which contracts with the Contractor or any Subcontractor, to fabricate or deliver, or who actually fabricates or delivers, plant, materials or equipment to be incorporated in the Work.

2.1.22 "**Means and Methods of Construction**" shall mean the labor, materials, temporary structures, tools, plant, and construction equipment, and the manner and time of their use, necessary to accomplish the result intended by this Contract.

2.1.23 "**Notice to Proceed**" or "**Order to Work**" shall mean the written notice issued by the Commissioner specifying the time for commencement of the Work and the Engineer, Architect or Project Manager.

2.1.24 "**Other Contractor(s)**" shall mean any contractor (other than the entity which executed this Contract or its Subcontractors) who or which has a contract with the City for work on or adjacent to the building or Site of the Work.

2.1.25 "**Payroll Taxes**" shall mean State Unemployment Insurance (SUI), Federal Unemployment Insurance (FUI), and payments pursuant to the Federal Insurance Contributions Act (FICA).

2.1.26 "**Project**" shall mean the public improvement to which this Contract relates.

2.1.27 "**Procurement Policy Board**" (PPB) shall mean the Agency of the City of New York whose function is to establish comprehensive and consistent procurement policies and rules which shall have broad application throughout the City.

2.1.28 "**Required Quantity**" in a unit price Contract shall mean the actual quantity of any item of Work or materials which is required to be performed or furnished in order to comply with the Contract.

2.1.29 "**Resident Engineer**" shall mean the representative of the Commissioner duly designated by the Commissioner to be his/her representative at the site of the Work.

2.1.30 "**Site**" shall mean the area upon or in which the Contractor's operations are carried on, and such other areas adjacent thereto as may be designated as such by the Engineer.

2.1.31 "**Small Tools**" shall mean items that are ordinarily required for a worker's job function, including but not limited to, equipment that ordinarily has no licensing, insurance

or substantive storage costs associated with it; such as circular and chain saws, impact drills, threaders, benders, wrenches, socket tools, etc.

2.1.32 "**Specifications**" shall mean all of the directions, requirements, and standards of performance applying to the Work as hereinafter detailed and designated under the Specifications.

2.1.33 "**Subcontractor**" shall mean any person, firm or corporation, other than employees of the Contractor, who or which contracts with the Contractor or with its subcontractors to furnish, or actually furnishes labor, or labor and materials, or labor and equipment, or superintendence, supervision and/or management at the Site. Wherever the word Subcontractor appears, it shall also mean sub-Subcontractor.

2.1.34 "**Substantial Completion**" shall mean the written determination by the Engineer that the Work required under this Contract is substantially, but not entirely, complete and the approval of the **Final Approved Punch List**.

2.1.35 "**Work**" shall mean all services required to complete the Project in accordance with the Contract Documents, including without limitation, labor, material, superintendence, management, administration, equipment, and incidentals, and obtaining any and all permits, certifications and licenses as may be necessary and required to complete the Work, and shall include both Contract Work and Extra Work.

CHAPTER II THE WORK AND ITS PERFORMANCE

ARTICLE 3. CHARACTER OF THE WORK

3.1 Unless otherwise expressly provided in the **Contract Drawings, Specifications, and Addenda**, the **Work** shall be performed in accordance with the best modern practice, utilizing, unless otherwise specified in writing, new and unused materials of standard first grade quality and workmanship and design of the highest quality, to the satisfaction of the **Commissioner**.

ARTICLE 4. MEANS AND METHODS OF CONSTRUCTION

4.1 Unless otherwise expressly provided in the **Contract Drawings, Specifications, and Addenda**, the **Means and Methods of Construction** shall be such as the Contractor may choose; subject, however, to the **Engineer's** right to reject the **Means and Methods of Construction** proposed by the Contractor which in the opinion of the **Engineer**:

4.1.1 Will constitute or create a hazard to the **Work**, or to persons or property; or

4.1.2 Will not produce finished **Work** in accordance with the terms of the **Contract**; or

4.1.3 Will be detrimental to the overall progress of the **Project**.

4.2 The **Engineer's** approval of the Contractor's **Means and Methods of Construction**, or his/her failure to exercise his/her right to reject such means or methods, shall not relieve the Contractor of its obligation to complete the **Work** as provided in this **Contract**; nor shall the exercise of such right to reject create a cause of action for damages.

ARTICLE 5. COMPLIANCE WITH LAWS

5.1 The **Contractor** shall comply with all **Laws** applicable to this **Contract** and to the **Work** to be done hereunder.

5.2 Procurement Policy Board Rules: This **Contract** is subject to the Rules of the **PPB** ("**PPB Rules**") in effect at the time of the bid opening for this **Contract**. In the event of a conflict between the **PPB Rules** and a provision of this **Contract**, the **PPB Rules** shall take precedence.

5.3 Noise Control Code provisions:

5.3.1 In accordance with the provisions of Section 24-216(b) of the Administrative Code of the **City** ("**Administrative Code**"), Noise Abatement Contract Compliance, devices and activities which will be operated, conducted, constructed or manufactured pursuant to this **Contract** and which are subject to the provisions of the **City Noise Control Code** shall be operated, conducted, constructed, or manufactured without causing a violation of the **Administrative Code**. Such devices and activities shall incorporate advances in the art of noise control development for the kind and level of noise emitted or produced by such devices and activities, in accordance with regulations issued by the **Commissioner** of the **City Department of Environmental Protection**.

5.3.2 The **Contractor** agrees to comply with Section 24-219 of the Administrative Code and implementing rules codified at 15 Rules of the City of New York ("**RCNY**") Section 28-100 *et seq.* In accordance with such provisions, the **Contractor**, if the **Contractor** is the responsible party under such regulations, shall prepare and post a Construction Noise Mitigation Plan at each **Site**, in which the **Contractor** shall certify that all construction tools and equipment have been maintained so that they operate at normal manufacturers operating specifications. If the **Contractor** cannot make this certification, it must have in place an Alternative Noise Mitigation Plan approved by the **City Department of Environmental Protection**. In addition, the **Contractor's** certified Construction Noise Mitigation Plan is subject inspection by the **City Department of Environmental Protection** in accordance with Section 28-101 of Title 15 of **RCNY**. No **Contract Work** may take place at a **Site** unless there is a Construction Noise Mitigation Plan or approved Alternative Noise Mitigation Plan in place. In addition, the **Contractor** shall create and implement a noise mitigation training program. Failure to comply with these requirements may result in fines and other penalties pursuant to the applicable provisions of the Administrative Code and **RCNY**.

5.4 Ultra Low Sulfur Diesel Fuel: In accordance with the provisions of Section 24-163.3 of the Administrative Code, the **Contractor** specifically agrees as follows:

5.4.1 Definitions. For purposes of this Article 5.4, the following definitions apply:

5.4.1(a) "**Contractor**" means any person or entity that enters into a Public Works Contract with a **City Agency**, or any person or entity that enters into an agreement with such person or entity, to perform work or provide labor or services related to such Public Works Contract.

5.4.1(b) "**Motor Vehicle**" means any self-propelled vehicle designed for transporting persons or property on a street or highway.

5.4.1(c) "**Nonroad Engine**" means an internal combustion engine (including the fuel system) that is not used in a **Motor Vehicle** or a vehicle used solely for competition, or that is not subject to standards promulgated under Section 7411 or Section 7521 of

Title 42 of the United States Code, except that this term shall apply to internal combustion engines used to power generators, compressors or similar equipment used in any construction program or project.

5.4.1(d) "Nonroad Vehicle" means a vehicle that is powered by a Nonroad Engine, fifty (50) horsepower and greater, and that is not a Motor Vehicle or a vehicle used solely for competition, which shall include, but not be limited to, excavators, backhoes, cranes, compressors, generators, bulldozers, and similar equipment, except that this term shall not apply to horticultural maintenance vehicles used for landscaping purposes that are powered by a Nonroad Engine of sixty-five (65) horsepower or less and that are not used in any construction program or project.

5.4.1(e) "Public Works Contract" means a contract with a City Agency for a construction program or project involving the construction, demolition, restoration, rehabilitation, repair, renovation, or abatement of any building, structure, tunnel, excavation, roadway, park or bridge; a contract with a City Agency for the preparation for any construction program or project involving the construction, demolition, restoration, rehabilitation, repair, renovation, or abatement of any building, structure, tunnel, excavation, roadway, park or bridge; or a contract with a City Agency for any final work involved in the completion of any construction program or project involving the construction, demolition, restoration, rehabilitation, repair, renovation, or abatement of any building, structure, tunnel, excavation, roadway, park or bridge.

5.4.1(f) "Ultra Low Sulfur Diesel Fuel" means diesel fuel that has a sulfur content of no more than fifteen parts per million (15 ppm).

5.4.2 Ultra Low Sulfur Diesel Fuel

5.4.2(a) All **Contractors** shall use Ultra Low Sulfur Diesel Fuel in diesel-powered Nonroad Vehicles in the performance of this **Contract**.

5.4.2(b) Notwithstanding the requirements of Article 5.4.2(a), **Contractors** may use diesel fuel that has a sulfur content of no more than thirty parts per million (30 ppm) to fulfill the requirements of this Article 5.4.2, where the Commissioner of the City Department of Environmental Protection ("DEP Commissioner") has issued a determination that a sufficient quantity of Ultra Low Sulfur Diesel Fuel is not available to meet the needs of **Agencies** and **Contractors**. Any such determination shall expire after six (6) months unless renewed.

5.4.2(c) **Contractors** shall not be required to comply with this Article 5.4.2 where the **City Agency** letting this **Contract** makes a written finding, which is approved, in writing, by the DEP Commissioner, that a sufficient quantity of Ultra Low Sulfur Diesel Fuel, or diesel fuel that has a sulfur content of no more than thirty parts per million (30 ppm) is not available to meet the requirements of Section 24-163.3 of the Administrative Code, provided that such **Contractor** in its fulfillment of the requirements of this **Contract**, to the extent practicable, shall use whatever quantity of Ultra Low Sulfur Diesel Fuel or diesel fuel that has a sulfur content of no more than thirty parts per million (30 ppm) is available. Any finding made pursuant to this Article 5.4.2(c) shall expire after sixty (60) **Days**, at which time the requirements of this Article 5.4.2 shall be in full force and effect unless the **City Agency** renews the finding in writing and such renewal is approved by the DEP Commissioner.

5.4.2(d) **Contractors** may check on determinations and approvals issued by the DEP Commissioner pursuant to Section 24-163.3 of the Administrative Code, if any, at www.dep.nyc.gov or by contacting the **City Agency** letting this **Contract**.

5.4.2(e) The requirements of this Article 5.4.2 do not apply where they are precluded by federal or State funding requirements or where the **Contract** is an emergency procurement.

5.4.3 Best Available Technology

5.4.3(a) All **Contractors** shall utilize the best available technology for reducing the emission of pollutants for diesel-powered Nonroad Vehicles in the performance of this **Contract**. For determinations of best available technology for each type of diesel-powered Nonroad Vehicle, **Contractors** shall comply with the regulations of the **City Department of Environmental Protection**, as and when adopted, Chapter 14 of Title 15 of the Rules of the City of New York (RCNY). The **Contractor** shall fully document all steps in the best available technology selection process and shall furnish such documentation to the **City Agency** or the DEP Commissioner upon request. The **Contractor** shall retain all documentation generated in the best available technology selection process for as long as the selected best available technology is in use.

5.4.3(b) No **Contractor** shall be required to replace best available technology for reducing the emission of pollutants or other authorized technology utilized for a diesel-powered Nonroad Vehicle in accordance with the provisions of this Article 5.4.3 within three (3) years of having first utilized such technology for such vehicle.

5.4.3(c) This Article 5.4.3 shall not apply to any vehicle used to satisfy the requirements of a specific Public Works Contract for fewer than twenty (20) **Days**.

5.4.3(d) The **Contractor** shall not be required to comply with this Article 5.4.3 with respect to a diesel-powered Nonroad Vehicle under the following circumstances:

5.4.3(d)(i) Where the **City Agency** makes a written finding, which is approved, in writing, by the DEP Commissioner, that the best available technology for reducing the emission of pollutants as required by this Article 5.4.3 is unavailable for such vehicle, the **Contractor** shall use whatever technology for reducing the emission of pollutants, if any, is available and appropriate for such vehicle.

5.4.3(d)(ii) Where the DEP Commissioner has issued a written waiver based upon the **Contractor** having demonstrated to the DEP Commissioner that the use of the best available technology for reducing the emission of pollutants might endanger the operator of such vehicle or those working near such vehicle, due to engine malfunction, the **Contractor** shall use whatever technology for reducing the emission of pollutants, if any, is available and appropriate for such vehicle, which would not endanger the operator of such vehicle or those working near such vehicle.

5.4.3(d)(iii) In determining which technology to use for the purposes of Articles 5.4.3(d)(i) and 5.4.3(d)(ii) above, the **Contractor** shall primarily consider the reduction in emissions of particulate matter and secondarily consider the reduction in emissions of nitrogen oxides associated with the use of such

technology, which shall in no event result in an increase in the emissions of either such pollutant.

5.4.3(d)(iv) The **Contractor** shall submit requests for a finding or a waiver pursuant to this Article 5.4.3(d) in writing to the DEP Commissioner, with a copy to the **ACCO** of the **City Agency** letting this **Contract**. Any finding or waiver made or issued pursuant to Articles 5.4.3(d)(i) and 5.4.3(d)(ii) above shall expire after one hundred eighty (180) **Days**, at which time the requirements of Article 5.4.3(a) shall be in full force and effect unless the **City Agency** renews the finding, in writing, and the DEP Commissioner approves such finding, in writing, or the DEP Commissioner renews the waiver, in writing.

5.4.3(e) The requirements of this Article 5.4.3 do not apply where they are precluded by federal or State funding requirements or where the **Contract** is an emergency procurement.

5.4.4 Section 24-163 of the Administrative Code. The **Contractor** shall comply with Section 24-163 of the Administrative Code related to the idling of the engines of motor vehicles while parking.

5.4.5 Compliance

5.4.5(a) The **Contractor's** compliance with Article 5.4 may be independently monitored. If it is determined that the **Contractor** has failed to comply with any provision of Article 5.4, any costs associated with any independent monitoring incurred by the **City** shall be reimbursed by the **Contractor**.

5.4.5(b) Any **Contractor** who violates any provision of Article 5.4, except as provided in Article 5.4.5(c) below, shall be liable for a civil penalty between the amounts of one thousand (\$1,000) and ten thousand (\$10,000) dollars, in addition to twice the amount of money saved by such **Contractor** for failure to comply with Article 5.4.

5.4.5(c) No **Contractor** shall make a false claim with respect to the provisions of Article 5.4 to a **City Agency**. Where a **Contractor** has been found to have done so, such **Contractor** shall be liable for a civil penalty of twenty thousand (\$20,000) dollars, in addition to twice the amount of money saved by such **Contractor** in association with having made such false claim.

5.4.6 Reporting

5.4.6(a) For all Public Works Contracts covered by this Article 5.4, the **Contractor** shall report to the **City Agency** the following information:

5.4.6(a)(i) The total number of diesel-powered Nonroad Vehicles used to fulfill the requirements of this Public Works Contract;

5.4.6(a)(ii) The number of such Nonroad Vehicles that were powered by Ultra Low Sulfur Diesel Fuel;

5.4.6(a)(iii) The number of such Nonroad Vehicles that utilized the best available technology for reducing the emission of pollutants, including a breakdown by vehicle model and the type of technology;

5.4.6(a)(iv) The number of such Nonroad Vehicles that utilized such other authorized technology in accordance with Article 5.4.3, including a breakdown by vehicle model and the type of technology used for each such vehicle;

5.4.6(a)(v) The locations where such Nonroad Vehicles were used; and

5.4.6(a)(vi) Where a determination is in effect pursuant to Article 5.4.2(b) or 5.4.2(c), detailed information concerning the **Contractor's** efforts to obtain Ultra Low Sulfur Diesel Fuel or diesel fuel that has a sulfur content of no more than thirty parts per million (30 ppm).

5.4.6(b) The **Contractor** shall submit the information required by Article 5.4.6(a) at the completion of **Work** under the Public Works Contract and on a yearly basis no later than August 1 throughout the term of the Public Works Contract. The yearly report shall cover **Work** performed during the preceding fiscal year (July 1 - June 30).

5.5 Ultra Low Sulfur Diesel Fuel. In accordance with the Coordinated Construction Act for Lower Manhattan, as amended:

5.5.1 Definitions. For purposes of this Article 5.5, the following definitions apply:

5.5.1(a) "Lower Manhattan" means the area to the south of and within the following lines: a line beginning at a point where the United States pierhead line in the Hudson River as it exists now or may be extended would intersect with the southerly line of West Houston Street in the Borough of Manhattan extended, thence easterly along the southerly side of West Houston Street to the southerly side of Houston Street, thence easterly along the southerly side of Houston Street to the southerly side of East Houston Street, thence northeasterly along the southerly side of East Houston Street to the point where it would intersect with the United States pierhead line in the East River as it exists now or may be extended, including tax lots within or immediately adjacent thereto.

5.5.1(b) "Lower Manhattan Redevelopment Project" means any project in Lower Manhattan that is funded in whole or in part with federal or State funding, or any project intended to improve transportation between Lower Manhattan and the two air terminals in the City known as LaGuardia Airport and John F. Kennedy International Airport, or between Lower Manhattan and the air terminal in Newark known as Newark Liberty International Airport, and that is funded in whole or in part with federal funding.

5.5.1(c) "Nonroad Engine" means an internal combustion engine (including the fuel system) that is not used in a Motor Vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under Section 7411 or Section 7521 of Title 42 of the United States Code, except that this term shall apply to internal combustion engines used to power generators, compressors or similar equipment used in any construction program or project.

5.5.1(d) "Nonroad Vehicle" means a vehicle that is powered by a Nonroad Engine, fifty (50) horsepower (HP) and greater, and that is not a Motor Vehicle or a vehicle used solely for competition, which shall include, but not be limited to, excavators, backhoes, cranes, compressors, generators, bulldozers, and similar equipment, except

that this terms shall not apply to horticultural maintenance vehicles used for landscaping purposes that are powered by a Nonroad Engine of sixty-five (65) HP or less and that are not used in any construction program or project.

5.5.1(e) "Ultra Low Sulfur Diesel Fuel" means diesel fuel that has a sulfur content of no more than fifteen parts per million (15 ppm).

5.5.2 Requirements. **Contractors and Subcontractors** are required to use only Ultra Low Sulfur Diesel Fuel to power the diesel-powered Nonroad Vehicles with engine HP rating of fifty (50) HP and above used on a Lower Manhattan Redevelopment Project and, where practicable, to reduce the emission of pollutants by retrofitting such Nonroad Vehicles with oxidation catalysts, particulate filters, or technology that achieves lowest particulate matter emissions.

5.6 Pesticides. In accordance with Section 17-1209 of the Administrative Code, to the extent that the **Contractor** or any **Subcontractor** applies pesticides to any property owned or leased by the **City**, the **Contractor**, and any **Subcontractor** shall comply with Chapter 12 of the Administrative Code.

5.7 Waste Treatment, Storage, and Disposal Facilities and Transporters. In connection with the **Work**, the **Contractor** and any **Subcontractor** shall use only those waste treatment, storage, and disposal facilities and waste transporters that possess the requisite license, permit or other governmental approval necessary to treat, store, dispose, or transport the waste, materials or hazardous substances.

5.8 Environmentally Preferable Purchasing. The **Contractor** shall ensure that products purchased or leased by the **Contractor** or any **Subcontractor** for the **Work** that are not specified by the **City** or are submitted as equivalents to a product specified by the **City** comply with the requirements of the New York City Environmentally Preferable Purchasing Program contained in Chapter 11 of Title 43 of the RCNY, pursuant to Chapter 3 of Title 6 of the Administrative Code.

ARTICLE 6. INSPECTION

6.1 During the progress of the **Work** and up to the date of **Final Acceptance**, the **Contractor** shall at all times afford the representatives of the **City** every reasonable, safe, and proper facility for inspecting all **Work** done or being done at the **Site** and also for inspecting the manufacture or preparation of materials and equipment at the place of such manufacture or preparation.

6.2 The **Contractor's** obligation hereunder shall include the uncovering or taking down of finished **Work** and its restoration thereafter; provided, however, that the order to uncover, take down and restore shall be in writing, and further provided that if **Work** thus exposed proves satisfactory, and if the **Contractor** has complied with Article 6.1, such uncovering or taking down and restoration shall be considered an item of **Extra Work** to be paid for in accordance with the provisions of Article 26. If the **Work** thus exposed proves unsatisfactory, the **City** has no obligation to compensate the **Contractor** for the uncovering, taking down or restoration.

6.3 Inspection and approval by the **Commissioner**, the **Engineer**, **Project Manager**, or **Resident Engineer**, of finished **Work** or of **Work** being performed, or of materials and equipment at the place of manufacture or preparation, shall not relieve the **Contractor** of its obligation to perform the **Work** in strict accordance with the **Contract**. Finished or unfinished **Work** not found to be in strict accordance with the **Contract** shall be replaced as directed by the **Engineer**, even though such **Work** may have been previously approved and paid for. Such corrective **Work** is **Contract Work** and shall not be deemed **Extra Work**.

6.4 Rejected **Work** and materials shall be promptly taken down and removed from the **Site**, which must at all times be kept in a reasonably clean and neat condition.

**ARTICLE 7. PROTECTION OF WORK AND OF PERSONS
AND PROPERTY; NOTICES AND INDEMNIFICATION**

7.1 During the performance of the **Work** and up to the date of **Final Acceptance**, the **Contractor** shall be under an absolute obligation to protect the finished and unfinished **Work** against any damage, loss, injury, theft and/or vandalism and in the event of such damage, loss, injury, theft and/or vandalism, it shall promptly replace and/or repair such **Work** at the **Contractor's** sole cost and expense, as directed by the **Resident Engineer**. The obligation to deliver finished **Work** in strict accordance with the **Contract** prior to **Final Acceptance** shall be absolute and shall not be affected by the **Resident Engineer's** approval of, or failure to prohibit, the **Means and Methods of Construction** used by the **Contractor**.

7.2 During the performance of the **Work** and up to the date of **Final Acceptance**, the **Contractor** shall take all reasonable precautions to protect all persons and the property of the **City** and of others from damage, loss or injury resulting from the **Contractor's**, and/or its **Subcontractors'** operations under this **Contract**. The **Contractor's** obligation to protect shall include the duty to provide, place or replace, and adequately maintain at or about the **Site** suitable and sufficient protection such as lights, barricades, and enclosures.

7.3 The **Contractor** shall comply with the notification requirements set forth below in the event of any loss, damage or injury to **Work**, persons or property, or any accidents arising out of the operations of the **Contractor** and/or its **Subcontractors** under this **Contract**.

7.3.1 The **Contractor** shall make a full and complete report in writing to the **Resident Engineer** within three (3) **Days** after the occurrence.

7.3.2 The **Contractor** shall also send written notice of any such event to all insurance carriers that issued potentially responsive policies (including commercial general liability insurance carriers for events relating to the **Contractor's** own employees) no later than twenty (20) days after such event and again no later than twenty (20) days after the initiation of any claim and/or action resulting therefrom. Such notice shall contain the following information: the number of the insurance policy, the name of the Named Insured, the date and location of the incident, and the identity of the persons injured or property damaged. For any policy on which the **City** and/or the **Engineer, Architect, or Project Manager** are Additional Insureds, such notice shall expressly specify that "this notice is being given on behalf of the City of New York as Additional Insured, such other Additional Insureds, as well as the Named Insured."

7.3.2(a) Whenever such notice is sent under a policy on which the **City** is an Additional Insured, the **Contractor** shall provide copies of the notice to the **Comptroller, the Commissioner** and the **City Corporation Counsel**. The copy to the **Comptroller** shall be sent to the Insurance Unit, NYC Comptroller's Office, 1 Centre Street - Room 1222, New York, New York, 10007. The copy to the **Commissioner** shall be sent to the address set forth in Schedule A of the General Conditions. The copy to the **City Corporation Counsel** shall be sent to Insurance Claims Specialist, Affirmative Litigation Division, New York City Law Department, 100 Church Street, New York, New York 10007.

7.3.2(b) If the **Contractor** fails to provide any of the foregoing notices to any appropriate insurance carrier(s) in a timely and complete manner, the **Contractor** shall indemnify the **City** for all losses, judgments, settlements, and expenses, including reasonable attorneys' fees, arising from an insurer's disclaimer of coverage citing late notice by or on behalf of the **City**.

7.4 To the fullest extent permitted by law, the **Contractor** shall defend, indemnify, and hold the **City**, its employees, and officials (the "Indemnitees") harmless against any and all claims (including but not limited to claims asserted by any employee of the **Contractor** and/or its **Subcontractors**) and costs and expenses of whatever kind (including but not limited to payment or reimbursement of attorneys' fees and disbursements) allegedly arising out of or in any way related to the operations of the **Contractor** and/or its **Subcontractors** in the performance of this **Contract** or from the **Contractor's** and/or its **Subcontractors'** failure to comply with any of the provisions of this **Contract** or of the **Law**. Such costs and expenses shall include all those incurred in defending the underlying claim and those incurred in connection with the enforcement of this Article 7.4 by way of cross-claim, third-party claim, declaratory action or otherwise. The parties expressly agree that the indemnification obligation hereunder contemplates (1) full indemnity in the event of liability imposed against the Indemnitees without negligence and solely by reason of statute, operation of **Law** or otherwise; and (2) partial indemnity in the event of any actual negligence on the part of the Indemnitees either causing or contributing to the underlying claim (in which case, indemnification will be limited to any liability imposed over and above that percentage attributable to actual fault whether by statute, by operation of **Law**, or otherwise). Where partial indemnity is provided hereunder, all costs and expenses shall be indemnified on a pro rata basis.

7.4.1 Indemnification under Article 7.4 or any other provision of the **Contract** shall operate whether or not **Contractor** or its **Subcontractors** have placed and maintained the insurance specified under Article 22.

7.5 The provisions of this Article 7 shall not be deemed to create any new right of action in favor of third parties against the **Contractor** or the **City**.

CHAPTER III TIME PROVISIONS

ARTICLE 8. COMMENCEMENT AND PROSECUTION OF THE WORK

8.1 The **Contractor** shall commence the **Work** on the date specified in the **Notice to Proceed** or the **Order to Work**. The time for performance of the **Work** under the **Contract** shall be computed from the date specified in the **Notice to Proceed** or the **Order to Work**. **TIME BEING OF THE ESSENCE** to the **City**, the **Contractor** shall thereafter prosecute the **Work** diligently, using such **Means and Methods of Construction** as are in accord with Article 4 herein and as will assure its completion not later than the date specified in this **Contract**, or on the date to which the time for completion may be extended.

ARTICLE 9. PROGRESS SCHEDULES

9.1 To enable the **Work** to be performed in an orderly and expeditious manner, the **Contractor**, within fifteen (15) **Days** after the **Notice to Proceed** or **Order to Work**, unless otherwise directed by the **Engineer**, shall submit to the **Engineer** a proposed progress schedule based on the Critical Path Method in the form of a bar graph or in such other form as specified by the **Engineer**, and monthly cash flow requirements, showing:

9.1.1 The anticipated time of commencement and completion of each of the various operations to be performed under this **Contract**; and

9.1.2 The sequence and interrelation of each of these operations with the others and with those of other related contracts; and

9.1.3 The estimated time required for fabrication or delivery, or both, of all materials and equipment required for the **Work**, including the anticipated time for obtaining required approvals pursuant to Article 10; and

9.1.4 The estimated amount in dollars the **Contractor** will claim on a monthly basis.

9.2 The proposed schedule shall be revised as directed by the **Engineer**, until finally approved by the **Engineer**, and after such approval, subject to the provisions of Article 11, shall be strictly adhered to by the **Contractor**.

9.3 If the **Contractor** shall fail to adhere to the approved progress schedule, or to the schedule as revised pursuant to Article 11, it shall promptly adopt such other or additional **Means and Methods of Construction**, at its sole cost and expense, as will make up for the time lost and will assure completion in accordance with the approved progress schedule. The approval by the **City** of a progress schedule which is shorter than the time allotted under the **Contract** shall not create any liability for the **City** if the approved progress schedule is not met.

9.4 The **Contractor** will not receive any payments until the proposed progress schedule is submitted.

ARTICLE 10. REQUESTS FOR INFORMATION OR APPROVAL

10.1 From time to time as the **Work** progresses and in the sequence indicated by the approved progress schedule, the **Contractor** shall submit to the **Engineer** a specific request in writing for each item of information or approval required by the **Contractor**. These requests shall state the latest date upon which the information or approval is actually required by the **Contractor**, and shall be submitted in a reasonable time in advance thereof to provide the **Engineer** a sufficient time to act upon such submissions, or any necessary re-submissions thereof.

10.2 The **Contractor** shall not have any right to an extension of time on account of delays due to the **Contractor's** failure to submit requests for the required information or the required approval in accordance with the above requirements.

ARTICLE 11. NOTICE OF CONDITIONS CAUSING DELAY AND DOCUMENTATION OF DAMAGES CAUSED BY DELAY

11.1 After the commencement of any condition which is causing or may cause a delay in completion of the **Work**, including conditions for which the **Contractor** may be entitled to an extension of time, the following notifications and submittals are required:

11.1.1 Within seven (7) **Days** after the commencement of such condition, the **Contractor** must notify the **Engineer** in writing of the existence, nature and effect of such condition upon the approved progress schedule and the **Work**, and must state why and in what respects, if any, the condition is causing or may cause a delay.

11.1.2 If the **Contractor** shall claim to be sustaining damages for delay as provided for in this Article 11, within forty-five (45) **Days** from the time such damages are first incurred, and every thirty (30) **Days** thereafter for as long as such damages are being incurred, the **Contractor** shall submit to the **Commissioner** verified written statements of the details and the amounts of such damages, together with documentary evidence of such damages, ("statement of delay damages") as further detailed in Article 11.6. The **Contractor** may submit any of the above statements within such additional time as may be granted by the **Commissioner** in writing upon written request therefor. On failure of the **Contractor** to strictly comply with all of the foregoing provisions, such claims shall be deemed waived and no right to recover on such claims shall exist. Damages that the **Contractor** may claim in any action arising under or by reason of this **Contract** shall not be different from or in excess of the statements made and documentation provided pursuant to this Article 11.

11.1.3 Within 60 days of submission of the final verified statement of claims pursuant to Article 44, the **Commissioner** shall make a determination as to whether a compensable delay has occurred and, if so, the amount of compensation due the **Contractor**. Notwithstanding the above, the **Commissioner** may make a determination as to whether a compensable delay has occurred at any time after the **Contractor's** first submission of a statement of delay damages provided, however, that the amount of compensation due to the **Contractor** will not be determined until the **Commissioner** determines that the **Work** is delayed after the date set for substantial completion.

11.2 Failure of the **Contractor** to strictly comply with the requirements of Article 11.1.1 may, in the discretion of the **Commissioner**, be deemed sufficient cause to deny any extension of time on account of delay arising out of such condition. Failure of the **Contractor** to strictly comply with the requirements of Articles 11.1.1 and 11.1.2 shall be deemed a conclusive waiver by the **Contractor** of any and all claims for damages for delay arising from such condition and no right to recover on such claims shall exist.

11.3 When appropriate and directed by the **Engineer**, the progress schedule shall be revised by the **Contractor** until finally approved by the **Engineer**. The revised progress schedule must be strictly adhered to by the **Contractor**.

11.4 Compensable Delays

11.4.1 The **Contractor** agrees to make claim only for additional costs attributable to delay in the performance of this **Contract** necessarily extending the time for completion of the **Work** or resulting from acceleration directed by the **Commissioner** and required to maintain the **Project** schedule, occasioned solely by any act or omission to act of the **City** listed below. The **Contractor** also agrees that delay from any other cause shall be compensated, if at all, solely by an extension of time to complete the performance of the **Work**.

11.4.1.1 The failure of the **City** to take reasonable measures to coordinate and progress the **Work**, except that the **City** shall not be responsible for the **Contractor's** obligation to coordinate and progress the **Work** of its **Subcontractors**.

11.4.1.2 Extended delays attributable to the **City** in the review or issuance of change orders, in shop drawing reviews and approvals or as a result of the cumulative impact of multiple change orders, which have a verifiable impact on **Project** costs.

11.4.1.3 The unavailability of the **Site** for an extended period of time that significantly affects the scheduled completion of the **Contract**.

- 11.4.1.4 The issuance by the **Engineer** of a stop work order relative to a substantial portion of the **Work** for a period exceeding thirty (30) **Days**, that was not brought about through any action or omission of the **Contractor**.
- 11.4.1.5 Differing site conditions that were neither known nor reasonably ascertainable on a pre-bid inspection of the **Site** or review of the bid documents or other publicly available sources, and that are not ordinarily encountered in the **Project's** geographical area or neighborhood or in the type of **Work** to be performed.
- 11.4.1.6 Delays caused by the **City's** bad faith or its willful, malicious, or grossly negligent conduct;
- 11.4.1.7 Delays not contemplated by the parties;
- 11.4.1.8 Delays so unreasonable that they constitute an intentional abandonment of the **Contract** by the **City**; and
- 11.4.1.9 Delays resulting from the **City's** breach of a fundamental obligation of the **Contract**.

11.4.2 No claim may be made for any alleged delay in **Substantial Completion** of the **Work** by a date earlier than the date of **Substantial Completion** provided for in Schedule A unless there is a provision in the **Contract** providing for additional compensation for early completion. No claim may be made for any alleged delay in **Substantial Completion** of the **Work** if the work is substantially completed by the date of **Substantial Completion** provided for in Schedule A unless acceleration has been directed by the **Commissioner** to meet the date of **Substantial Completion** set forth in Schedule A.

11.4.3 The provisions of this Article 11 apply only to claims for additional costs attributable to delay and do not preclude determinations by the **Commissioner** allowing reimbursements for additional costs for **Extra Work** pursuant to Articles 25 and 26 of this **Contract**. To the extent that any cost attributable to delay is reimbursed as part of a change order, no additional claim for compensation under this Article 11 shall be allowed.

11.5 Non-Compensable Delays. The **Contractor** agrees to make no claim for, and is deemed to have included in its bid prices for the various items of the **Contract**, the extra/additional costs attributable to any delays caused by or attributable to the items set forth below. For such items, the **Contractor** shall be compensated, if at all, solely by an extension of time to complete the performance of the **Work**, in accordance with the provisions of Article 13. Such extensions of time will be granted, if at all, pursuant to the grounds set forth in Article 13.3.

11.5.1 The acts or omissions of any third parties, including but not limited to **Other Contractors**, public/ governmental bodies (other than **City Agencies**), utilities or private enterprises, who are disclosed in the **Contract Documents** or are ordinarily encountered or generally recognized as related to the **Work**;

11.5.2 Any situation which was within the contemplation of the parties at the time of entering into the **Contract**, including any delay indicated or disclosed in the **Contract Documents** or generally recognized as related to the nature of the **Work**, and/or the existence of any facility or appurtenance owned, operated or maintained by any third party, as indicated or disclosed in the **Contract Documents** or ordinarily encountered or generally recognized as related to the nature of the **Work**;

11.5.3 Restraining orders, injunctions or judgments issued by a court which were caused by a Contractor's submission, action or inaction or by a Contractor's **Means and Methods of**

Construction, or by third parties, unless such order, injunction or judgment was the result of an action or omission by the **City**;

11.5.4 Any labor boycott, strike, picketing, lockout or similar situation;

11.5.5 Any shortages of supplies or materials, or unavailability of equipment, required by the **Contract Work**;

11.5.6 Climatic conditions, storms, floods, droughts, tidal waves, fires, hurricanes, earthquakes, landslides or other catastrophes or acts of God, or acts of war or of the public enemy or terrorist acts, including the **City's** reasonable responses thereto; and

11.5.7 **Extra Work** which does not significantly affect the overall completion of the **Contract**, reasonable delays in the review or issuance of change orders or field orders and/or in shop drawing reviews or approvals.

11.6 Required Content of Submission of Statement of Delay Damages

11.6.1 In the verified written statement of delay damages required by Article 11.1.2, the following information shall be provided by the **Contractor**:

11.6.1.1 For each delay, the start and end dates of the claimed periods of delay and, in addition, a description of the operations that were delayed, an explanation of how they were delayed, and the reasons for the delay, including identifying the applicable act or omission of the **City** listed in Article 11.4.

11.6.1.2 A detailed factual statement of the claim providing all necessary dates, locations and items of **Work** affected by the claim.

11.6.1.3 The amount of additional compensation sought and a breakdown of that amount into categories as described in Article 26.2, subject to the limitations set forth in Article 11.7.

11.6.1.4 Any additional information requested by the **Commissioner**.

11.7 Recoverable Costs

11.7.1 Delay damages may be recoverable for the following costs actually and necessarily incurred in the performance of the **Work**:

11.7.1.1 Direct labor, including payroll taxes (subject to statutory wage caps) and supplemental benefits, based on time and materials records;

11.7.1.2 Necessary materials (including transportation to the **Site**), based on time and material records;

11.7.1.3 Reasonable rental value of necessary plant and equipment other than small tools, plus fuel/energy costs according to the applicable formula set forth in Articles 26.2.4 and/or 26.2.8, based on time and material records;

11.7.1.4 Insurance and bond costs;

11.7.1.5 Extended field office costs;

11.7.1.6 Extended **Site** overhead; and

11.7.1.7 Extended home office overhead.

11.7.2 Recoverable Subcontractor Costs. When the **Work** is performed by a **Subcontractor**, the **Contractor** may be paid the actual and necessary costs of such subcontracted **Work** as outlined above in Articles 11.7.1.1 through 11.7.1.6, and an

additional overhead of five (5%) percent of the costs outlined in Articles 11.7.1.1 through 11.7.1.3.

11.7.3 Non-Recoverable Costs. The parties agree that the **City** will have no liability for the following items and the **Contractor** agrees it shall make no claim for the following items:

- 11.7.3.1 Profit, or loss of anticipated or unanticipated profit;
- 11.7.3.2 Consequential damages, including but not limited to interest on monies in dispute, including interest which is paid on such monies, loss of bonding capacity, bidding opportunities, or interest in investment, or any resulting insolvency;
- 11.7.3.3 Indirect costs or expenses of any nature;
- 11.7.3.4 Direct or indirect costs attributable to performance of **Work** where the **Contractor**, because of situations or conditions within its control, has not progressed the **Work** in a satisfactory manner; and
- 11.7.3.5 Attorneys' fees and dispute and claims preparation expenses.

11.8 Determinations under this Article 11 are not subject to the jurisdiction of the Contract Dispute Resolution Board pursuant to the dispute resolution process set forth in Article 27.

11.9 If the parties agree, pursuant to Article 11.1.3 above, that a compensable delay has occurred and agree on the amount of compensation, payment may be made pursuant to a written change order. Payment pursuant to such change order is subject to pre-audit by the **Engineering Audit Officer**, and may be post-audited by the **Comptroller** and/or the **Agency**.

ARTICLE 12. COORDINATION WITH OTHER CONTRACTORS

12.1 During the progress of the **Work**, **Other Contractors** may be engaged in performing other work or may be awarded other contracts for additional work on this **Project**. In that event, the **Contractor** shall coordinate the **Work** to be done hereunder with the work of such **Other Contractors** and the **Contractor** shall fully cooperate with such **Other Contractors** and carefully fit its own **Work** to that provided under other contracts as may be directed by the **Engineer**. The **Contractor** shall not commit or permit any act which will interfere with the performance of work by any **Other Contractors**.

12.2 If the **Engineer** determines that the **Contractor** is failing to coordinate its **Work** with the work of **Other Contractors** as the **Engineer** has directed, then the **Commissioner** shall have the right to withhold any payments otherwise due hereunder until the **Contractor** completely complies with the **Engineer's** directions.

12.3 The **Contractor** shall notify the **Engineer** in writing if any **Other Contractor** on this **Project** is failing to coordinate its work with the **Work** of this **Contract**. If the **Engineer** finds such charges to be true, the **Engineer** shall promptly issue such directions to the **Other Contractor** with respect thereto as the situation may require. The **City** shall not, however, be liable for any damages suffered by any **Other Contractor's** failure to coordinate its work with the **Work** of this **Contract** or by reason of the **Other Contractor's** failure to promptly comply with the directions so issued by the **Engineer**, or by reason of any **Other Contractor's** default in performance, it being understood that the **City** does not guarantee the responsibility or continued efficiency of any contractor. The **Contractor** agrees to make no claim against

the **City** for any damages relating to or arising out of any directions issued by the **Engineer** pursuant to this Article 12 (including but not limited to the failure of any **Other Contractor** to comply or promptly comply with such directions), or the failure of the **Engineer** to issue any directions, or the failure of any **Other Contractor** to coordinate its work, or the default in performance of any **Other Contractor**.

12.4 The **Contractor** shall indemnify and hold the **City** harmless from any and all claims or judgments for damages and from costs and expenses to which the **City** may be subjected or which it may suffer or incur by reason of the **Contractor's** failure to comply with the **Engineer's** directions promptly; and the **Comptroller** shall have the right to exercise the powers reserved in Article 23 with respect to any claims which may be made for damages due to the **Contractor's** failure to comply with the **Engineer's** directions promptly. Insofar as the facts and **Law** relating to any claim would preclude the **City** from being completely indemnified by the **Contractor**, the **City** shall be partially indemnified by the **Contractor** to the fullest extent provided by **Law**.

12.5 Should the **Contractor** sustain any damage through any act or omission of any **Other Contractor** having a contract with the **City** for the performance of work upon the **Site** or of work which may be necessary to be performed for the proper prosecution of the **Work** to be performed hereunder, or through any act or omission of a subcontractor of such **Other Contractor**, the **Contractor** shall have no claim against the **City** for such damage, but shall have a right to recover such damage from the **Other Contractor** under the provision similar to the following provisions which apply to this **Contract** and have been or will be inserted in the contracts with such **Other Contractors**:

12.5.1 Should any **Other Contractor** having or who shall hereafter have a contract with the **City** for the performance of work upon the **Site** sustain any damage through any act or omission of the **Contractor** hereunder or through any act or omission of any **Subcontractor** of the **Contractor**, the **Contractor** agrees to reimburse such **Other Contractor** for all such damages and to defend at its own expense any action based upon such claim and if any judgment or claim (even if the allegations of the action are without merit) against the **City** shall be allowed the **Contractor** shall pay or satisfy such judgment or claim and pay all costs and expenses in connection therewith and agrees to indemnify and hold the **City** harmless from all such claims. Insofar as the facts and **Law** relating to any claim would preclude the **City** from being completely indemnified by the **Contractor**, the **City** shall be partially indemnified by the **Contractor** to the fullest extent provided by **Law**.

12.6 The **City's** right to indemnification hereunder shall in no way be diminished, waived or discharged by its recourse to assessment of liquidated damages as provided in Article 15, or by the exercise of any other remedy provided for by **Contract** or by **Law**.

ARTICLE 13. EXTENSION OF TIME FOR PERFORMANCE

13.1 If performance by the **Contractor** is delayed for a reason set forth in Article 13.3, the **Contractor** may be allowed a reasonable extension of time in conformance with this Article 13 and the **PPB Rules**.

13.2 Any extension of time may be granted only by the **ACCO** or by the Board for the Extension of Time (hereafter "**Board**") (as set forth below) upon written application by the **Contractor**.

13.3 Grounds for Extension: If such application is made, the **Contractor** shall be entitled to an extension of time for delay in completion of the **Work** caused solely:

13.3.1 By the acts or omissions of the **City**, its officials, agents or employees; or

13.3.2 By the act or omissions of **Other Contractors** on this **Project**; or

13.3.3 By supervening conditions entirely beyond the control of either party hereto (such as, but not limited to, acts of God or the public enemy, excessive inclement weather, war or other national emergency making performance temporarily impossible or illegal, or strikes or labor disputes not brought about by any act or omission of the **Contractor**).

13.3.4 The **Contractor** shall, however, be entitled to an extension of time for such causes only for the number of **Days** of delay which the **ACCO** or the Board may determine to be due solely to such causes, and then only if the **Contractor** shall have strictly complied with all of the requirements of Articles 9 and 10.

13.4 The **Contractor** shall not be entitled to receive a separate extension of time for each of several causes of delay operating concurrently, but, if at all, only for the actual period of delay in completion of the **Work** as determined by the **ACCO** or the Board, irrespective of the number of causes contributing to produce such delay. If one of several causes of delay operating concurrently results from any act, fault or omission of the **Contractor** or of its **Subcontractors** or **Materialmen**, and would of itself (irrespective of the concurrent causes) have delayed the **Work**, no extension of time will be allowed for the period of delay resulting from such act, fault or omission.

13.5 The determination made by the **ACCO** or the Board on an application for an extension of time shall be binding and conclusive on the **Contractor**.

13.6 The **ACCO** or the Board acting entirely within their discretion may grant an application for an extension of time for causes of delay other than those herein referred.

13.7 Permitting the **Contractor** to continue with the **Work** after the time fixed for its completion has expired, or after the time to which such completion may have been extended has expired, or the making of any payment to the **Contractor** after such time, shall in no way operate as a waiver on the part of the **City** of any of its rights under this **Contract**.

13.8 Application for Extension of Time:

13.8.1 Before the **Contractor's** time extension request will be considered, the **Contractor** shall notify the **ACCO** of the condition which allegedly has caused or is causing the delay, and shall submit a written application to the **ACCO** identifying:

13.8.1(a) The **Contractor**; the registration number; and **Project** description;

13.8.1(b) Liquidated damage assessment rate, as specified in the **Contract**;

13.8.1(c) Original total bid price;

13.8.1(d) The original **Contract** start date and completion date;

13.8.1(e) Any previous time extensions granted (number and duration); and

13.8.1(f) The extension of time requested.

13.8.2 In addition, the application for extension of time shall set forth in detail:

13.8.2(a) The nature of each alleged cause of delay in completing the **Work**;

13.8.2(b) The date upon which each such cause of delay began and ended and the number of **Days** attributable to each such cause;

13.8.2(c) A statement that the **Contractor** waives all claims except for those delineated in the application, and the particulars of any claims which the **Contractor** does not agree to waive. For time extensions for **Substantial Completion** and final completion payments, the application shall include a detailed statement of the dollar amounts of each element of claim item reserved; and

13.8.2(d) A statement indicating the **Contractor's** understanding that the time extension is granted only for purposes of permitting continuation of **Contract** performance and payment for **Work** performed and that the **City** retains its right to conduct an investigation and assess liquidated damages as appropriate in the future.

13.9 Analysis and Approval of Time Extensions:

13.9.1 For time extensions for partial payments, a written determination shall be made by the **ACCO** who may, for good and sufficient cause, extend the time for the performance of the **Contract** as follows:

13.9.1(a) If the **Work** is to be completed within six (6) months, the time for performance may be extended for sixty (60) **Days**;

13.9.1(b) If the **Work** is to be completed within less than one (1) year but more than six (6) months, an extension of ninety (90) **Days** may be granted;

13.9.1(c) If the **Contract** period exceeds one (1) year, besides the extension granted in Article 13.9.1(b), an additional thirty (30) **Days** may be granted for each multiple of six (6) months involved beyond the one (1) year period; or

13.9.1(d) If exceptional circumstances exist, the **ACCO** may extend the time for performance beyond the extensions in Articles 13.9.1(a), 13.9.1(b), and 13.9.1(c). In that event, the **ACCO** shall file with the Mayor's Office of Contract Services a written explanation of the exceptional circumstances.

13.9.2 For extensions of time for **Substantial Completion** and final completion payments, the **Engineer**, in consultation with the **ACCO**, shall prepare a written analysis of the delay (including a preliminary determination of the causes of delay, the beginning and end dates for each such cause of delay, and whether the delays are excusable under the terms of this **Contract**). The report shall be subject to review by and approval of the Board, which shall have authority to question its analysis and determinations and request additional facts or documentation. The report as reviewed and made final by the Board shall be made a part of the **Agency** contract file. Neither the report itself nor anything contained therein shall operate as a waiver or release of any claim the **City** may have against the **Contractor** for either actual or liquidated damages.

13.9.3 Approval Mechanism for Time Extensions for **Substantial Completion** or Final Completion Payments: An extension shall be granted only with the approval of the Board which is comprised of the **ACCO** of the **Agency**, the **City** Corporation Counsel, and the **Comptroller**, or their authorized representatives.

13.9.4 Neither the granting of any application for an extension of time to the **Contractor** or any **Other Contractor** on this **Project** nor the papers, records or reports related to any application for or grant of an extension of time or determination related thereto shall be referred to or offered in evidence by the **Contractor** or its attorneys in any action or proceeding.

13.10 No Damage for Delay: The **Contractor** agrees to make no claim for damages for delay in the performance of this **Contract** occasioned by any act or omission to act of the **City** or any of its representatives, except as provided for in Article 11.

ARTICLE 14. COMPLETION AND FINAL ACCEPTANCE OF THE WORK

14.1 Date for **Substantial Completion**: The **Contractor** shall substantially complete the **Work** within the time fixed in Schedule A of the General Conditions, or within the time to which such **Substantial Completion** may be extended.

14.2 Determining the Date of **Substantial Completion**: The **Work** will be deemed to be substantially complete when the two conditions set forth below have been met.

14.2.1 Inspection: The **Engineer** has inspected the **Work** and has made a written determination that it is substantially complete.

14.2.2 Approval of **Final Approved Punch List** and Date for **Final Acceptance**: Following inspection of the **Work**, the **Engineer** shall furnish the **Contractor** with a final punch list, specifying all items of **Work** to be completed and proposing dates for the completion of each specified item of **Work**. The **Contractor** shall then submit in writing to the **Engineer** within ten (10) **Days** of the **Engineer** furnishing the final punch list either acceptance of the dates or proposed alternative dates for the completion of each specified item of **Work**. If the **Contractor** proposes alternative dates, then, within a reasonable time after receipt, the **Engineer**, in a written notification to the **Contractor**, shall approve the **Contractor's** completion dates or, if they are unable to agree, the **Engineer** shall establish dates for the completion of each item of **Work**. If the **Contractor** neither accepts the dates nor proposes alternative dates within ten (10) **Days**, the schedule proposed by the **Engineer** shall be deemed accepted. The latest completion date specified shall be the date for **Final Acceptance** of the **Work**.

14.3 Date of **Substantial Completion**. The date of approval of the **Final Approved Punch List**, shall be the date of **Substantial Completion**. The date of approval of the **Final Approved Punch List** shall be either (a) if the **Contractor** approves the final punch list and proposed dates for completion furnished by the **Engineer**, the date of the **Contractor's** approval; or (b) if the **Contractor** neither accepts the dates nor proposes alternative dates, ten (10) **Days** after the **Engineer** furnishes the **Contractor** with a final punch list and proposed dates for completion; or (c) if the **Contractor** proposes alternative dates, the date that the **Engineer** sends written notification to the **Contractor** either approving the **Contractor's** proposed alternative dates or establishing dates for the completion for each item of **Work**.

14.4 Determining the Date of **Final Acceptance**: The **Work** will be accepted as final and complete as of the date of the **Engineer's** inspection if, upon such inspection, the **Engineer** finds that all items on the **Final Approved Punch List** are complete and no further **Work** remains to be done. The **Commissioner** will then issue a written determination of **Final Acceptance**.

14.5 Request for Inspection: Inspection of the **Work** by the **Engineer** for the purpose of **Substantial Completion** or **Final Acceptance** shall be made within ten (10) Days after receipt of the **Contractor's** written request therefor.

14.6 Request for Re-inspection: If upon inspection for the purpose of **Substantial Completion** or **Final Acceptance**, the **Engineer** determines that there are items of **Work** still to be performed, the **Contractor** shall promptly perform them and then request a re-inspection. If upon re-inspection, the **Engineer** determines that the **Work** is substantially complete or finally accepted, the date of such re-inspection shall be the date of **Substantial Completion** or **Final Acceptance**. Re-inspection by the **Engineer** shall be made within ten (10) Days after receipt of the **Contractor's** written request therefor.

14.7 Initiation of Inspection by the **Engineer**: If the **Contractor** does not request inspection or re-inspection of the **Work** for the purpose of **Substantial Completion** or **Final Acceptance**, the **Engineer** may initiate such inspection or re-inspection.

ARTICLE 15. LIQUIDATED DAMAGES

15.1 In the event the **Contractor** fails to substantially complete the **Work** within the time fixed for such **Substantial Completion** in Schedule A of the General Conditions, plus authorized time extensions, or if the **Contractor**, in the sole determination of the **Commissioner**, has abandoned the **Work**, the **Contractor** shall pay to the **City** the sum fixed in Schedule A of the General Conditions, for each and every **Day** that the time consumed in substantially completing the **Work** exceeds the time allowed therefor; which said sum, in view of the difficulty of accurately ascertaining the loss which the **City** will suffer by reason of delay in the **Substantial Completion** of the **Work** hereunder, is hereby fixed and agreed as the liquidated damages that the **City** will suffer by reason of such delay, and not as a penalty. This Article 15 shall also apply to the **Contractor** whether or not the **Contractor** is defaulted pursuant to Chapter X of this **Contract**. Neither the failure to assess liquidated damages nor the granting of any time extension shall operate as a waiver or release of any claim the **City** may have against the **Contractor** for either actual or liquidated damages.

15.2 Liquidated damages received hereunder are not intended to be nor shall they be treated as either a partial or full waiver or discharge of the **City's** right to indemnification, or the **Contractor's** obligation to indemnify the **City**, or to any other remedy provided for in this **Contract** or by **Law**.

15.3 The **Commissioner** may deduct and retain out of the monies which may become due hereunder, the amount of any such liquidated damages; and in case the amount which may become due hereunder shall be less than the amount of liquidated damages suffered by the **City**, the **Contractor** shall be liable to pay the difference.

ARTICLE 16. OCCUPATION OR USE PRIOR TO COMPLETION

16.1 Unless otherwise provided for in the **Specifications**, the **Commissioner** may take over, use, occupy or operate any part of the **Work** at any time prior to **Final Acceptance**, upon written notification to the **Contractor**. The **Engineer** shall inspect the part of the **Work** to be taken over, used, occupied, or operated, and will furnish the **Contractor** with a written statement of the **Work**, if any, which remains to be performed on such part. The **Contractor** shall not object to, nor interfere with, the **Commissioner's** decision to exercise the rights granted by Article 16. In the event the **Commissioner** takes over, uses, occupies, or operates any part of the **Work**:

16.1.1 the **Engineer** shall issue a written determination of **Substantial Completion** with respect to such part of the **Work**;

16.1.2 the **Contractor** shall be relieved of its absolute obligation to protect such part of the unfinished **Work** in accordance with Article 7;

16.1.3 the **Contractor's** guarantee on such part of the **Work** shall begin on the date of such use by the **City**; and;

16.1.4 the **Contractor** shall be entitled to a return of so much of the amount retained in accordance with Article 21 as it relates to such part of the **Work**, except so much thereof as may be retained under Articles 24 and 44.

CHAPTER IV SUBCONTRACTS AND ASSIGNMENTS

ARTICLE 17. SUBCONTRACTS

17.1 The **Contractor** shall not make subcontracts totaling an amount more than the percentage of the total **Contract** price fixed in Schedule A of the General Conditions, without prior written permission from the **Commissioner**. All subcontracts made by the **Contractor** shall be in writing. No **Work** may be performed by a **Subcontractor** prior to the **Contractor** entering into a written subcontract with the **Subcontractor** and complying with the provisions of this Article 17.

17.2 Before making any subcontracts, the **Contractor** shall submit a written statement to the **Commissioner** giving the name and address of the proposed **Subcontractor**; the portion of the **Work** and materials which it is to perform and furnish; the cost of the subcontract; the VENDEX questionnaire if required; the proposed subcontract if requested by the **Commissioner**; and any other information tending to prove that the proposed **Subcontractor** has the necessary facilities, skill, integrity, past experience, and financial resources to perform the **Work** in accordance with the terms and conditions of this **Contract**.

17.3 In addition to the requirements in Article 17.2, **Contractor** is required to list the **Subcontractor** in the web based Subcontractor Reporting System through the City's Payee Information Portal (PIP), available at www.nyc.gov/pip.¹ For each **Subcontractor** listed, **Contractor** is required to provide the following information: maximum contract value, description of **Subcontractor's** **Work**, start and end date of the subcontract and identification of the **Subcontractor's** industry. Thereafter, **Contractor** will be required to report in the system the payments made to each **Subcontractor** within 30 days of making the payment. If any of the required information changes throughout the Term of the **Contract**, **Contractor** will be required to revise the information in the system.

Failure of the **Contractor** to list a **Subcontractor** and/or to report **Subcontractor** payments in a timely fashion may result in the **Commissioner** declaring the **Contractor** in default of the **Contract** and will subject **Contractor** to liquidated damages in the amount of \$100 per day for each day that the **Contractor** fails to identify a **Subcontractor** along with the required information about the **Subcontractor** and/or fails to report payments to a **Subcontractor**, beyond the time frames set forth herein or in the notice from the **City**. Article 15 shall govern the issue of liquidated damages.

¹ In order to use the new system, a PIP account will be required. Detailed instructions on creating a PIP account and using the new system are also available at www.nyc.gov/pip. Additional assistance with PIP may be obtained by emailing the Financial Information Services Agency Help Desk at pip@fisa.nyc.gov.

17.4 If an approved **Subcontractor** elects to subcontract any portion of its subcontract, the proposed sub-subcontract shall be submitted in the same manner as directed above.

17.5 The **Commissioner** will notify the **Contractor** in writing whether the proposed **Subcontractor** is approved. If the proposed **Subcontractor** is not approved, the **Contractor** may submit another proposed **Subcontractor** unless the **Contractor** decides to do the **Work**. No **Subcontractor** shall be permitted to enter or perform any work on the **Site** unless approved.

17.6 Before entering into any subcontract hereunder, the **Contractor** shall provide the proposed **Subcontractor** with a complete copy of this document and inform the proposed **Subcontractor** fully and completely of all provisions and requirements of this **Contract** relating either directly or indirectly to the **Work** to be performed and the materials to be furnished under such subcontract, and every such **Subcontractor** shall expressly stipulate that all labor performed and materials furnished by the **Subcontractor** shall strictly comply with the requirements of this **Contract**.

17.7 Documents given to a prospective **Subcontractor** for the purpose of soliciting the **Subcontractor's** bid shall include either a copy of the bid cover or a separate information sheet setting forth the **Project** name, the **Contract** number (if available), the **Agency** (as noted in Article 2.1.6), and the **Project's** location.

17.8 The **Commissioner's** approval of a **Subcontractor** shall not relieve the **Contractor** of any of its responsibilities, duties, and liabilities hereunder. The **Contractor** shall be solely responsible to the **City** for the acts or defaults of its **Subcontractor** and of such **Subcontractor's** officers, agents, and employees, each of whom shall, for this purpose, be deemed to be the agent or employee of the **Contractor** to the extent of its subcontract.

17.9 If the **Subcontractor** fails to maintain the necessary facilities, skill, integrity, past experience, and financial resources (other than due to the **Contractor's** failure to make payments where required) to perform the **Work** in accordance with the terms and conditions of this **Contract**, the **Contractor** shall promptly notify the **Commissioner** and replace such **Subcontractor** with a newly approved **Subcontractor** in accordance with this Article 17.

17.10 The **Contractor** shall be responsible for ensuring that all **Subcontractors** performing **Work** at the **Site** maintain all insurance required by **Law**.

17.11 The **Contractor** shall promptly, upon request, file with the **Engineer** a conformed copy of the subcontract and its cost. The subcontract shall provide the following:

17.11.1 **Payment to Subcontractors:** The agreement between the **Contractor** and its **Subcontractor** shall contain the same terms and conditions as to method of payment for **Work**, labor, and materials, and as to retained percentages, as are contained in this **Contract**.

17.11.2 **Prevailing Rate of Wages:** The agreement between the **Contractor** and its **Subcontractor** shall include the prevailing wage rates and supplemental benefits to be paid in accordance with Labor Law Section 220.

17.11.3 **Section 6-123 of the Administrative Code:** Pursuant to the requirements of Section 6-123 of the Administrative Code, every agreement between the **Contractor** and a **Subcontractor** in excess of fifty thousand (\$50,000) dollars shall include a provision that the **Subcontractor** shall not engage in any unlawful discriminatory practice as defined in Title VIII of the Administrative Code (Section 8-101 *et seq.*).

17.11.4 All requirements required pursuant to federal and/or state grant agreement(s), if applicable to the **Work**.

17.12 The **Commissioner** may deduct from the amounts certified under this **Contract** to be due to the **Contractor**, the sum or sums due and owing from the **Contractor** to the **Subcontractors** according to the terms of the said subcontracts, and in case of dispute between the **Contractor** and its **Subcontractor**, or **Subcontractors**, as to the amount due and owing, the **Commissioner** may deduct and withhold from the amounts certified under this **Contract** to be due to the **Contractor** such sum or sums as may be claimed by such **Subcontractor**, or **Subcontractors**, in a sworn affidavit, to be due and owing until such time as such claim or claims shall have been finally resolved.

17.13 On contracts where performance bonds and payment bonds are executed, the **Contractor** shall include on each requisition for payment the following data: **Subcontractor's** name, value of the subcontract, total amount previously paid to **Subcontractor** for **Work** previously requisitioned, and the amount, including retainage, to be paid to the **Subcontractor** for **Work** included in the requisition.

17.14 On **Contracts** where performance bonds and payment bonds are not executed, the **Contractor** shall include with each requisition for payment submitted hereunder, a signed statement from each and every **Subcontractor** and/or **Materialman** for whom payment is requested in such requisition. Such signed statement shall be on the letterhead of the **Subcontractor** and/or **Materialman** for whom payment is requested and shall (i) verify that such **Subcontractor** and/or **Materialman** has been paid in full for all **Work** performed and/or material supplied to date, exclusive of any amount retained and any amount included on the current requisition, and (ii) state the total amount of retainage to date, exclusive of any amount retained on the current requisition.

ARTICLE 18. ASSIGNMENTS

18.1 The **Contractor** shall not assign, transfer, convey or otherwise dispose of this **Contract**, or the right to execute it, or the right, title or interest in or to it or any part thereof, or assign, by power of attorney or otherwise any of the monies due or to become due under this **Contract**, unless the previous written consent of the **Commissioner** shall first be obtained thereto, and the giving of any such consent to a particular assignment shall not dispense with the necessity of such consent to any further or other assignments.

18.2 Such assignment, transfer, conveyance or other disposition of this **Contract** shall not be valid until filed in the office of the **Commissioner** and the **Comptroller**, with the written consent of the **Commissioner** endorsed thereon or attached thereto.

18.3 Failure to obtain the previous written consent of the **Commissioner** to such an assignment, transfer, conveyance or other disposition, may result in the revocation and annulment of this **Contract**. The **City** shall thereupon be relieved and discharged from any further liability to the **Contractor**, its assignees, transferees or sublessees, who shall forfeit and lose all monies therefor earned under the **Contract**, except so much as may be required to pay the **Contractor's** employees.

18.4 The provisions of this clause shall not hinder, prevent, or affect an assignment by the **Contractor** for the benefit of its creditors made pursuant to the **Laws** of the State of New York.

18.5 This **Contract** may be assigned by the **City** to any corporation, agency or instrumentality having authority to accept such assignment.

**CHAPTER V
CONTRACTOR'S SECURITY AND GUARANTEE**

ARTICLE 19. SECURITY DEPOSIT

19.1 If performance and payment bonds are required, the City shall retain the bid security to ensure that the successful bidder executes the **Contract** and furnishes the required payment and performance security within ten (10) **Days** after notice of the award of the **Contract**. If the successful bidder fails to execute the **Contract** and furnish the required payment and performance security, the City shall retain such bid security as set forth in the Information for Bidders. If the successful bidder executes the **Contract** and furnishes the required payment and performance security, the City shall return the bid security within a reasonable time after the furnishing of such bonds and execution of the **Contract** by the City.

19.2 If performance and payment bonds are not required, the bid security shall be retained by the City as security for the Contractor's faithful performance of the **Contract**. If partial payments are provided, the bid security will be returned to the Contractor after the sum retained under Article 21 equals the amount of the bid security, subject to other provisions of this **Contract**. If partial payments are not provided, the bid security will be released when final payment is certified by the City for payment.

19.3 If the Contractor is declared in default under Article 48 prior to the return of the deposit, or if any claim is made such as referred to in Article 23, the amount of such deposit, or so much thereof as the Comptroller may deem necessary, may be retained and then applied by the Comptroller:

19.3.1 To compensate the City for any expense, loss or damage suffered or incurred by reason of or resulting from such default, including the cost of re-letting and liquidated damages; or

19.3.2 To indemnify the City against any and all claims.

ARTICLE 20. PAYMENT GUARANTEE

20.1 On **Contracts** where one hundred (100%) percent performance bonds and payment bonds are executed, this Article 20 does not apply.

20.2 In the event the terms of this **Contract** do not require the Contractor to provide a payment bond or where the **Contract** does not require a payment bond for one hundred (100%) percent of the **Contract** price, the City shall, in accordance with the terms of this Article 20, guarantee payment of all lawful claims for:

20.2.1 Wages and compensation for labor performed and/or services rendered; and

20.2.2 Materials, equipment, and supplies provided, whether incorporated into the **Work** or not, when demands have been filed with the City as provided hereinafter by any person, firm, or corporation which furnished labor, material, equipment, supplies, or any combination thereof, in connection with the **Work** performed hereunder (hereinafter referred to as the "beneficiary") at the direction of the City or the Contractor.

20.3 The provisions of Article 20.2 are subject to the following limitations and conditions:

20.3.1 If the **Contractor** provides a payment bond for a value that is less than one hundred (100%) percent of the value of the **Contract Work**, the payment bond provided by the **Contractor** shall be primary (and non-contributing) to the payment guarantee provided under this Article 20.

20.3.2 The guarantee is made for the benefit of all beneficiaries as defined in Article 20.2 provided that those beneficiaries strictly adhere to the terms and conditions of Article 20.3.4 and 20.3.5.

20.3.3 Nothing in this Article 20 shall prevent a beneficiary providing labor, services or material for the **Work** from suing the **Contractor** for any amounts due and owing the beneficiary by the **Contractor**.

20.3.4 Every person who has furnished labor or material, to the **Contractor** or to a **Subcontractor** of the **Contractor**, in the prosecution of the **Work** and who has not been paid in full therefor before the expiration of a period of ninety (90) **Days** after the date on which the last of the labor was performed or material was furnished by him/her for which the claim is made, shall have the right to sue on this payment guarantee in his/her own name for the amount, or the balance thereof, unpaid at the time of commencement of the action; provided, however, that a person having a direct contractual relationship with a **Subcontractor** of the **Contractor** but no contractual relationship express or implied with the **Contractor** shall not have a right of action upon the guarantee unless he/she shall have given written notice to the **Contractor** within one hundred twenty (120) **Days** from the date on which the last of the labor was performed or the last of the material was furnished, for which his/her claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the material was furnished or for whom the labor was performed. The notice shall be served by delivering the same personally to the **Contractor** or by mailing the same by registered mail, postage prepaid, in an envelope addressed to the **Contractor** at any place where it maintains an office or conducts its business; provided, however, that where such notice is actually received by the **Contractor** by other means, such notice shall be deemed sufficient.

20.3.5 Except as provided in Labor Law Section 220-g, no action on this payment guarantee shall be commenced after the expiration of the one-year limitations period set forth in Section 137(4)(b) of the State Finance Law.

20.3.6 The **Contractor** shall promptly forward to the **City** any notice or demand received pursuant to Article 20.3.4. The **Contractor** shall inform the **City** of any defenses to the notice or demand and shall forward to the **City** any documents the **City** requests concerning the notice or demand.

20.3.7 All demands made against the **City** by a beneficiary of this payment guarantee shall be presented to the **Engineer** along with all written documentation concerning the demand which the **Engineer** deems reasonably appropriate or necessary, which may include, but shall not be limited to: the subcontract; any invoices presented to the **Contractor** for payment; the notarized statement of the beneficiary that the demand is due and payable, that a request for payment has been made of the **Contractor** and that the demand has not been paid by the **Contractor** within the time allowed for such payment by the subcontract; and copies of any correspondence between the beneficiary and the **Contractor** concerning such demand. The **City** shall notify the **Contractor** that a demand has been made. The **Contractor** shall inform the **City** of any defenses to the demand and shall forward to the **City** any documents the **City** requests concerning the demand.

20.3.8 The City shall make payment only if, after considering all defenses presented by the Contractor, it determines that the payment is due and owing to the beneficiary making the demand.

20.3.9 No beneficiary shall be entitled to interest from the City, or to any other costs, including, but not limited to, attorneys' fees, except to the extent required by State Finance Law Section 137.

20.4 Upon the receipt by the City of a demand pursuant to this Article 20, the City may withhold from any payment otherwise due and owing to the Contractor under this Contract an amount sufficient to satisfy the demand.

20.4.1 In the event the City determines that the demand is valid, the City shall notify the Contractor of such determination and the amount thereof and direct the Contractor to immediately pay such amount to the beneficiary. In the event the Contractor, within seven (7) Days of receipt of such notification from the City, fails to pay the beneficiary, such failure shall constitute an automatic and irrevocable assignment of payment by the Contractor to the beneficiary for the amount of the demand determined by the City to be valid. The Contractor, without further notification or other process, hereby gives its unconditional consent to such assignment of payment to the beneficiary and authorizes the City, on its behalf, to take all necessary actions to implement such assignment of payment, including without limitation the execution of any instrument or documentation necessary to effectuate such assignment.

20.4.2 In the event that the amount otherwise due and owing to the Contractor by the City is insufficient to satisfy such demand, the City may, at its option, require payment from the Contractor of an amount sufficient to cover such demand and exercise any other right to require or recover payment which the City may have under Law or Contract.

20.4.3 In the event the City determines that the demand is invalid, any amount withheld pending the City's review of such demand shall be paid to the Contractor; provided, however, no lien has been filed. In the event a claim or an action has been filed, the terms and conditions set forth in Article 23 shall apply. In the event a lien has been filed, the parties will be governed by the provisions of the Lien Law of the State of New York.

20.5 The provisions of this Article 20 shall not prevent the City and the Contractor from resolving disputes in accordance with the PPB Rules, where applicable.

20.6 In the event the City determines that the beneficiary is entitled to payment pursuant to this Article 20, such determination and any defenses and counterclaims raised by the Contractor shall be taken into account in evaluating the Contractor's performance.

20.7 Nothing in this Article 20 shall relieve the Contractor of the obligation to pay the claims of all persons with valid and lawful claims against the Contractor relating to the Work.

20.8 The Contractor shall not require any performance, payment or other bonds of any Subcontractor if this Contract does not require such bonds of the Contractor.

20.9 The payment guarantee made pursuant to this Article 20 shall be construed in a manner consistent with Section 137 of the State Finance Law and shall afford to persons furnishing labor or materials to the Contractor or its Subcontractors in the prosecution of the Work under this Contract all of the rights and remedies afforded to such persons by such section, including but not limited to, the right

to commence an action against the **City** on the payment guarantee provided by this Article 20 within the one-year limitations period set forth in Section 137(4)(b).

ARTICLE 21. RETAINED PERCENTAGE

21.1 If this **Contract** requires one hundred (100%) percent performance and payment security, then as further security for the faithful performance of this **Contract**, the **Commissioner** shall deduct, and retain until the substantial completion of the **Work**, five (5%) percent of the value of **Work** certified for payment in each partial payment voucher.

21.2 If this **Contract** does not require one hundred (100%) percent performance and payment security and if the price for which this **Contract** was awarded does not exceed one million (\$1,000,000) dollars, then as further security for the faithful performance of this **Contract**, the **Commissioner** shall deduct, and retain until the substantial completion of the **Work**, five (5%) percent of the value of **Work** certified for payment in each partial payment voucher.

21.3 If this **Contract** does not require one hundred (100%) percent performance and payment security and if the price for which this **Contract** was awarded exceeds one million (\$1,000,000) dollars, then as further security for the faithful performance of this **Contract**, the **Commissioner** shall deduct, and retain until the substantial completion of the **Work**, up to ten (10%) percent of the value of **Work** certified for payment in each partial payment voucher. The percentage to be retained is set forth in Schedule A of the General Conditions.

ARTICLE 22. INSURANCE

22.1 Types of Insurance: The **Contractor** shall procure and maintain the following types of insurance if, and as indicated, in Schedule A of the General Conditions (with the minimum limits and special conditions specified in Schedule A). Such insurance shall be maintained from the date the **Contractor** is required to provide Proof of Insurance pursuant to Article 22.3.1 through the date of completion of all required **Work** (including punch list work as certified in writing by the **Resident Engineer**), except for insurance required pursuant to Article 22.1.4, which may terminate upon **Substantial Completion** of the **Contract**. All insurance shall meet the requirements set forth in this Article 22. Wherever this Article requires that insurance coverage be "at least as broad" as a specified form (including all ISO forms), there is no obligation that the form itself be used, provided that the **Contractor** can demonstrate that the alternative form or endorsement contained in its policy provides coverage at least as broad as the specified form.

22.1.1 Commercial General Liability Insurance: The **Contractor** shall provide Commercial General Liability Insurance covering claims for property damage and/or bodily injury, including death, which may arise from any of the operations under this **Contract**. Coverage under this insurance shall be at least as broad as that provided by the latest edition of Insurance Services Office ("ISO") Form CG 0001. Such insurance shall be "occurrence" based rather than "claims-made" and include, without limitation, the following types of coverage: premises operations; products and completed operations; contractual liability (including the tort liability of another assumed in a contract); broad form property damage; independent contractors; explosion, collapse and underground (XCU); construction means and methods; and incidental malpractice. Such insurance shall contain a "per project" aggregate limit, as specified in Schedule A, that applies separately to operations under this **Contract**.

22.1.1(a) Such Commercial General Liability Insurance shall name the City as an Additional Insured. Coverage for the City shall specifically include the City's officials and employees, be at least as broad as the latest edition of ISO Form CG 20 10 and provide completed operations coverage at least as broad as the latest edition of ISO Form CG 20 37.

22.1.1(b) Such Commercial General Liability Insurance shall name all other entities designated as additional insureds in Schedule A but only for claims arising from the Contractor's operations under this Contract, with coverage at least as broad as the latest edition of ISO Form CG 20 26.

22.1.1(c) If the Work requires a permit from the Department of Buildings pursuant to 1 RCNY Section 101-08, at http://www.nyc.gov/html/dob/downloads/rules/1_RCNY_101-08.pdf, the Contractor shall provide Commercial General Liability Insurance with limits of at least those required by 1 RCNY section 101-08. If the Work does not require such a permit, the minimum limits shall be those provided for in Schedule A.

22.1.1(d) If any of the Work includes repair of a waterborne vessel owned by or to be delivered to the City, such Commercial General Liability shall include, or be endorsed to include, Ship Repairer's Legal Liability Coverage to protect against, without limitation, liability arising from navigation of such vessels prior to delivery to and acceptance by the City.

22.1.2 Workers' Compensation Insurance, Employers' Liability Insurance, and Disability Benefits Insurance: The Contractor shall provide, and shall cause its Subcontractors to provide, Workers Compensation Insurance, Employers' Liability Insurance, and Disability Benefits Insurance in accordance with the Laws of the State of New York on behalf of all employees providing services under this Contract (except for those employees, if any, for which the Laws require insurance only pursuant to Article 22.1.3).

22.1.3 United States Longshoremen's and Harbor Workers Act and/or Jones Act Insurance: If specified in Schedule A of the General Conditions or if required by Law, the Contractor shall provide insurance in accordance with the United States Longshoremen's and Harbor Workers Act and/or the Jones Act, on behalf of all qualifying employees providing services under this Contract.

22.1.4 Builders Risk Insurance: If specified in Schedule A of the General Conditions, the Contractor shall provide Builders Risk Insurance on a completed value form for the total value of the Work through Substantial Completion of the Work in its entirety. Such insurance shall be provided on an All Risk basis and include coverage, without limitation, for windstorm (including named windstorm), storm surge, flood and earth movement. Unless waived by the Commissioner, it shall include coverage for ordinance and law, demolition and increased costs of construction, debris removal, pollutant clean up and removal, and expediting costs. Such insurance shall cover, without limitation, (a) all buildings and/or structures involved in the Work, as well as temporary structures at the Site, and (b) any property that is intended to become a permanent part of such building or structure, whether such property is on the Site, in transit or in temporary storage. Policies shall name the Contractor as Named Insured and list the City as both an Additional Insured and a Loss Payee as its interest may appear.

22.1.4(a) Policies of such insurance shall specify that, in the event a loss occurs at an occupied facility, occupancy of such facility is permitted without the consent of the issuing insurance company.

22.1.4(b) Such insurance may be provided through an Installation Floater, at the **Contractor's** option, if it otherwise conforms with the requirements of this Article 22.1.4.

22.1.5 Commercial Automobile Liability Insurance: The **Contractor** shall provide Commercial Automobile Liability Insurance for liability arising out of ownership, maintenance or use of any owned (if any), non-owned and hired vehicles to be used in connection with this **Contract**. Coverage shall be at least as broad as the latest edition of ISO Form CA0001. If vehicles are used for transporting hazardous materials, the Automobile Liability Insurance shall be endorsed to provide pollution liability broadened coverage for covered vehicles (endorsement CA 99 48) as well as proof of MCS 90.

22.1.6 Contractors Pollution Liability Insurance: If specified in Schedule A of the General Conditions, the **Contractor** shall maintain, or cause the **Subcontractor** doing such **Work** to maintain, Contractors Pollution Liability Insurance covering bodily injury and property damage. Such insurance shall provide coverage for actual, alleged or threatened emission, discharge, dispersal, seepage, release or escape of pollutants (including asbestos), including any loss, cost or expense incurred as a result of any cleanup of pollutants (including asbestos) or in the investigation, settlement or defense of any claim, action, or proceedings arising from the operations under this **Contract**. Such insurance shall be in the **Contractor's** name and list the **City** as an Additional Insured and any other entity specified in Schedule A. Coverage shall include, without limitation, (a) loss of use of damaged property or of property that has not been physically injured, (b) transportation, and (c) non-owned disposal sites.

22.1.6(a) Coverage for the **City** as Additional Insured shall specifically include the **City's** officials and employees and be at least as broad as provided to the **Contractor** for this **Project**.

22.1.6(b) If such insurance is written on a claims-made policy, such policy shall have a retroactive date on or before the effective date of this **Contract**, and continuous coverage shall be maintained, or an extended discovery period exercised, for a period of not less than three (3) years from the time the **Work** under this **Contract** is completed.

22.1.7 Marine Insurance:

22.1.7(a) Marine Protection and Indemnity Insurance: If specified in Schedule A of the General Conditions or if the **Contractor** engages in marine operations in the execution of any part of the **Work**, the **Contractor** shall maintain, or cause the **Subcontractor** doing such **Work** to maintain, Marine Protection and Indemnity Insurance with coverage at least as broad as Form SP-23. The insurance shall provide coverage for the **Contractor** or **Subcontractor** (whichever is doing this **Work**) and for the **City** (together with its officials and employees) and any other entity specified in Schedule A as an Additional Insured for bodily injury and property damage arising from marine operations under this **Contract**. Coverage shall include, without limitation, injury or death of crew members (if not fully provided through other insurance), removal of wreck, damage to piers, wharves and other fixed or floating objects and loss of or damage to any other vessel or craft, or to property on such other vessel or craft.

22.1.7(b) Hull and Machinery Insurance: If specified in Schedule A of the General Conditions or if the **Contractor** engages in marine operations in the execution of any part of the **Work**, the **Contractor** shall maintain, or cause the **Subcontractor** doing such **Work** to maintain, Hull and Machinery Insurance with coverage for the **Contractor** or **Subcontractor** (whichever is doing this **Work**) and for the **City** (together with its officials and employees) as Additional Insured at least as broad as the latest edition of American Institute Tug Form for all tugs used under this **Contract** and Collision Liability at least as broad as the latest edition of American Institute Hull Clauses.

22.1.7(c) Marine Pollution Liability Insurance: If specified in Schedule A of the General Conditions or if the **Contractor** engages in marine operations in the execution of any part of the **Work**, the **Contractor** shall maintain, or cause the **Subcontractor** doing such **Work** to maintain, Marine Pollution Liability Insurance covering itself (or the **Subcontractor** doing such **Work**) as Named Insured and the **City** (together with its officials and employees) and any other entity specified in Schedule A as an Additional Insured. Coverage shall be at least as broad as that provided by the latest edition of Water Quality Insurance Syndicate Form and include, without limitation, liability arising from the discharge or substantial threat of a discharge of oil, or from the release or threatened release of a hazardous substance including injury to, or economic losses resulting from, the destruction of or damage to real property, personal property or natural resources.

22.1.8 The **Contractor** shall provide such other types of insurance, at such minimum limits and with such conditions, as are specified in Schedule A of the General Conditions.

22.2 General Requirements for Insurance Coverage and Policies:

22.2.1 All required insurance policies shall be maintained with companies that may lawfully issue the required policy and have an A.M. Best rating of at least A-/VII or a Standard and Poor's rating of at least A, unless prior written approval is obtained from the **City** Corporation Counsel.

22.2.2 The **Contractor** shall be solely responsible for the payment of all premiums for all required policies and all deductibles and self-insured retentions to which such policies are subject, whether or not the **City** is an insured under the policy.

22.2.3 In his/her sole discretion, the **Commissioner** may, subject to the approval of the **Comptroller** and the **City** Corporation Counsel, accept Letters of Credit and/or custodial accounts in lieu of required insurance.

22.2.4 The **City's** limits of coverage for all types of insurance required pursuant to Schedule A of the General Conditions shall be the greater of (i) the minimum limits set forth in Schedule A or (ii) the limits provided to the **Contractor** as Named Insured under all primary, excess, and umbrella policies of that type of coverage.

22.2.5 The **Contractor** may satisfy its insurance obligations under this Article 22 through primary policies or a combination of primary and excess/umbrella policies, so long as all policies provide the scope of coverage required herein.

22.2.6 Policies of insurance provided pursuant to this Article 22 shall be primary and non-contributing to any insurance or self-insurance maintained by the **City**.

22.3 Proof of Insurance:

22.3.1 For all types of insurance required by Article 22.1 and Schedule A, except for insurance required by Articles 22.1.4 and 22.1.7, the **Contractor** shall file proof of insurance in accordance with this Article 22.3 within ten (10) **Days** of award. For insurance provided pursuant to Articles 22.1.4 and 22.1.7, proof shall be filed by a date specified by the **Commissioner** or ten (10) **Days** prior to the commencement of the portion of the **Work** covered by such policy, whichever is earlier.

22.3.2 For Workers' Compensation Insurance provided pursuant to Article 22.1.2, the **Contractor** shall submit one of the following forms: C-105.2 Certificate of Workers' Compensation Insurance; U-26.3 - State Insurance Fund Certificate of Workers' Compensation Insurance; Request for WC/DB Exemption (Form CE-200); equivalent or successor forms used by the New York State Workers' Compensation Board; or other proof of insurance in a form acceptable to the **Commissioner**. For Disability Benefits Insurance provided pursuant to Article 22.1.2, the Contractor shall submit DB-120.1 - Certificate Of Insurance Coverage Under The NYS Disability Benefits Law, Request for WC/DB Exemption (Form CE-200); equivalent or successor forms used by the New York State Workers' Compensation Board; or other proof of insurance in a form acceptable to the **Commissioner**. ACORD forms are not acceptable.

22.3.3 For policies provided pursuant to all of Article 22.1 other than Article 22.1.2, the **Contractor** shall submit one or more Certificates of Insurance on forms acceptable to the **Commissioner**. All such Certificates of Insurance shall certify (a) the issuance and effectiveness of such policies of insurance, each with the specified minimum limits (b) for insurance secured pursuant to Article 22.1.1 that the **City** and any other entity specified in Schedule A is an Additional Insured with coverage at least as broad as the most recent edition of ISO Forms CG 20 10, CG 20 37, and CG 20 26, as applicable; (c) in the event insurance is required pursuant to Article 22.1.6 and/or Article 22.1.7, that the **City** is an Additional Insured thereunder; (d) the company code issued to the insurance company by the National Association of Insurance Commissioners (the NAIC number); and (e) the number assigned to the **Contract** by the **City**. All such Certificates of Insurance shall be accompanied by either a duly executed "Certification by Broker" in the form contained in Part III of Schedule A or copies of all policies referenced in such Certificate of Insurance as certified by an authorized representative of the issuing insurance carrier. If any policy is not available at the time of submission, certified binders may be submitted until such time as the policy is available, at which time a certified copy of the policy shall be submitted.

22.3.4 Documentation confirming renewals of insurance shall be submitted to the **Commissioner** prior to the expiration date of coverage of policies required under this **Contract**. Such proofs of insurance shall comply with the requirements of Articles 22.3.2 and 22.3.3.

22.3.5 The **Contractor** shall be obligated to provide the **City** with a copy of any policy of insurance provided pursuant to this Article 22 upon the demand for such policy by the **Commissioner** or the **City** Corporation Counsel.

22.4 Operations of the Contractor:

22.4.1 The **Contractor** shall not commence the **Work** unless and until all required certificates have been submitted to and accepted by the **Commissioner**. Acceptance by the **Commissioner** of a certificate does not excuse the **Contractor** from securing insurance

consistent with all provisions of this Article 22 or of any liability arising from its failure to do so.

22.4.2 The **Contractor** shall be responsible for providing continuous insurance coverage in the manner, form, and limits required by this **Contract** and shall be authorized to perform **Work** only during the effective period of all required coverage.

22.4.3 In the event that any of the required insurance policies lapse, are revoked, suspended or otherwise terminated, for whatever cause, the **Contractor** shall immediately stop all **Work**, and shall not recommence **Work** until authorized in writing to do so by the **Commissioner**. Upon quitting the **Site**, except as otherwise directed by the **Commissioner**, the **Contractor** shall leave all plant, materials, equipment, tools, and supplies on the **Site**. **Contract** time shall continue to run during such periods and no extensions of time will be granted. The **Commissioner** may also declare the **Contractor** in default for failure to maintain required insurance.

22.4.4 In the event the **Contractor** receives notice, from an insurance company or other person, that any insurance policy required under this Article 22 shall be cancelled or terminated (or has been cancelled or terminated) for any reason, the **Contractor** shall immediately forward a copy of such notice to both the **Commissioner** and the New York City Comptroller, attn: Office of Contract Administration, Municipal Building, One Centre Street, room 1005, New York, New York 10007. Notwithstanding the foregoing, the **Contractor** shall ensure that there is no interruption in any of the insurance coverage required under this Article 22.

22.4.5 Where notice of loss, damage, occurrence, accident, claim or suit is required under an insurance policy maintained in accordance with this Article 22, the **Contractor** shall notify in writing all insurance carriers that issued potentially responsive policies of any such event relating to any operations under this **Contract** (including notice to Commercial General Liability insurance carriers for events relating to the **Contractor's** own employees) no later than 20 days after such event. For any policy where the **City** is an Additional Insured, such notice shall expressly specify that "this notice is being given on behalf of the City of New York as Insured as well as the Named Insured." Such notice shall also contain the following information: the number of the insurance policy, the name of the named insured, the date and location of the damage, occurrence, or accident, and the identity of the persons or things injured, damaged or lost. The **Contractor** shall simultaneously send a copy of such notice to the City of New York c/o Insurance Claims Specialist, Affirmative Litigation Division, New York City Law Department, 100 Church Street, New York, New York 10007.

22.4.6 In the event of any loss, accident, claim, action, or other event that does or can give rise to a claim under any insurance policy required under this Article 22, the **Contractor** shall at all times fully cooperate with the **City** with regard to such potential or actual claim.

22.5 **Subcontractor Insurance:** In the event the **Contractor** requires any **Subcontractor** to procure insurance with regard to any operations under this **Contract** and requires such **Subcontractor** to name the **Contractor** as an **Additional Insured** thereunder, the **Contractor** shall ensure that the **Subcontractor** name the **City**, including its officials and employees, as an **Additional Insured** with coverage at least as broad as the most recent edition of ISO Form CG 20 26.

22.6 Wherever reference is made in Article 7 or this Article 22 to documents to be sent to the **Commissioner** (e.g., notices, filings, or submissions), such documents shall be sent to the address set forth in Schedule A of the General Conditions. In the event no address is set forth in Schedule A, such documents are to be sent to the **Commissioner's** address as provided elsewhere in this **Contract**.

22.7 Apart from damages or losses covered by insurance provided pursuant to Articles 22.1.2, 22.1.3, or 22.1.5, the **Contractor** waives all rights against the **City**, including its officials and employees, for any damages or losses that are covered under any insurance required under this Article 22 (whether or not such insurance is actually procured or claims are paid thereunder) or any other insurance applicable to the operations of the **Contractor** and/or its employees, agents, or **Subcontractors**.

22.8 In the event the **Contractor** utilizes a self-insurance program to satisfy any of the requirements of this Article 22, the **Contractor** shall ensure that any such self-insurance program provides the **City** with all rights that would be provided by traditional insurance under this Article 22, including but not limited to the defense and indemnification obligations that insurers are required to undertake in liability policies.

22.9 Materiality/Non-Waiver: The **Contractor's** failure to secure policies in complete conformity with this Article 22, or to give an insurance company timely notice of any sort required in this **Contract** or to do anything else required by this Article 22 shall constitute a material breach of this **Contract**. Such breach shall not be waived or otherwise excused by any action or inaction by the **City** at any time.

22.10 Pursuant to General Municipal Law Section 108, this **Contract** shall be void and of no effect unless **Contractor** maintains Workers' Compensation Insurance for the term of this **Contract** to the extent required and in compliance with the New York State Workers' Compensation Law.

22.11 Other Remedies: Insurance coverage provided pursuant to this Article 22 or otherwise shall not relieve the **Contractor** of any liability under this **Contract**, nor shall it preclude the **City** from exercising any rights or taking such other actions available to it under any other provisions of this **Contract** or **Law**.

ARTICLE 23. MONEY RETAINED AGAINST CLAIMS

23.1 If any claim shall be made by any person or entity (including **Other Contractors** with the **City** on this **Project**) against the **City** or against the **Contractor** and the **City** for any of the following:

- (a) An alleged loss, damage, injury, theft or vandalism of any of the kinds referred to in Articles 7 and 12, plus the reasonable costs of defending the **City**, which in the opinion of the **Comptroller** may not be paid by an insurance company (for any reason whatsoever); or
- (b) An infringement of copyrights, patents or use of patented articles, tools, etc., as referred to in Article 57; or
- (c) Damage claimed to have been caused directly or indirectly by the failure of the **Contractor** to perform the **Work** in strict accordance with this **Contract**,

the amount of such claim, or so much thereof as the **Comptroller** may deem necessary, may be withheld by the **Comptroller**, as security against such claim, from any money due hereunder. The **Comptroller**, in his/her discretion, may permit the **Contractor** to substitute other satisfactory security in lieu of the monies so withheld.

23.2 If an action on such claim is timely commenced and the liability of the **City**, or the **Contractor**, or both, shall have been established therein by a final judgment of a court of competent jurisdiction, or if such claim shall have been admitted by the **Contractor** to be valid, the **Comptroller**

shall pay such judgment or admitted claim out of the monies retained by the **Comptroller** under the provisions of this Article 23, and return the balance, if any, without interest, to the **Contractor**.

ARTICLE 24. MAINTENANCE AND GUARANTY

24.1 The **Contractor** shall promptly repair, replace, restore or rebuild, as the **Commissioner** may determine, any finished **Work** in which defects of materials or workmanship may appear or to which damage may occur because of such defects, during the one (1) year period subsequent to the date of **Substantial Completion** (or use and occupancy in accordance with Article 16), except where other periods of maintenance and guaranty are provided for in Schedule A.

24.2 As security for the faithful performance of its obligations hereunder, the **Contractor**, upon filing its requisition for payment on **Substantial Completion**, shall deposit with the **Commissioner** a sum equal to one (1%) percent of the price (or the amount fixed in Schedule A of the General Conditions) in cash or certified check upon a state or national bank and trust company or a check of such bank and trust company signed by a duly authorized officer thereof and drawn to the order of the **Comptroller**, or obligations of the **City**, which the **Comptroller** may approve as of equal value with the sum so required.

24.3 In lieu of the above, the **Contractor** may make such security payment to the **City** by authorizing the **Commissioner** in writing to deduct the amount from the **Substantial Completion** payment which shall be deemed the deposit required above.

24.4 If the **Contractor** has faithfully performed all of its obligations hereunder the **Commissioner** shall so certify to the **Comptroller** within five (5) **Days** after the expiration of one (1) year from the date of **Substantial Completion** and acceptance of the **Work** or within thirty (30) **Days** after the expiration of the guarantee period fixed in the **Specifications**. The security payment shall be repaid to the **Contractor** without interest within thirty (30) **Days** after certification by the **Commissioner** to the **Comptroller** that the **Contractor** has faithfully performed all of its obligations hereunder.

24.5 Notice by the **Commissioner** to the **Contractor** to repair, replace, rebuild or restore such defective or damaged **Work** shall be timely, pursuant to this article, if given not later than ten (10) **Days** subsequent to the expiration of the one (1) year period or other periods provided for herein.

24.6 If the **Contractor** shall fail to repair, replace, rebuild or restore such defective or damaged **Work** promptly after receiving such notice, the **Commissioner** shall have the right to have the **Work** done by others in the same manner as provided for in the completion of a defaulted **Contract**, under Article 51.

24.7 If the security payment so deposited is insufficient to cover the cost of such **Work**, the **Contractor** shall be liable to pay such deficiency on demand by the **Commissioner**.

24.8 The **Engineer's** certificate setting forth the fair and reasonable cost of repairing, replacing, rebuilding or restoring any damaged or defective **Work** when performed by one other than the **Contractor**, shall be binding and conclusive upon the **Contractor** as to the amount thereof.

24.9 The **Contractor** shall obtain all manufacturers' warranties and guaranties of all equipment and materials required by this **Contract** in the name of the **City** and shall deliver same to the **Commissioner**. All of the **City's** rights and title and interest in and to said manufacturers' warranties and guaranties may be assigned by the **City** to any subsequent purchasers of such equipment and materials or lessees of the premises into which the equipment and materials have been installed.

CHAPTER VI
CHANGES, EXTRA WORK, AND DOCUMENTATION OF CLAIM

ARTICLE 25. CHANGES

25.1 Changes may be made to this **Contract** only as duly authorized in writing by the **Commissioner** in accordance with the **Law** and this **Contract**. All such changes, modifications, and amendments will become a part of the **Contract**. **Work** so ordered shall be performed by the **Contractor**.

25.2 **Contract** changes will be made only for **Work** necessary to complete the **Work** included in the original scope of the **Contract** and/or for non-material changes to the scope of the **Contract**. Changes are not permitted for any material alteration in the scope of **Work** in the **Contract**.

25.3 The **Contractor** shall be entitled to a price adjustment for **Extra Work** performed pursuant to a written change order. Adjustments to price shall be computed in one or more of the following ways:

25.3.1 By applicable unit prices specified in the **Contract**; and/or

25.3.2 By agreement of a fixed price; and/or

25.3.3 By time and material records; and/or

25.3.4 In any other manner approved by the **CCPO**.

25.4 All payments for change orders are subject to pre-audit by the **Engineering Audit Officer** and may be post-audited by the **Comptroller** and/or the **Agency**.

ARTICLE 26. METHODS OF PAYMENT FOR OVERRUNS AND EXTRA WORK

26.1 **Overrun of Unit Price Item:** An overrun is any quantity of a unit price item which the **Contractor** is directed to provide which is in excess of one hundred twenty-five (125%) percent of the estimated quantity for that item set forth in the bid schedule.

26.1.1 For any unit price item, the **Contractor** will be paid at the unit price bid for any quantity up to one hundred twenty-five (125%) percent of the estimated quantity for that item set forth in the bid schedule. If during the progress of the **Work**, the actual quantity of any unit price item required to complete the **Work** approaches the estimated quantity for that item, and for any reason it appears that the actual quantity of any unit price item necessary to complete the **Work** will exceed the estimated quantity for that item by twenty-five (25%) percent, the **Contractor** shall immediately notify the **Engineer** of such anticipated overrun. The **Contractor** shall not be compensated for any quantity of a unit price item provided which is in excess of one hundred twenty-five (125%) percent of the estimated quantity for that item set forth in the bid schedule without written authorization from the **Engineer**.

26.1.2 If the actual quantity of any unit price item necessary to complete the **Work** will exceed one hundred twenty five (125%) percent of the estimated quantity for that item set forth in the bid schedule, the **City** reserves the right and the **Contractor** agrees to negotiate a new unit price for such item. In no event shall such negotiated new unit price exceed the unit bid price. If the **City** and **Contractor** cannot agree on a new unit price, then the **City** shall order the **Contractor** and the **Contractor** agrees to provide additional quantities of the

item on the basis of time and material records for the actual and reasonable cost as determined under Article 26.2, but in no event at a unit price exceeding the unit price bid.

26.2 Extra Work: For **Extra Work** where payment is by agreement on a fixed price in accordance with Article 25.3.2, the price to be paid for such **Extra Work** shall be based on the fair and reasonable estimated cost of the items set forth below. For **Extra Work** where payment is based on time and material records in accordance with Article 25.3.3, the price to be paid for such **Extra Work** shall be the actual and reasonable cost of the items set forth below, calculated in accordance with the formula specified therein, if any.

- 26.2.1 Necessary materials (including transportation to the Site); plus
- 26.2.2 Necessary direct labor, including payroll taxes (subject to statutory wage caps) and supplemental benefits; plus
- 26.2.3 Sales and personal property taxes, if any, required to be paid on materials not incorporated into such **Extra Work**; plus
- 26.2.4 Reasonable rental value of **Contractor-owned** (or **Subcontractor-owned**, as applicable), necessary plant and equipment other than **Small Tools**, plus fuel/energy costs. Except for fuel costs for pick-up trucks which shall be reimbursed based on a consumption of five (5) gallons per shift, fuel costs shall be reimbursed based on actual costs or, in the absence of auditable documentation, the following fuel consumption formula per operating hour: $(.035) \times (\text{HP rating}) \times (\text{Fuel cost/gallon})$. Reasonable rental value is defined as the lower of either seventy-five percent of the monthly prorated rental rates established in "The AED Green Book, Rental Rates and Specifications for Construction Equipment" published by Equipment Watch (the "Green Book"), or seventy-five percent of the monthly prorated rental rates established in the "Rental Rate Blue Book for Construction Equipment" published by Equipment Watch (the "Blue Book") (the applicable Blue Book rate being for rental only without the addition of any operational costs listed in the Blue Book). The reasonable rental value is deemed to be inclusive of all operating costs except for fuel/energy consumption and equipment operator's wages/costs. For multiple shift utilization, reimbursement shall be calculated as follows: first shift shall be seventy-five (75%) percent of such rental rates; second shift shall be sixty (60%) percent of the first shift rate; and third shift shall be forty (40%) percent of the first shift rate. Equipment on standby shall be reimbursed at one-third (1/3) the prorated monthly rental rate. **Contractor-owned** (or **Subcontractor-owned**, as applicable) equipment includes equipment from rental companies affiliated with or controlled by the **Contractor** (or **Subcontractor**, as applicable), as determined by the **Commissioner**. In establishing cost reimbursement for non-operating **Contractor-owned** (or **Subcontractor-owned**, as applicable) equipment (scaffolding, sheeting systems, road plates, etc.), the **City** may restrict reimbursement to a purchase-salvage/life cycle basis if less than the computed rental costs; plus
- 26.2.5 Necessary installation and dismantling of such plant and equipment, including transportation to and from the **Site**, if any, provided that, in the case of non-**Contractor-owned** (or non-**Subcontractor-owned**, as applicable) equipment rented from a third party, the cost of installation and dismantling are not allowable if such costs are included in the rental rate; plus
- 26.2.6 Necessary fees charged by governmental entities; plus

26.2.7 Necessary construction-related service fees charged by non-governmental entities, such as landfill tipping fees; plus

26.2.8 Reasonable rental costs of non-Contractor-owned (or non-Subcontractor-owned, as applicable) necessary plant and equipment other than **Small Tools**, plus fuel/energy costs. Except for fuel costs for pick-up trucks which shall be reimbursed based on a consumption of five (5) gallons per shift, fuel costs shall be reimbursed based on actual costs or, in the absence of auditable documentation, the following fuel consumption formula per hour of operation: $(.035) \times (\text{HP rating}) \times (\text{Fuel cost/gallon})$. In lieu of renting, the **City** reserves the right to direct the purchase of non-operating equipment (scaffolding, sheeting systems, road plates, etc.), with payment on a purchase-salvage/life cycle basis, if less than the projected rental costs; plus

26.2.9 Workers' Compensation Insurance, and any insurance coverage expressly required by the **City** for the performance of the **Extra Work** which is different than the types of insurance required by Article 22 and Schedule A of the General Conditions. The cost of Workers' Compensation Insurance is subject to applicable payroll limitation caps and shall be based upon the carrier's Manual Rate for such insurance derived from the applicable class Loss Cost ("LC") and carrier's Lost Cost Multiplier ("LCM") approved by the New York State Department of Financial Services, and with the exception of experience rating, rate modifiers as promulgated by the New York Compensation Insurance Rating Board ("NYCIRB"); plus

26.2.10 Additional costs incurred as a result of the **Extra Work** for performance and payment bonds; plus

26.2.11 Twelve percent (12%) percent of the total of items in Articles 26.2.1 through 26.2.5 as compensation for overhead, except that no percentage for overhead will be allowed on **Payroll Taxes** or on the premium portion of overtime pay or on sales and personal property taxes. Overhead shall include without limitation, all costs and expenses in connection with administration, management superintendence, small tools, and insurance required by Schedule A of the General Conditions other than Workers' Compensation Insurance; plus

26.2.12 Ten (10%) percent of the total of items in Articles 26.2.1 through 26.2.5, plus the items in Article 26.2.11, as compensation for profit, except that no percentage for profit will be allowed on **Payroll Taxes** or on the premium portion of overtime pay or on sales and personal property taxes; plus

26.2.13 Five (5%) percent of the total of items in Articles 26.2.6 through 26.2.10 as compensation for overhead and profit.

26.3 Where the **Extra Work** is performed in whole or in part by other than the **Contractor's** own forces pursuant to Article 26.2, the **Contractor** shall be paid, subject to pre-audit by the **Engineering Audit Officer**, the cost of such **Work** computed in accordance with Article 26.2 above, plus an additional allowance of five (5%) percent to cover the **Contractor's** overhead and profit.

26.4 Where a change is ordered, involving both **Extra Work** and omitted or reduced **Contract Work**, the **Contract** price shall be adjusted, subject to pre-audit by the **EAO**, in an amount based on the difference between the cost of such **Extra Work** and of the omitted or reduced **Work**.

26.5 Where the **Contractor** and the **Commissioner** can agree upon a fixed price for **Extra Work** in accordance with Article 25.3.2 or another method of payment for **Extra Work** in accordance with Article

25.3.4, or for **Extra Work** ordered in connection with omitted **Work**, such method, subject to pre-audit by the **EAO**, may, at the option of the **Commissioner**, be substituted for the cost plus a percentage method provided in Article 26.2; provided, however, that if the **Extra Work** is performed by a **Subcontractor**, the **Contractor** shall not be entitled to receive more than an additional allowance of five (5%) percent for overhead and profit over the cost of such **Subcontractor's Work** as computed in accordance with Article 26.2.

ARTICLE 27. RESOLUTION OF DISPUTES

27.1 All disputes between the **City** and the **Contractor** of the kind delineated in this Article 27.1 that arise under, or by virtue of, this **Contract** shall be finally resolved in accordance with the provisions of this Article 27 and the **PPB Rules**. This procedure for resolving all disputes of the kind delineated herein shall be the exclusive means of resolving any such disputes.

27.1.1 This Article 27 shall not apply to disputes concerning matters dealt with in other sections of the **PPB Rules**, or to disputes involving patents, copyrights, trademarks, or trade secrets (as interpreted by the courts of New York State) relating to proprietary rights in computer software.

27.1.2 This Article 27 shall apply only to disputes about the scope of **Work** delineated by the **Contract**, the interpretation of **Contract** documents, the amount to be paid for **Extra Work** or disputed work performed in connection with the **Contract**, the conformity of the **Contractor's Work** to the **Contract**, and the acceptability and quality of the **Contractor's Work**; such disputes arise when the **Engineer**, **Resident Engineer**, **Engineering Audit Officer**, or other designee of the **Commissioner** makes a determination with which the **Contractor** disagrees.

27.2 All determinations required by this Article 27 shall be made in writing clearly stated, with a reasoned explanation for the determination based on the information and evidence presented to the party making the determination. Failure to make such determination within the time required by this Article 27 shall be deemed a non-determination without prejudice that will allow application to the next level.

27.3 During such time as any dispute is being presented, heard, and considered pursuant to this Article 27, the **Contract** terms shall remain in force and the **Contractor** shall continue to perform **Work** as directed by the **ACCO** or the **Engineer**. Failure of the **Contractor** to continue **Work** as directed shall constitute a waiver by the **Contractor** of its claim.

27.4 Presentation of Disputes to **Commissioner**.

Notice of Dispute and Agency Response. The **Contractor** shall present its dispute in writing ("Notice of Dispute") to the **Commissioner** within thirty (30) Days of receiving written notice of the determination or action that is the subject of the dispute. This notice requirement shall not be read to replace any other notice requirements contained in the **Contract**. The Notice of Dispute shall include all the facts, evidence, documents, or other basis upon which the **Contractor** relies in support of its position, as well as a detailed computation demonstrating how any amount of money claimed by the **Contractor** in the dispute was arrived at. Within thirty (30) Days after receipt of the detailed written submission comprising the complete Notice of Dispute, the **Engineer**, **Resident Engineer**, **Engineering Audit Officer**, or other designee of the **Commissioner** shall submit to the **Commissioner** all materials he or she deems pertinent to the dispute. Following initial submissions to the **Commissioner**, either party may demand of the other the production of any document or other material the demanding party believes may be relevant to the dispute. The requested party shall produce all relevant materials that are not otherwise

protected by a legal privilege recognized by the courts of New York State. Any question of relevancy shall be determined by the **Commissioner** whose decision shall be final. Willful failure of the **Contractor** to produce any requested material whose relevancy the **Contractor** has not disputed, or whose relevancy has been affirmatively determined, shall constitute a waiver by the **Contractor** of its claim.

27.4.1 **Commissioner Inquiry.** The **Commissioner** shall examine the material and may, in his or her discretion, convene an informal conference with the **Contractor**, the **ACCO**, and the **Engineer, Resident Engineer, Engineering Audit Officer**, or other designee of the **Commissioner** to resolve the issue by mutual consent prior to reaching a determination. The **Commissioner** may seek such technical or other expertise as he or she shall deem appropriate, including the use of neutral mediators, and require any such additional material from either or both parties as he or she deems fit. The **Commissioner's** ability to render, and the effect of, a decision hereunder shall not be impaired by any negotiations in connection with the dispute presented, whether or not the **Commissioner** participated therein. The **Commissioner** may or, at the request of any party to the dispute, shall compel the participation of any **Other Contractor** with a contract related to the **Work** of this **Contract**, and that **Contractor** shall be bound by the decision of the **Commissioner**. Any **Other Contractor** thus brought into the dispute resolution proceeding shall have the same rights and obligations under this Article 27 as the **Contractor** initiating the dispute.

27.4.2 **Commissioner Determination.** Within thirty (30) **Days** after the receipt of all materials and information, or such longer time as may be agreed to by the parties, the **Commissioner** shall make his or her determination and shall deliver or send a copy of such determination to the **Contractor**, the **ACCO**, and **Engineer, Resident Engineer, Engineering Audit Officer**, or other designee of the **Commissioner**, as applicable, together with a statement concerning how the decision may be appealed.

27.4.3 **Finality of Commissioner's Decision.** The **Commissioner's** decision shall be final and binding on all parties, unless presented to the Contract Dispute Resolution Board pursuant to this Article 27. The **City** may not take a petition to the Contract Dispute Resolution Board. However, should the **Contractor** take such a petition, the **City** may seek, and the Contract Dispute Resolution Board may render, a determination less favorable to the **Contractor** and more favorable to the **City** than the decision of the **Commissioner**.

27.5 **Presentation of Dispute to the Comptroller.** Before any dispute may be brought by the **Contractor** to the Contract Dispute Resolution Board, the **Contractor** must first present its claim to the **Comptroller** for his or her review, investigation, and possible adjustment.

27.5.1 **Time, Form, and Content of Notice.** Within thirty (30) **Days** of its receipt of a decision by the **Commissioner**, the **Contractor** shall submit to the **Comptroller** and to the **Commissioner** a Notice of Claim regarding its dispute with the **Agency**. The Notice of Claim shall consist of (i) a brief written statement of the substance of the dispute, the amount of money, if any, claimed and the reason(s) the **Contractor** contends the dispute was wrongly decided by the **Commissioner**; (ii) a copy of the written decision of the **Commissioner**; and (iii) a copy of all materials submitted by the **Contractor** to the **Agency**, including the Notice of Dispute. The **Contractor** may not present to the **Comptroller** any material not presented to the **Commissioner**, except at the request of the **Comptroller**.

27.5.2 **Response.** Within thirty (30) **Days** of receipt of the Notice of Claim, the **Agency** shall make available to the **Comptroller** a copy of all material submitted by the **Agency** to the **Commissioner** in connection with the dispute. The **Agency** may not present to the

Comptroller any material not presented to the **Commissioner** except at the request of the **Comptroller**.

27.5.3 **Comptroller Investigation.** The **Comptroller** may investigate the claim in dispute and, in the course of such investigation, may exercise all powers provided in Sections 7-201 and 7-203 of the Administrative Code. In addition, the **Comptroller** may demand of either party, and such party shall provide, whatever additional material the **Comptroller** deems pertinent to the claim, including original business records of the **Contractor**. Willful failure of the **Contractor** to produce within fifteen (15) **Days** any material requested by the **Comptroller** shall constitute a waiver by the **Contractor** of its claim. The **Comptroller** may also schedule an informal conference to be attended by the **Contractor**, **Agency** representatives, and any other personnel desired by the **Comptroller**.

27.5.4 **Opportunity of Comptroller to Compromise or Adjust Claim.** The **Comptroller** shall have forty-five (45) **Days** from his or her receipt of all materials referred to in Article 27.5.3 to investigate the disputed claim. The period for investigation and compromise may be further extended by agreement between the **Contractor** and the **Comptroller**, to a maximum of ninety (90) **Days** from the **Comptroller's** receipt of all materials. The **Contractor** may not present its petition to the Contract Dispute Resolution Board until the period for investigation and compromise delineated in this Article 27.5.4 has expired. In compromising or adjusting any claim hereunder, the **Comptroller** may not revise or disregard the terms of the **Contract** between the parties.

27.6 **Contract Dispute Resolution Board.** There shall be a Contract Dispute Resolution Board composed of:

27.6.1 The chief administrative law judge of the Office of Administrative Trials and Hearings (OATH) or his/her designated OATH administrative law judge, who shall act as chairperson, and may adopt operational procedures and issue such orders consistent with this Article 27 as may be necessary in the execution of the Contract Dispute Resolution Board's functions, including, but not limited to, granting extensions of time to present or respond to submissions;

27.6.2 The **CCPO** or his/her designee; any designee shall have the requisite background to consider and resolve the merits of the dispute and shall not have participated personally and substantially in the particular matter that is the subject of the dispute or report to anyone who so participated; and

27.6.3 A person with appropriate expertise who is not an employee of the **City**. This person shall be selected by the presiding administrative law judge from a prequalified panel of individuals, established and administered by OATH with appropriate background to act as decision-makers in a dispute. Such individual may not have a contract or dispute with the **City** or be an officer or employee of any company or organization that does, or regularly represents persons, companies, or organizations having disputes with the **City**.

27.7 **Petition to the Contract Dispute Resolution Board.** In the event the claim has not been settled or adjusted by the **Comptroller** within the period provided in this Article 27, the **Contractor**, within thirty (30) **Days** thereafter, may petition the Contract Dispute Resolution Board to review the **Commissioner's** determination.

27.7.1 **Form and Content of Petition by Contractor.** The **Contractor** shall present its dispute to the Contract Dispute Resolution Board in the form of a petition, which shall

include (i) a brief written statement of the substance of the dispute, the amount of money, if any, claimed, and the reason(s) the **Contractor** contends the dispute was wrongly decided by the **Commissioner**; (ii) a copy of the written Decision of the **Commissioner**, (iii) copies of all materials submitted by the **Contractor** to the Agency; (iv) a copy of the written decision of the **Comptroller**, if any, and (v) copies of all correspondence with, or written material submitted by the **Contractor**, to the **Comptroller**. The **Contractor** shall concurrently submit four (4) complete sets of the Petition: one set to the City Corporation Counsel (Attn: Commercial and Real Estate Litigation Division) and three (3) sets to the Contract Dispute Resolution Board at OATH's offices with proof of service on the City Corporation Counsel. In addition, the **Contractor** shall submit a copy of the written statement of the substance of the dispute, cited in (i) above, to both the **Commissioner** and the **Comptroller**.

27.7.2 **Agency Response.** Within thirty (30) **Days** of its receipt of the Petition by the City Corporation Counsel, the **Agency** shall respond to the brief written statement of the **Contractor** and make available to the Contract Dispute Resolution Board all material it submitted to the **Commissioner** and **Comptroller**. Three (3) complete copies of the **Agency** response shall be provided to the Contract Dispute Resolution Board and one to the **Contractor**. Extensions of time for submittal of the **Agency** response shall be given as necessary upon a showing of good cause or, upon consent of the parties, for an initial period of up to thirty (30) **Days**.

27.7.3 **Further Proceedings.** The Contract Dispute Resolution Board shall permit the **Contractor** to present its case by submission of memoranda, briefs, and oral argument. The Contract Dispute Resolution Board shall also permit the **Agency** to present its case in response to the **Contractor** by submission of memoranda, briefs, and oral argument. If requested by the City Corporation Counsel, the **Comptroller** shall provide reasonable assistance in the preparation of the **Agency's** case. Neither the **Contractor** nor the **Agency** may support its case with any documentation or other material that was not considered by the **Comptroller**, unless requested by the Contract Dispute Resolution Board. The Contract Dispute Resolution Board, in its discretion, may seek such technical or other expert advice as it shall deem appropriate and may seek, on its own or upon application of a party, any such additional material from any party as it deems fit. The Contract Dispute Resolution Board, in its discretion, may combine more than one dispute between the parties for concurrent resolution.

27.7.4 **Contract Dispute Resolution Board Determination.** Within forty-five (45) **Days** of the conclusion of all written submissions and oral arguments, the Contract Dispute Resolution Board shall render a written decision resolving the dispute. In an unusually complex case, the Contract Dispute Resolution Board may render its decision in a longer period, not to exceed ninety (90) **Days**, and shall so advise the parties at the commencement of this period. The Contract Dispute Resolution Board's decision must be consistent with the terms of the **Contract**. Decisions of the Contract Dispute Resolution Board shall only resolve matters before the Contract Dispute Resolution Board and shall not have precedential effect with respect to matters not before the Contract Dispute Resolution Board.

27.7.5 **Notification of Contract Dispute Resolution Board Decision.** The Contract Dispute Resolution Board shall send a copy of its decision to the **Contractor**, the **ACCO**, the Engineer, the **Comptroller**, the City Corporation Counsel, the **CCPO**, and the **PPB**. A decision in favor of the **Contractor** shall be subject to the prompt payment provisions of the **PPB** Rules. The Required Payment Date shall be thirty (30) **Days** after the date the parties are formally notified of the Contract Dispute Resolution Board's decision.

27.7.6 Finality of Contract Dispute Resolution Board Decision. The Contract Dispute Resolution

Board's decision shall be final and binding on all parties. Any party may seek review of the Contract Dispute Resolution Board's decision solely in the form of a challenge, filed within four (4) months of the date of the Contract Dispute Resolution Board's decision, in a court of competent jurisdiction of the State of New York, County of New York pursuant to Article 78 of the Civil Practice Law and Rules. Such review by the court shall be limited to the question of whether or not the Contract Dispute Resolution Board's decision was made in violation of lawful procedure, was affected by an error of Law, or was arbitrary and capricious or an abuse of discretion. No evidence or information shall be introduced or relied upon in such proceeding that was not presented to the Contract Dispute Resolution Board in accordance with this Article 27.

27.8 Any termination, cancellation, or alleged breach of the Contract prior to or during the pendency of any proceedings pursuant to this Article 27 shall not affect or impair the ability of the Commissioner or Contract Dispute Resolution Board to make a binding and final decision pursuant to this Article 27.

ARTICLE 28. RECORD KEEPING FOR EXTRA OR DISPUTED WORK OR WORK ON A TIME & MATERIALS BASIS

28.1 While the Contractor or any of its Subcontractors is performing Work on a time and material basis or Extra Work on a time and material basis ordered by the Commissioner under Article 25, or where the Contractor believes that it or any of its Subcontractors is performing Extra Work but a final determination by Agency has not been made, or the Contractor or any of its Subcontractors is performing disputed Work (whether on or off the Site), or complying with a determination or order under protest in accordance with Articles 11, 27, and 30, in each such case the Contractor shall furnish the Resident Engineer daily with three (3) copies of written statements signed by the Contractor's representative at the Site showing:

28.1.1 The name, trade, and number of each worker employed on such Work or engaged in complying with such determination or order, the number of hours employed, and the character of the Work each is doing; and

28.1.2 The nature and quantity of any materials, plant and equipment furnished or used in connection with the performance of such Work or compliance with such determination or order, and from whom purchased or rented.

28.2 A copy of such statement will be countersigned by the Resident Engineer, noting thereon any items not agreed to or questioned, and will be returned to the Contractor within two (2) Days after submission.

28.3 The Contractor and its Subcontractors, when required by the Commissioner, or the Comptroller, shall also produce for inspection, at the office of the Contractor or Subcontractor, any and all of its books, bid documents, financial statements, vouchers, records, daily job diaries and reports, and cancelled checks, and any other documents relating to showing the nature and quantity of the labor, materials, plant and equipment actually used in the performance of such Work, or in complying with such determination or order, and the amounts expended therefor, and shall permit the Commissioner and the Comptroller to make such extracts therefrom, or copies thereof, as they or either of them may desire.

28.4 In connection with the examination provided for herein, the Commissioner, upon demand therefor, will produce for inspection by the Contractor such records as the Agency may have with

respect to such **Extra Work** or disputed **Work** performed under protest pursuant to order of the **Commissioner**, except those records and reports which may have been prepared for the purpose of determining the accuracy and validity of the **Contractor's** claim.

28.5 Failure to comply strictly with these requirements shall constitute a waiver of any claim for extra compensation or damages on account of the performance of such **Work** or compliance with such determination or order.

ARTICLE 29. OMITTED WORK

29.1 If any **Contract Work** in a lump sum **Contract**, or if any part of a lump sum item in a unit price, lump sum, or percentage-bid **Contract** is omitted by the **Commissioner** pursuant to Article 33, the **Contract** price, subject to audit by the EAO, shall be reduced by a pro rata portion of the lump sum bid amount based upon the percent of **Work** omitted subject to Article 29.4. For the purpose of determining the pro rata portion of the lump sum bid amount, the bid breakdown submitted in accordance with Article 41 shall be considered, but shall not be the determining factor.

29.2 If the whole of a lump sum item or units of any other item is so omitted by the **Commissioner** in a unit price, lump sum, or percentage-bid **Contract**, then no payment will be made therefor except as provided in Article 29.4.

29.3 For units that have been ordered but are only partially completed, the unit price shall be reduced by a pro rata portion of the unit price bid based upon the percentage of **Work** omitted subject to Article 29.4.

29.4 In the event the **Contractor**, with respect to any omitted **Work**, has purchased any non-cancelable material and/or equipment that is not capable of use except in the performance of this **Contract** and has been specifically fabricated for the sole purpose of this **Contract**, but not yet incorporated into the **Work**, the **Contractor** shall be paid for such material and/or equipment in accordance with Article 64.2.1(b); provided, however, such payment is contingent upon the **Contractor's** delivery of such material and/or equipment in acceptable condition to a location designated by the **City**.

29.5 The **Contractor** agrees to make no claim for damages or for loss of overhead and profit with regard to any omitted **Work**.

ARTICLE 30. NOTICE AND DOCUMENTATION OF COSTS AND DAMAGES: PRODUCTION OF FINANCIAL RECORDS

30.1 If the **Contractor** shall claim to be sustaining damages by reason of any act or omission of the **City** or its agents, it shall submit to the **Commissioner** within forty-five (45) **Days** from the time such damages are first incurred, and every thirty (30) **Days** thereafter for as long as such damages are incurred, verified statements of the details and the amounts of such damages, together with documentary evidence of such damages. The **Contractor** may submit any of the above statements within such additional time as may be granted by the **Commissioner** in writing upon written request therefor. Failure of the **Commissioner** to respond in writing to a written request for additional time within thirty (30) **Days** shall be deemed a denial of the request. On failure of the **Contractor** to strictly comply with the foregoing provisions, such claims shall be deemed waived and no right to recover on such claims shall exist. Damages that the **Contractor** may claim in any action or dispute resolution procedure arising under or by reason of this **Contract** shall not be different from or in excess of the statements and documentation made pursuant to this Article 30.

30.2 In addition to the foregoing statements, the **Contractor** shall, upon notice from the **Commissioner**, produce for examination at the **Contractor's** office, by the **Engineer, Architect or Project Manager**, all of its books of account, bills, invoices, payrolls, subcontracts, time books, daily reports, bank deposit books, bank statements, check books, and cancelled checks, showing all of its acts and transactions in connection with or relating to or arising by reason of this **Contract**, and submit itself and persons in its employment, for examination under oath by any person designated by the **Commissioner** or **Comptroller** to investigate claims made or disputes against the **City** under this **Contract**. At such examination, a duly authorized representative of the **Contractor** may be present.

30.3 In addition to the statements required under Article 28 and this Article 30, the **Contractor** and/or its **Subcontractor** shall, within thirty (30) **Days** upon notice from the **Commissioner** or **Comptroller**, produce for examination at the **Contractor's** and/or **Subcontractor's** office, by a representative of either the **Commissioner** or **Comptroller**, all of its books of account, bid documents, financial statements, accountant workpapers, bills, invoices, payrolls, subcontracts, time books, daily reports, bank deposit books, bank statements, check books, and cancelled checks, showing all of its acts and transactions in connection with or relating to or arising by reason of this **Contract**. Further, the **Contractor** and/or its **Subcontractor** shall submit any person in its employment, for examination under oath by any person designated by the **Commissioner** or **Comptroller** to investigate claims made or disputes against the **City** under this **Contract**. At such examination, a duly authorized representative of the **Contractor** may be present.

30.4 Unless the information and examination required under Article 30.3 is provided by the **Contractor** and/or its **Subcontractor** upon thirty (30) **Days'** notice from the **Commissioner** or **Comptroller**, or upon the **Commissioner's** or **Comptroller's** written authorization to extend the time to comply, the **City** shall be released from all claims arising under, relating to or by reason of this **Contract**, except for sums certified by the **Commissioner** to be due under the provisions of this **Contract**. It is further stipulated and agreed that no person has the power to waive any of the foregoing provisions and that in any action or dispute resolution procedure against the **City** to recover any sum in excess of the sums certified by the **Commissioner** to be due under or by reason of this **Contract**, the **Contractor** must allege in its complaint and prove, at trial or during such dispute resolution procedure, compliance with the provisions of this Article 30.

30.5 In addition, after the commencement of any action or dispute resolution procedure by the **Contractor** arising under or by reason of this **Contract**, the **City** shall have the right to require the **Contractor** to produce for examination under oath, up until the trial of the action or hearing before the Contract Dispute Resolution Board, the books and documents described in Article 30.3 and submit itself and all persons in its employ for examination under oath. If this Article 30 is not complied with as required, then the **Contractor** hereby consents to the dismissal of the action or dispute resolution procedure.

CHAPTER VII
POWERS OF THE RESIDENT ENGINEER,
THE ENGINEER OR ARCHITECT AND THE COMMISSIONER

ARTICLE 31. THE RESIDENT ENGINEER

31.1 The **Resident Engineer** shall have the power to inspect, supervise, and control the performance of the **Work**, subject to review by the **Commissioner**. The **Resident Engineer** shall not, however, have the power to issue an **Extra Work** order, except as specifically designated in writing by the **Commissioner**.

ARTICLE 32. THE ENGINEER OR ARCHITECT OR PROJECT MANAGER

32.1 The **Engineer** or **Architect** or **Project Manager**, in addition to those matters elsewhere herein delegated to the **Engineer** and expressly made subject to his/her determination, direction or approval, shall have the power, subject to review by the **Commissioner**:

32.1.1 To determine the amount, quality, and location of the **Work** to be paid for hereunder; and

32.1.2 To determine all questions in relation to the **Work**, to interpret the **Contract Drawings, Specifications, and Addenda**, and to resolve all patent inconsistencies or ambiguities therein; and

32.1.3 To determine how the **Work** of this **Contract** shall be coordinated with **Work** of **Other Contractors** engaged simultaneously on this **Project**, including the power to suspend any part of the **Work**, but not the whole thereof; and

32.1.4 To make minor changes in the **Work** as he/she deems necessary, provided such changes do not result in a net change in the cost to the **City** or to the **Contractor** of the **Work** to be done under the **Contract**; and

32.1.5 To amplify the **Contract Drawings**, add explanatory information and furnish additional **Specifications** and drawings, consistent with this **Contract**.

32.2 The foregoing enumeration shall not imply any limitation upon the power of the **Engineer** or **Architect** or **Project Manager**, for it is the intent of this **Contract** that all of the **Work** shall generally be subject to his/her determination, direction, and approval, except where the determination, direction or approval of someone other than the **Engineer** or **Architect** or **Project Manager** is expressly called for herein.

32.3 The **Engineer** or **Architect** or **Project Manager** shall not, however, have the power to issue an **Extra Work** order, except as specifically designated in writing by the **Commissioner**.

ARTICLE 33. THE COMMISSIONER

33.1 The **Commissioner**, in addition to those matters elsewhere herein expressly made subject to his/her determination, direction or approval, shall have the power:

33.1.1 To review and make determinations on any and all questions in relation to this **Contract** and its performance; and

33.1.2 To modify or change this **Contract** so as to require the performance of **Extra Work** (subject, however, to the limitations specified in Article 25) or the omission of **Contract Work**; and

33.1.3 To suspend the whole or any part of the **Work** whenever in his/her judgment such suspension is required:

33.1.3(a) In the interest of the **City** generally; or

33.1.3(b) To coordinate the **Work** of the various contractors engaged on this **Project** pursuant to the provisions of Article 12; or

33.1.3(c) To expedite the completion of the entire **Project** even though the completion of this particular **Contract** may thereby be delayed.

ARTICLE 34. NO ESTOPPEL

34.1 Neither the **City** nor any **Agency**, official, agent or employee thereof, shall be bound, precluded or estopped by any determination, decision, approval, order, letter, payment or certificate made or given under or in connection with this **Contract** by the **City**, the **Commissioner**, the **Engineer**, the **Resident Engineer**, or any other official, agent or employee of the **City**, either before or after the final completion and acceptance of the **Work** and payment therefor:

34.1.1 From showing the true and correct classification, amount, quality or character of the **Work** actually done; or that any such determination, decision, order, letter, payment or certificate was untrue, incorrect or improperly made in any particular, or that the **Work**, or any part thereof, does not in fact conform to the requirements of this **Contract**; and

34.1.2 From demanding and recovering from the **Contractor** any overpayment made to it, or such damages as the **City** may sustain by reason of the **Contractor's** failure to perform each and every part of its **Contract**.

CHAPTER VIII LABOR PROVISIONS

ARTICLE 35. EMPLOYEES

35.1 The **Contractor** and its **Subcontractors** shall not employ on the **Work**:

35.1.1 Anyone who is not competent, faithful and skilled in the **Work** for which he/she shall be employed; and whenever the **Commissioner** shall inform the **Contractor**, in writing, that any employee is, in his/her opinion, incompetent, unfaithful or disobedient, that employee shall be discharged from the **Work** forthwith, and shall not again be employed upon it; or

35.1.2 Any labor, materials or means whose employment, or utilization during the course of this **Contract**, may tend to or in any way cause or result in strikes, work stoppages, delays, suspension of **Work** or similar troubles by workers employed by the **Contractor** or its **Subcontractors**, or by any of the trades working in or about the buildings and premises where **Work** is being performed under this **Contract**, or by **Other Contractors** or their **Subcontractors** pursuant to other contracts, or on any other building or premises owned or operated by the **City**, its **Agencies**, departments, boards or authorities. Any violation by the **Contractor** of this requirement may, upon certification of the **Commissioner**, be considered as proper and sufficient cause for declaring the **Contractor** to be in default, and for the **City** to take action against it as set forth in Chapter X of this **Contract**, or such other article of this **Contract** as the **Commissioner** may deem proper; or

35.1.3 In accordance with Section 220.3-e of the Labor Law of the State of New York (hereinafter "Labor Law"), the **Contractor** and its **Subcontractors** shall not employ on the **Work** any apprentice, unless he/she is a registered individual, under a bona fide program

registered with the New York State Department of Labor. The allowable ratio of apprentices to journey-level workers in any craft classification shall not be greater than the ratio permitted to the **Contractor** as to its work force on any job under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered as above, shall be paid the wage rate determined by the **Comptroller** of the **City** for the classification of **Work** actually performed. The **Contractor** or **Subcontractor** will be required to furnish written evidence of the registration of its program and apprentices as well as all the appropriate ratios and wage rates, for the area of the construction prior to using any apprentices on the **Contract Work**.

35.2 If the total cost of the **Work** under this **Contract** is at least two hundred fifty thousand (\$250,000) dollars, all laborers, workers, and mechanics employed in the performance of the **Contract** on the public work site, either by the **Contractor**, **Subcontractor** or other person doing or contracting to do the whole or a part of the **Work** contemplated by the **Contract**, shall be certified prior to performing any **Work** as having successfully completed a course in construction safety and health approved by the United States Department of Labor's Occupational Safety and Health Administration that is at least ten (10) hours in duration.

35.3 In accordance with Local Law Nos. 30-2012 and 33-2012, codified at sections 6-132 and 12-113 of the Administrative Code, respectively,

35.3.1 The **Contractor** shall not take an adverse personnel action with respect to an officer or employee in retaliation for such officer or employee making a report of information concerning conduct which such officer or employee knows or reasonably believes to involve corruption, criminal activity, conflict of interest, gross mismanagement or abuse of authority by any officer or employee relating to this **Contract** to (a) the Commissioner of the Department of Investigation, (b) a member of the New York City Council, the Public Advocate, or the **Comptroller**, or (c) the **CCPO**, **ACCO**, **Agency head**, or **Commissioner**.

35.3.2 If any of the **Contractor's** officers or employees believes that he or she has been the subject of an adverse personnel action in violation of Article 35.3.1, he or she shall be entitled to bring a cause of action against the **Contractor** to recover all relief necessary to make him or her whole. Such relief may include but is not limited to: (a) an injunction to restrain continued retaliation, (b) reinstatement to the position such employee would have had but for the retaliation or to an equivalent position, (c) reinstatement of full fringe benefits and seniority rights, (d) payment of two times back pay, plus interest, and (e) compensation for any special damages sustained as a result of the retaliation, including litigation costs and reasonable attorney's fees.

35.3.3 The **Contractor** shall post a notice provided by the **City** in a prominent and accessible place on any site where work pursuant to the **Contract** is performed that contains information about:

35.3.3(a) how its employees can report to the New York City Department of Investigation allegations of fraud, false claims, criminality or corruption arising out of or in connection with the **Contract**; and

35.3.3(b) the rights and remedies afforded to its employees under Administrative Code sections 7-805 (the New York City False Claims Act) and 12-113 (the Whistleblower Protection Expansion Act) for lawful acts taken in connection with the reporting of allegations of fraud, false claims, criminality or corruption in connection with the **Contract**.

35.3.4 For the purposes of this Article 35.3, "adverse personnel action" includes dismissal, demotion, suspension, disciplinary action, negative performance evaluation, any action resulting in loss of staff, office space, equipment or other benefit, failure to appoint, failure to promote, or any transfer or assignment or failure to transfer or assign against the wishes of the affected officer or employee.

35.3.5 This Article 35.3 is applicable to all of the Contractor's Subcontractors having subcontracts with a value in excess of \$100,000; accordingly, the Contractor shall include this rider in all subcontracts with a value a value in excess of \$100,000.

35.4 Article 35.3 is not applicable to this Contract if it is valued at \$100,000 or less. Articles 35.3.1, 35.3.2, 35.3.4, and 35.3.5 are not applicable to this Contract if it was solicited pursuant to a finding of an emergency.

ARTICLE 36. NO DISCRIMINATION

36.1 The Contractor specifically agrees, as required by Labor Law Section 220-e, as amended, that:

36.1.1 In the hiring of employees for the performance of Work under this Contract or any subcontract hereunder, neither the Contractor, Subcontractor, nor any person acting on behalf of such Contractor or Subcontractor, shall by reason of race, creed, color or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the Work to which the employment relates;

36.1.2 Neither the Contractor, Subcontractor, nor any person on its behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of Work under this Contract on account of race, creed, color or national origin;

36.1.3 There may be deducted from the amount payable to the Contractor by the City under this Contract a penalty of fifty (\$50.00) dollars for each person for each Day during which such person was discriminated against or intimidated in violation of the provisions of this Contract; and

36.1.4 This Contract may be cancelled or terminated by the City and all moneys due or to become due hereunder may be forfeited, for a second or any subsequent violation of the terms or conditions of this Article 36.

36.1.5 This Article 36 covers all construction, alteration and repair of any public building or public work occurring in the State of New York and the manufacture, sale, and distribution of materials, equipment, and supplies to the extent that such operations are performed within the State of New York pursuant to this Contract.

36.2 The Contractor specifically agrees, as required by Section 6-108 of the Administrative Code, as amended, that:

36.2.1 It shall be unlawful for any person engaged in the construction, alteration or repair of buildings or engaged in the construction or repair of streets or highways pursuant to a Contract with the City or engaged in the manufacture, sale or distribution of materials, equipment or supplies pursuant to a Contract with the City to refuse to employ or to refuse to continue in any employment any person on account of the race, color or creed of such person.

36.2.2 It shall be unlawful for any person or any servant, agent or employee of any person, described in Article 36.1.2, to ask, indicate or transmit, orally or in writing, directly or indirectly, the race, color or creed or religious affiliation of any person employed or seeking employment from such person, firm or corporation.

36.2.3 Breach of the foregoing provisions shall be deemed a violation of a material provision of this **Contract**.

36.2.4 Any person, or the employee, manager or owner of or officer of such firm or corporation who shall violate any of the provisions of this Article 36.2 shall, upon conviction thereof, be punished by a fine of not more than one hundred (\$100.00) dollars or by imprisonment for not more than thirty (30) **Days**, or both.

36.3 This **Contract** is subject to the requirements of Executive Order No. 50 (1980) ("E.O. 50"), as revised, and the rules and regulations promulgated thereunder. No contract will be awarded unless and until these requirements have been complied with in their entirety. By signing this **Contract**, the **Contractor** agrees that it:

36.3.1 Will not engage in any unlawful discrimination against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability, marital status or sexual orientation with respect to all employment decisions including, but not limited to, recruitment, hiring, upgrading, demotion, downgrading, transfer, training, rates of pay or other forms of compensation, layoff, termination, and all other terms and conditions of employment; and

36.3.2 Will not engage in any unlawful discrimination in the selection of **Subcontractors** on the basis of the owner's race, color, creed, national origin, sex, age, disability, marital status or sexual orientation; and

36.3.3 Will state in all solicitations or advertisements for employees placed by or on behalf of the **Contractor** that all qualified applicants will receive consideration for employment without unlawful discrimination based on race, creed, color, national origin, sex, age, citizens status, disability, marital status, sexual orientation, or that it is an equal employment opportunity employer; and

36.3.4 Will send to each labor organization or representative of workers with which it has a collective bargaining agreement or other contract or memorandum of understanding, written notification of its equal employment opportunity commitments under E.O. 50 and the rules and regulations promulgated thereunder; and

36.3.5 Will furnish, before the award of the **Contract**, all information and reports, including an employment report, that are required by E.O. 50, the rules and regulations promulgated thereunder, and orders of the City Department of Business Services, Division of Labor Services (**DLS**) and will permit access to its books, records, and accounts by the **DLS** for the purposes of investigation to ascertain compliance with such rules, regulations, and orders.

36.4 The **Contractor** understands that in the event of its noncompliance with the nondiscrimination clauses of this **Contract** or with any of such rules, regulations, or orders, such noncompliance shall constitute a material breach of this **Contract** and noncompliance with E.O. 50 and the rules and regulations promulgated thereunder. After a hearing held pursuant to the rules of the **DLS**, the Director of the **DLS** may direct the **Commissioner** to impose any or all of the following sanctions:

36.4.1 Disapproval of the **Contractor**; and/or

36.4.2 Suspension or termination of the **Contract**; and/or

36.4.3 Declaring the **Contractor** in default; and/or

36.4.4 In lieu of any of the foregoing sanctions, the Director of the **DLS** may impose an employment program.

In addition to any actions taken under this **Contract**, failure to comply with E.O. 50 and the rules and regulations promulgated thereunder, in one or more instances, may result in a **City Agency** declaring the **Contractor** to be non-responsible in future procurements. The **Contractor** further agrees that it will refrain from entering into any **Contract** or **Contract** modification subject to E.O. 50 and the rules and regulations promulgated thereunder with a **Subcontractor** who is not in compliance with the requirements of E.O. 50 and the rules and regulations promulgated thereunder.

36.5 The **Contractor** specifically agrees, as required by Section 6-123 of the Administrative Code, that:

36.5.1 The **Contractor** will not engage in any unlawful discriminatory practice in violation of Title 8 of the Administrative Code; and

36.5.2 Any failure to comply with this Article 36.5 may subject the **Contractor** to the remedies set forth in Section 6-123 of the Administrative Code, including, where appropriate, sanctions such as withholding of payment, imposition of an employment program, finding the **Contractor** to be in default, cancellation of the **Contract**, or any other sanction or remedy provided by Law or **Contract**.

ARTICLE 37. LABOR LAW REQUIREMENTS

37.1 The **Contractor** shall strictly comply with all applicable provisions of the Labor Law, as amended. Such compliance is a material term of this **Contract**.

37.2 The **Contractor** specifically agrees, as required by Labor Law Sections 220 and 220-d, as amended, that:

37.2.1 **Hours of Work:** No laborer, worker, or mechanic in the employ of the **Contractor**, **Subcontractor** or other person doing or contracting to do the whole or a part of the **Work** contemplated by this **Contract** shall be permitted or required to work more than eight (8) hours in any one (1) **Day**, or more than five (5) **Days** in any one (1) week, except as provided in the Labor Law and in cases of extraordinary emergency including fire, flood, or danger to life or property, or in the case of national emergency when so proclaimed by the President of the United States of America.

37.2.2 In situations in which there are not sufficient laborers, workers, and mechanics who may be employed to carry on expeditiously the **Work** contemplated by this **Contract** as a result of such restrictions upon the number of hours and **Days** of labor, and the immediate commencement or prosecution or completion without undue delay of the **Work** is necessary for the preservation of the **Site** and/or for the protection of the life and limb of the persons using the same, such laborers, workers, and mechanics shall be permitted or required to

work more than eight (8) hours in any one (1) **Day**; or five (5) **Days** in any one (1) week; provided, however, that upon application of any **Contractor**, the **Commissioner** shall have first certified to the Commissioner of Labor of the State of New York (hereinafter "**Commissioner of Labor**") that such public **Work** is of an important nature and that a delay in carrying it to completion would result in serious disadvantage to the public; and provided, further, that such **Commissioner of Labor** shall have determined that such an emergency does in fact exist as provided in Labor Law Section 220.2.

37.2.3 Failure of the **Commissioner** to make such a certification to the **Commissioner of Labor** shall not entitle the **Contractor** to damages for delay or for any cause whatsoever.

37.2.4 **Prevailing Rate of Wages**: The wages to be paid for a legal day's **Work** to laborers, workers, or mechanics employed upon the **Work** contemplated by this **Contract** or upon any materials to be used thereon shall not be less than the "prevailing rate of wage" as defined in Labor Law Section 220, and as fixed by the **Comptroller** in the attached Schedule of Wage Rates and in updated schedules thereof. The prevailing wage rates and supplemental benefits to be paid are those in effect at the time the **Work** is being performed.

37.2.5 Requests for interpretation or correction in the Information for Bidders includes all requests for clarification of the classification of trades to be employed in the performance of the **Work** under this **Contract**. In the event that a trade not listed in the **Contract** is in fact employed during the performance of this **Contract**, the **Contractor** shall be required to obtain from the **Agency** the prevailing wage rates and supplementary benefits for the trades used and to complete the performance of this **Contract** at the price at which the **Contract** was awarded.

37.2.6 **Minimum Wages**: Except for employees whose wage is required to be fixed pursuant to Labor Law Section 220, all persons employed by the **Contractor** and any **Subcontractor** in the manufacture or furnishing of the supplies, materials, or equipment, or the furnishing of work, labor, or services, used in the performance of this **Contract**, shall be paid, without subsequent deduction or rebate unless expressly authorized by **Law**, not less than the sum mandated by **Law**.

37.3 **Working Conditions**: No part of the **Work**, labor or services shall be performed or rendered by the **Contractor** in any plants, factories, buildings or surroundings or under working conditions which are unsanitary or hazardous or dangerous to the health and safety of employees engaged in the performance of this **Contract**. Compliance with the safety, sanitary, and factory inspection **Laws** of the state in which the **Work** is to be performed shall be prima facie evidence of compliance with this Article 37.3.

37.4 **Prevailing Wage Enforcement**: The **Contractor** agrees to pay for all costs incurred by the **City** in enforcing prevailing wage requirements, including the cost of any investigation conducted by or on behalf of the **Agency** or the **Comptroller**, where the **City** discovers a failure to comply with any of the requirements of this Article 37 by the **Contractor** or its **Subcontractor(s)**. The **Contractor** also agrees that, should it fail or refuse to pay for any such investigation, the **Agency** is hereby authorized to deduct from a **Contractor's** account an amount equal to the cost of such investigation.

37.4.1 The Labor Law Section 220 and Section 220-d, as amended, provide that this **Contract** shall be forfeited and no sum paid for any **Work** done hereunder on a second conviction for willfully paying less than:

37.4.1(a) The stipulated prevailing wage scale as provided in Labor Law section 220, as amended, or

37.4.1(b) The stipulated minimum hourly wage scale as provided in Labor Law section 220-d, as amended.

37.4.2 For any breach or violation of either working conditions (Article 37.3) or minimum wages (Article 37.2.6) provisions, the party responsible therefor shall be liable to the City for liquidated damages, which may be withheld from any amounts due on any contracts with the City of such party responsible, or may be recovered in actions brought by the City Corporation Counsel in the name of the City, in addition to damages for any other breach of this Contract, for a sum equal to the amount of any underpayment of wages due to any employee engaged in the performance of this Contract. In addition, the Commissioner shall have the right to cancel contracts and enter into other contracts for the completion of the original contract, with or without public letting, and the original Contractor shall be liable for any additional cost. All sums withheld or recovered as deductions, rebates, refunds, or underpayment of wages hereunder, shall be held in a special deposit account and shall be paid without interest, on order of the Comptroller, directly to the employees who have been paid less than minimum rates of pay as set forth herein and on whose account such sums were withheld or recovered, provided that no claims by employees for such payments shall be entertained unless made within two (2) years from the date of actual notice to the Contractor of the withholding or recovery of such sums by the City.

37.4.3 A determination by the Comptroller that a Contractor and/or its Subcontractor willfully violated Labor Law Section 220 will be forwarded to the City's five District Attorneys for review.

37.4.4 The Contractor's or Subcontractor's noncompliance with this Article 37.4 and Labor Law Section 220 may result in an unsatisfactory performance evaluation and the Comptroller may also find and determine that the Contractor or Subcontractor willfully violated the New York Labor Law.

37.4.4(a) An unsatisfactory performance evaluation for noncompliance with this Article 37.4 may result in a determination that the Contractor is a non-responsible bidder on subsequent procurements with the City and thus a rejection of a future award of a contract with the City, as well as any other sanctions provided for by Law.

37.4.4(b) Labor Law Section 220-b, as amended, provides that when two (2) final determinations have been rendered against a Contractor or Subcontractor within any consecutive six (6) year period determining that such Contractor or Subcontractor has willfully failed to pay the prevailing rate of wages or to provide supplements in accordance with the Labor Law and this Article 37.4, whether such failures were concurrent or consecutive and whether or not such final determinations concerning separate public works projects are rendered simultaneously, such Contractor or Subcontractor shall be ineligible to submit a bid on or be awarded any public works contract with the City for a period of five (5) years from the second final determination. If the final determination involves the falsification of payroll records or the kickback of wages or supplements, the Contractor or Subcontractor shall be ineligible to submit a bid on or be awarded any public works contract with the City for a period of five (5) years from the first final determination.

37.4.4(c) Labor Law Section 220, as amended, provides that the Contractor or Subcontractor found to have violated this Article 37.4 may be directed to make payment of wages or supplements including interest found to be due, and the Contractor or Subcontractor may be directed to make payment of a further sum as

a civil penalty in an amount not exceeding twenty-five (25%) percent of the total amount found to be due.

37.5 The **Contractor** and its **Subcontractors** shall within ten (10) **Days** after mailing of a Notice of Award or written order, post in prominent and conspicuous places in each and every plant, factory, building, and structure where employees of the **Contractor** and its **Subcontractors** engaged in the performance of this **Contract** are employed, notices furnished by the **City**, in relation to prevailing wages and supplements, minimum wages, and other stipulations contained in Sections 220 and 220-h of the Labor Law, and the **Contractor** and its **Subcontractors** shall continue to keep such notices posted in such prominent and conspicuous places until **Final Acceptance** of the supplies, materials, equipment, or **Work**, labor, or services required to be furnished or rendered under this **Contract**.

37.6 The **Contractor** shall strictly comply with all of the provisions of Articles 37.6.1 through 37.6.5, and provide for all workers, laborers or mechanics in its employ, the following:

37.6.1 **Notices Posted At Site:** Post, in a location designated by the **City**, schedules of prevailing wages and supplements for this **Project**, a copy of all re-determinations of such schedules for the **Project**, the Workers' Compensation Law Section 51 notice, all other notices required by Law to be posted at the **Site**, the **City** notice that this **Project** is a public works project on which each worker is entitled to receive the prevailing wages and supplements for the occupation at which he or she is working, and all other notices which the **City** directs the **Contractor** to post. The **Contractor** shall provide a surface for such notices which is satisfactory to the **City**. The **Contractor** shall maintain and keep current such notices in a legible manner and shall replace any notice or schedule which is damaged, defaced, illegible or removed for any reason. The **Contractor** shall post such notices before commencing any **Work** on the **Site** and shall maintain such notices until all **Work** on the **Site** is complete; and

37.6.2 **Daily Site Sign-in Sheets:** Maintain daily **Site** sign-in sheets, and require that **Subcontractors** maintain daily **Site** sign-in sheets for its employees, which include blank spaces for an employee's name to be both printed and signed, job title, date started and Social Security number, the time the employee began work and the time the employee left work, until **Final Acceptance** of the supplies, materials, equipment, or **Work**, labor, or services to be furnished or rendered under this **Contract** unless exception is granted by the **Comptroller** upon application by the **Agency**. In the alternative, subject to the approval of the **CCPO**, the **Contractor** and **Subcontractor** may maintain an electronic or biometric sign-in system, which provides the information required by this Article 37.6.2; and

37.6.3 **Individual Employee Information Notices:** Distribute a notice to each worker, laborer or mechanic employed under this **Contract**, in a form provided by the **Agency**, that this **Project** is a public works project on which each worker, laborer or mechanic is entitled to receive the prevailing rate of wages and supplements for the occupation at which he or she is working. If the total cost of the **Work** under this **Contract** is at least two hundred fifty thousand (\$250,000) dollars, such notice shall also include a statement that each worker, laborer or mechanic must be certified prior to performing any **Work** as having successfully completed a course in construction safety and health approved by the United States Department of Labor's Occupational Safety and Health Administration that is at least ten (10) hours in duration. Such notice shall be distributed to each worker before he or she starts performing any **Work** of this **Contract** and with the first paycheck after July first of each year. "Worker, laborer or mechanic" includes employees of the **Contractor** and all **Subcontractors** and all employees of suppliers entering the **Site**. At the time of distribution, the **Contractor** shall have each worker, laborer or mechanic sign a statement, in a form provided by the **Agency**, certifying that the worker has received the notice required by this

Article 37.6.3, which signed statement shall be maintained with the payroll records required by this Contract; and

37.6.3(a) The **Contractor** and each **Subcontractor** shall notify each worker, laborer or mechanic employed under this **Contract** in writing of the prevailing rate of wages for their particular job classification. Such notification shall be given to every worker, laborer, and mechanic on their first pay stub and with every pay stub thereafter; and

37.6.4 **Site Laminated Identification Badges:** The **Contractor** shall provide laminated identification badges which include a photograph of the worker's, laborer's or mechanic's face and indicate the worker's, laborer's or mechanic's name, trade, employer's name, and employment starting date (month/day/year). Further, the **Contractor** shall require as a condition of employment on the **Site**, that each and every worker, laborer or mechanic wear the laminated identification badge at all times and that it may be seen by any representative of the **City**. The **Commissioner** may grant a written waiver from the requirement that the laminated identification badge include a photograph if the **Contractor** demonstrates that the identity of an individual wearing a laminated identification badge can be easily verified by another method; and

37.6.5 **Language Other Than English Used On Site:** Provide the **ACCO** notice when three (3) or more employees (worker and/or laborer and/or mechanic) on the **Site**, at any time, speak a language other than English. The **ACCO** will then provide the **Contractor** the notices described in Article 37.6.1 in that language or languages as may be required. The **Contractor** is responsible for all distributions under this Article 37; and

37.6.6 **Provision of Records:** The **Contractor** and **Subcontractor(s)** shall produce within five (5) **Days** on the **Site** of the **Work** and upon a written order of the **Engineer**, the **Commissioner**, the **ACCO**, the **Agency EAO**, or the **Comptroller**, such records as are required to be kept by this Article 37.6; and

37.6.7 The **Contractor** and **Subcontractor(s)** shall pay employees by check or direct deposit. If this **Contract** is for an amount greater than one million (\$1,000,000) dollars, checks issued by the **Contractor** to covered employees shall be generated by a payroll service or automated payroll system (an in-house system may be used if approved by the **Agency**). For any subcontract for an amount greater than seven hundred fifty thousand (\$750,000) dollars, checks issued by a **Subcontractor** to covered employees shall be generated by a payroll service or automated payroll system (an in-house system may be used if approved by the **Agency**); and

37.6.8 The failure of the **Contractor** or **Subcontractor(s)** to comply with the provisions of Articles 37.6.1 through 37.6.7 may result in the **Commissioner** declaring the **Contractor** in default and/or the withholding of payments otherwise due under the **Contract**.

37.7 The **Contractor** and its **Subcontractors** shall keep such employment and payroll records as are required by Section 220 of the Labor Law. The failure of the **Contractor** or **Subcontractor(s)** to comply with the provisions of this Article 37.7 may result in the **Commissioner** declaring the **Contractor** in default and/or the withholding of payments otherwise due under the **Contract**.

37.8 At the time the **Contractor** makes application for each partial payment and for final payment, the **Contractor** shall submit to the **Commissioner** a written payroll certification, in the form provided by this **Contract**, of compliance with the prevailing wage, minimum wage, and other provisions and stipulations required by Labor Law Section 220 and of compliance with the training requirements of

Labor Law Section 220-h set forth in Article 35.2. This certification of compliance shall be a condition precedent to payment and no payment shall be made to the **Contractor** unless and until each such certification shall have been submitted to and received by the **Commissioner**.

37.9 This **Contract** is executed by the **Contractor** with the express warranty and representation that the **Contractor** is not disqualified under the provisions of Section 220 of the Labor Law from the award of the **Contract**.

37.10 Any breach or violation of any of the foregoing shall be deemed a breach or violation of a material provision of this **Contract**, and grounds for cancellation thereof by the **City**.

ARTICLE 38. PAYROLL REPORTS

38.1 The **Contractor** and its **Subcontractor(s)** shall maintain on the **Site** during the performance of the **Work** the original payrolls or transcripts thereof which the **Contractor** and its **Subcontractor(s)** are required to maintain and shall submit such original payrolls or transcripts, subscribed and affirmed by it as true, within thirty (30) **Days** after issuance of its first payroll, and every thirty (30) **Days** thereafter, pursuant to Labor Law Section 220(3-a)(a)(iii). The **Contractor** and **Subcontractor(s)** shall submit such original payrolls or transcripts along with each and every payment requisition. If payment requisitions are not submitted at least once a month, the **Contractor** and its **Subcontractor(s)** shall submit original payrolls and transcripts both along with its payment requisitions and independently of its payment requisitions.

38.2 The **Contractor** shall maintain payrolls or transcripts thereof for six (6) years from the date of completion of the **Work** on this **Contract**. If such payrolls and transcripts are maintained outside of New York City after the completion of the **Work** and their production is required pursuant to this Article 38, the **Contractor** shall produce such records in New York City upon request by the **City**.

38.3 The **Contractor** and **Subcontractor(s)** shall comply with any written order, direction, or request made by the **Engineer**, the **Commissioner**, the **ACCO**, the **Agency EAO**, the **Agency Labor Law Investigator(s)**, or the **Comptroller**, to provide to the requesting party any of the following information and/or records within five (5) **Days** of such written order, direction, or request:

38.3.1 Such original payrolls or transcripts thereof subscribed and affirmed by it as true and the statements signed by each worker pursuant to this Chapter VIII; and/or

38.3.2 Attendance sheets for each **Day** on which any employee of the **Contractor** and/or any of the **Subcontractor(s)** performed **Work** on the **Site**, which attendance sheet shall be in a form acceptable to the **Agency** and shall provide information acceptable to the **Agency** to identify each such employee; and/or

38.3.3 Any other information to satisfy the **Engineer**, the **Commissioner**, the **ACCO**, the **Agency EAO**, the **Agency Labor Law Investigator(s)** or the **Comptroller**, that this Chapter VIII and the Labor Law, as to the hours of employment and prevailing rates of wages and/or supplemental benefits, are being observed.

38.4 The failure of the **Contractor** or **Subcontractor(s)** to comply with the provisions of Articles 38.1 and/or 38.2 may result in the **Commissioner** declaring the **Contractor** in default and/or the withholding of payments otherwise due under the **Contract**.

ARTICLE 39. DUST HAZARDS

39.1 Should a harmful dust hazard be created in performing the **Work** of this **Contract**, for the elimination of which appliances or methods have been approved by the Board of Standards and Appeals of the City of New York, such appliances and methods shall be installed, maintained, and effectively operated during the continuance of such harmful dust hazard. Failure to comply with this provision after notice shall make this **Contract** voidable at the sole discretion of the **City**.

CHAPTER IX **PARTIAL AND FINAL PAYMENTS**

ARTICLE 40. CONTRACT PRICE

40.1 The **City** shall pay, and the **Contractor** agrees to accept, in full consideration for the **Contractor's** performance of the **Work** subject to the terms and conditions hereof, the lump sum price or unit prices for which this **Contract** was awarded, plus the amount required to be paid for any **Extra Work** ordered by the **Commissioner** under Article 25, less credit for any **Work** omitted pursuant to Article 29.

ARTICLE 41. BID BREAKDOWN ON LUMP SUM

41.1 Within fifteen (15) **Days** after the commencement date specified in the **Notice to Proceed** or **Order to Work**, unless otherwise directed by the **Resident Engineer**, the **Contractor** shall submit to the **Resident Engineer** a breakdown of its bid price, or of lump sums bid for items of the **Contract**, showing the various operations to be performed under the **Contract**, as directed in the progress schedule required under Article 9, and the value of each of such operations, the total of such items to equal the lump sum price bid. Said breakdown must be approved in writing by the **Resident Engineer**.

41.2 No partial payment will be approved until the **Contractor** submits a bid breakdown that is acceptable to the **Resident Engineer**.

41.3 The **Contractor** shall also submit such other information relating to the bid breakdown as directed by the **Resident Engineer**. Thereafter, the breakdown may be used only for checking the **Contractor's** applications for partial payments hereunder, but shall not be binding upon the **City**, the **Commissioner**, or the **Engineer** for any purpose whatsoever.

ARTICLE 42. PARTIAL PAYMENTS

42.1 From time to time as the **Work** progresses satisfactorily, but not more often than once each calendar month (except where the **Commissioner** approves in writing the submission of invoices on a more frequent basis and for invoices relating to **Work** performed pursuant to a change order), the **Contractor** may submit to the **Engineer** a requisition for a partial payment in the prescribed form, which shall contain an estimate of the quantity and the fair value of the **Work** done during the payment period.

42.2 Partial payments may be made for materials, fixtures, and equipment in advance of their actual incorporation in the **Work**, as the **Commissioner** may approve, and upon the terms and conditions set forth in the General Conditions.

42.3 The **Contractor** shall also submit to the **Commissioner** in connection with every application for partial payment a verified statement in the form prescribed by the **Comptroller** setting forth the information required under Labor Law Section 220-a.

42.4 Within thirty (30) **Days** after receipt of a satisfactory payment application, and within sixty (60) **Days** after receipt of a satisfactory payment application in relation to **Work** performed pursuant to a change order, the **Engineer** will prepare and certify, and the **Commissioner** will approve, a voucher for a partial payment in the amount of such approved estimate, less any and all deductions authorized to be made by the **Commissioner** under the terms of this **Contract** or by **Law**.

ARTICLE 43. PROMPT PAYMENT

43.1 The Prompt Payment provisions of the **PPB Rules** in effect at the time of the bid will be applicable to payments made under this **Contract**. The provisions require the payment to the **Contractor** of interest on payments made after the required payment date, except as set forth in the **PPB Rules**.

43.2 The **Contractor** shall submit a proper invoice to receive payment, except where the **Contract** provides that the **Contractor** will be paid at predetermined intervals without having to submit an invoice for each scheduled payment.

43.3 Determination of interest due will be made in accordance with the **PPB Rules**.

43.4 If the **Contractor** is paid interest, the proportionate share(s) of that interest shall be forwarded by the **Contractor** to its **Subcontractor(s)**.

43.5 The **Contractor** shall pay each **Subcontractor** or **Materialman** not later than seven (7) **Days** after receipt of payment out of amounts paid to the **Contractor** by the **City** for **Work** performed by the **Subcontractor** or **Materialman** under this **Contract**.

43.5.1 If **Contractor** fails to make any payment to any **Subcontractor** or **Materialman** within seven (7) **Days** after receipt of payment by the **City** pursuant to this Article 43.5, then the **Contractor** shall pay interest on amounts due to such **Subcontractor** or **Materialman** at the rate of interest in effect on the date such payment is made by the **Contractor** computed in accordance with Section 756-b (1)(b) of the New York General Business Law. Accrual of interest shall commence on the **Day** immediately following the expiration of the seventh **Day** following receipt of payment by the **Contractor** from the **City** and shall end on the date on which payment is made.

43.6 The **Contractor** shall include in each of its subcontracts a provision requiring each **Subcontractor** to make payment to each of its **Subcontractors** or **Materialmen** for **Work** performed under this **Contract** in the same manner and within the same time period set forth above.

ARTICLE 44. SUBSTANTIAL COMPLETION PAYMENT

44.1 The **Contractor** shall submit with the **Substantial Completion** requisition:

44.1.1 A final verified statement of any pending Article 27 disputes in accordance with the **PPB Rules** and this **Contract** and any and all alleged claims against the **City**, in any way connected with or arising out of this **Contract** (including those as to which details may have been furnished pursuant to Articles 11, 27, 28, and 30) setting forth with respect to each

such claim the total amount thereof, the various items of labor and materials included therein, and the alleged value of each item; and if the alleged claim be one for delay, the alleged cause of each such delay, the period or periods of time, giving the dates when the **Contractor** claims the performance of the **Work** or a particular part thereof was delayed, and an itemized statement and breakdown of the amount claimed for each such delay.

44.1.1(a) With respect to each such claim, the **Commissioner**, the **Comptroller** and, in the event of litigation, the **City Corporation Counsel** shall have the same right to inspect, and to make extracts or copies of, the **Contractor's** books, vouchers, records, etc., as is referred to in Articles 11, 27, 28, and 30. Nothing contained in this Article 44.1.1(a) is intended to or shall relieve the **Contractor** from the obligation of complying strictly with Articles 11, 27, 28, and 30. The **Contractor** is warned that unless such claims are completely set forth as herein required, the **Contractor** upon acceptance of the **Substantial Completion** payment pursuant to this Article 44, will have waived any such claims.

44.1.2 A Final Approved Punch List.

44.1.3 Where required, a request for an extension of time to achieve **Substantial Completion** or final extension of time.

44.2 The **Commissioner** shall issue a voucher calling for payment of any part or all of the balance due for **Work** performed under the **Contract**, including monies retained under Article 21, less any and all deductions authorized to be made by the **Commissioner**, under this **Contract** or by **Law**, and less twice the amount the **Commissioner** considers necessary to ensure the completion of the balance of the **Work** by the **Contractor**. Such a payment shall be considered a partial and not a final payment. No **Substantial Completion** payment shall be made under this Article 44 where the **Contractor** failed to complete the **Work** within the time fixed for such completion in the Schedule A of the General Conditions, or within the time to which completion may have been extended, until an extension or extensions of time for the completion of **Work** have been acted upon pursuant to Article 13.

44.3 No further partial payments shall be made to the **Contractor** after **Substantial Completion**, except the **Substantial Completion** payment and payment pursuant to any **Contractor's** requisition that were properly filed with the **Commissioner** prior to the date of **Substantial Completion**; however, the **Commissioner** may grant a waiver for further partial payments after the date of **Substantial Completion** to permit payments for change order **Work** and/or release of retainage and deposits pursuant to Articles 21 and 24. Such waiver shall be in writing.

44.4 The **Contractor** acknowledges that nothing contained in this Article 44 is intended to or shall in any way diminish the force and effect of Article 13.

ARTICLE 45. FINAL PAYMENT

45.1 After completion and **Final Acceptance** of the **Work**, the **Contractor** shall submit all required certificates and documents, together with a requisition for the balance claimed to be due under the **Contract**, less the amount authorized to be retained for maintenance under Article 24. Such submission shall be within 90 days of the date of the **Commissioner's** written determination of **Final Acceptance**, or within such additional time as may be granted by the **Commissioner** in writing. If the **Contractor** fails to submit all required certificates and documents within the time allowed, no payment of the balance claimed shall be made to the **Contractor** and the **Contractor** shall be deemed to have forfeited its right to

payment of any balance claimed. A verified statement similar to that required in connection with applications for partial payments shall also be submitted to the **Commissioner**.

45.2 Amended Verified Statement of Claims: The **Contractor** shall also submit with the final requisition any amendments to the final verified statement of any pending dispute resolution procedures in accordance with the **PPB Rules** and this **Contract** and any and all alleged claims against the **City**, in any way connected with or arising out of this **Contract** (including those as to which details may have been furnished pursuant to Articles 11, 27, 28, and 30) that have occurred subsequent to **Substantial Completion**, setting forth with respect to each such claim the total amount thereof, the various items of labor and materials included therein, and the alleged value of each such item; and if the alleged claim be one for delay, the alleged cause of each such delay, the period or periods of time, giving the dates when the **Contractor** claims the performance of the **Work** or a particular part thereof was delayed, and an itemized statement and breakdown of the amount claimed for each such delay. With reference to each such claim, the **Commissioner**, the **Comptroller** and, in the event of litigation, the **City Corporation Counsel** shall have the same right to inspect, and to make extracts or copies of, the **Contractor's** books, vouchers, records, etc., as is referred to in Articles 11, 27, 28, and 30. Nothing contained in this Article 45.2, is intended to or shall relieve the **Contractor** from the obligation of complying strictly with Articles 11, 27, 28, and 30. The **Contractor** is warned that unless such claims are completely set forth as herein required, the **Contractor**, upon acceptance of the Final Payment pursuant to Article 46, will have waived any such claims.

45.3 Preparation of Final Voucher: Upon determining the balance due hereunder other than on account of claims, the **Engineer** will prepare and certify, for the **Commissioner's** approval, a voucher for final payment in that amount less any and all deductions authorized to be made by the **Commissioner** under this **Contract** or by **Law**. In the case of a lump sum **Contract**, the **Commissioner** shall certify the voucher for final payment within thirty (30) **Days** from the date of completion and acceptance of the **Work**, provided all requests for extensions of time have been acted upon.

45.3.1 All prior certificates and vouchers upon which partial payments were made, being merely estimates made to enable the **Contractor** to prosecute the **Work** more advantageously, shall be subject to correction in the final voucher, and the certification of the **Engineer** thereon and the approval of the **Commissioner** thereof, shall be conditions precedent to the right of the **Contractor** to receive any money hereunder. Such final voucher shall be binding and conclusive upon the **Contractor**.

45.3.2 Payment pursuant to such final voucher, less any deductions authorized to be made by the **Commissioner** under this **Contract** or by **Law**, shall constitute the final payment, and shall be made by the **Comptroller** within thirty (30) **Days** after the filing of such voucher in his/her office.

45.4 The **Contractor** acknowledges that nothing contained in this Article 45 is intended to or shall in any way diminish the force and effect of Article 13.

ARTICLE 46. ACCEPTANCE OF FINAL PAYMENT

46.1 The acceptance by the **Contractor**, or by anyone claiming by or through it, of the final payment, whether such payment be made pursuant to any judgment of any court, or otherwise, shall constitute and operate as a release of the **City** from any and all claims of and liability to the **Contractor** for anything heretofore done or furnished for the **Contractor** relating to or arising out of this **Contract** and the **Work** done hereunder, and for any prior act, neglect or default on the part of the **City** or any of its officials, agents or employees, excepting only a claim against the **City** for the amounts deducted or retained in accordance with the terms and provisions of this **Contract** or by **Law**, and excepting any

claims, not otherwise waived, or any pending dispute resolution procedures which are contained in the verified statement filed with the **Contractor's** substantial and final requisitions pursuant to Articles 44 and 45.

46.2 The **Contractor** is warned that the execution by it of a release, in connection with the acceptance of the final payment, containing language purporting to reserve claims other than those herein specifically excepted from the operation of this Article 46, or those for amounts deducted by the **Commissioner** from the final requisition or from the final payment as certified by the **Engineer** and approved by the **Commissioner**, shall not be effective to reserve such claims, anything stated to the **Contractor** orally or in writing by any official, agent or employee of the **City** to the contrary notwithstanding.

46.3 Should the **Contractor** refuse to accept the final payment as tendered by the **Comptroller**, it shall constitute a waiver of any right to interest thereon.

46.4 The **Contractor**, however, shall not be barred by this Article 46 from commencing an action for breach of **Contract** to the extent permitted by **Law** and by the terms of the **Contract** for any claims that are contained in the verified statement filed with the **Contractor's** substantial and final requisitions pursuant to Articles 44 and 45 or that arose after submission of the final payment requisition, provided that a detailed and verified statement of claim is served upon the contracting **Agency** and **Comptroller** not later than forty (40) **Days** after the making of such final payment by electronic funds transfer (EFT) or the mailing of such final payment. The statement shall specify the items upon which the claim will be based and any such claim shall be limited to such items.

ARTICLE 47. APPROVAL BY PUBLIC DESIGN COMMISSION

47.1 All works of art, including paintings, mural decorations, stained glass, statues, bas-reliefs, and other sculptures, monuments, fountains, arches, and other structures of a permanent character intended for ornament or commemoration, and every design of the same to be used in the performance of this **Contract**, and the design of all bridges, approaches, buildings, gates, fences, lamps, or structures to be erected, pursuant to the terms of this **Contract**, shall be submitted to the Art Commission, d/b/a the Public Design Commission of the City of New York, and shall be approved by the Public Design Commission prior to the erection or placing in position of the same. The final payment shall not become due or payable under this **Contract** unless and until the Public Design Commission shall certify that the design for the **Work** herein contracted for has been approved by the said Public Design Commission, and that the same has been executed in substantial accordance with the design so approved, pursuant to the provisions of Chapter 37, Section 854 of the **City Charter**, as amended.

CHAPTER X CONTRACTOR'S DEFAULT

ARTICLE 48. COMMISSIONER'S RIGHT TO DECLARE CONTRACTOR IN DEFAULT

48.1 In addition to those instances specifically referred to in other Articles herein, the **Commissioner** shall have the right to declare the **Contractor** in default of this **Contract** if:

48.1.1 The **Contractor** fails to commence **Work** when notified to do so by the **Commissioner**; or
if

48.1.2 The **Contractor** shall abandon the **Work**; or if

48.1.3 The **Contractor** shall refuse to proceed with the **Work** when and as directed by the **Commissioner**; or if

48.1.4 The **Contractor** shall, without just cause, reduce its working force to a number which, if maintained, would be insufficient, in the opinion of the **Commissioner**, to complete the **Work** in accordance with the progress schedule; or if

48.1.5 The **Contractor** shall fail or refuse to increase sufficiently such working force when ordered to do so by the **Commissioner**; or if

48.1.6 The **Contractor** shall sublet, assign, transfer, convert or otherwise dispose of this **Contract** other than as herein specified; or sell or assign a majority interest in the **Contractor**; or if

48.1.7 The **Contractor** fails to secure and maintain all required insurance; or if

48.1.8 A receiver or receivers are appointed to take charge of the **Contractor's** property or affairs; or if

48.1.9 The **Commissioner** shall be of the opinion that the **Contractor** is or has been unnecessarily or unreasonably or willfully delaying the performance and completion of the **Work**, or the award of necessary subcontracts, or the placing of necessary material and equipment orders; or if

48.1.10 The **Commissioner** shall be of the opinion that the **Contractor** is or has been willfully or in bad faith violating any of the provisions of this **Contract**; or if

48.1.11 The **Commissioner** shall be of the opinion that the **Work** cannot be completed within the time herein provided therefor or within the time to which such completion may have been extended; provided, however, that the impossibility of timely completion is, in the **Commissioner's** opinion, attributable to conditions within the **Contractor's** control; or if

48.1.12 The **Work** is not completed within the time herein provided therefor or within the time to which the **Contractor** may be entitled to have such completion extended; or if

48.1.13 Any statement or representation of the **Contractor** in the **Contract** or in any document submitted by the **Contractor** with respect to the **Work**, the **Project**, or the **Contract** (or for purposes of securing the **Contract**) was untrue or incorrect when made; or if

48.1.14 The **Contractor** or any of its officers, directors, partners, five (5%) percent shareholders, principals, or other persons substantially involved in its activities, commits any of the acts or omissions specified as the grounds for debarment in the **PPB Rules**.

48.2 Before the **Commissioner** shall exercise his/her right to declare the **Contractor** in default, the **Commissioner** shall give the **Contractor** an opportunity to be heard, upon not less than two (2) **Days** notice.

ARTICLE 49. EXERCISE OF THE RIGHT TO DECLARE DEFAULT

49.1 The right to declare the **Contractor** in default for any of the grounds specified or referred to in Article 48 shall be exercised by sending the **Contractor** a notice, signed by the **Commissioner**, setting forth the ground or grounds upon which such default is declared (hereinafter referred to as a "Notice of Default").

49.2 The **Commissioner's** determination that the **Contractor** is in default shall be conclusive, final, and binding on the parties and such a finding shall preclude the **Contractor** from commencing a plenary action for any damages relating to the **Contract**. If the **Contractor** protests the determination of the **Commissioner**, the **Contractor** may commence an action in a court of competent jurisdiction of the State of New York under Article 78 of the New York Civil Practice Law and Rules.

ARTICLE 50. QUITTING THE SITE

50.1 Upon receipt of such notice the **Contractor** shall immediately discontinue all further operations under this **Contract** and shall immediately quit the **Site**, leaving untouched all plant, materials, equipment, tools, and supplies then on the **Site**.

ARTICLE 51. COMPLETION OF THE WORK

51.1 The **Commissioner**, after declaring the **Contractor** in default, may then have the **Work** completed by such means and in such manner, by contract with or without public letting, or otherwise, as he/she may deem advisable, utilizing for such purpose such of the **Contractor's** plant, materials, equipment, tools, and supplies remaining on the **Site**, and also such **Subcontractors**, as he/she may deem advisable.

51.2 After such completion, the **Commissioner** shall make a certificate stating the expense incurred in such completion, which shall include the cost of re-letting and also the total amount of liquidated damages (at the rate provided for in the **Contract**) from the date when the **Work** should have been completed by the **Contractor** in accordance with the terms hereof to the date of actual completion of the **Work**. Such certificate shall be binding and conclusive upon the **Contractor**, its sureties, and any person claiming under the **Contractor**, as to the amount thereof.

51.3 The expense of such completion, including any and all related and incidental costs, as so certified by the **Commissioner**, and any liquidated damages assessed against the **Contractor**, shall be charged against and deducted out of monies which are earned by the **Contractor** prior to the date of default. Should the expense of such completion, as certified by the **Commissioner**, exceed the total sum which would have been payable under the **Contract** if it had been completed by the **Contractor**, any excess shall be paid by the **Contractor**.

ARTICLE 52. PARTIAL DEFAULT

52.1 In case the **Commissioner** shall declare the **Contractor** in default as to a part of the **Work** only, the **Contractor** shall discontinue such part, shall continue performing the remainder of the **Work** in strict conformity with the terms of this **Contract**, and shall in no way hinder or interfere with any **Other**

Contractor(s) or persons whom the **Commissioner** may engage to complete the **Work** as to which the **Contractor** was declared in default.

52.2 The provisions of this Chapter relating to declaring the **Contractor** in default as to the entire **Work** shall be equally applicable to a declaration of partial default, except that the **Commissioner** shall be entitled to utilize for completion of the part of the **Work** as to which the **Contractor** was declared in default only such plant, materials, equipment, tools, and supplies as had been previously used by the **Contractor** on such part.

ARTICLE 53. PERFORMANCE OF UNCOMPLETED WORK

53.1 In completing the whole or any part of the **Work** under the provisions of this Chapter X, the **Commissioner** shall have the power to depart from or change or vary the terms and provisions of this **Contract**, provided, however, that such departure, change or variation is made for the purpose of reducing the time or expense of such completion. Such departure, change or variation, even to the extent of accepting a lesser or different performance, shall not affect the conclusiveness of the **Commissioner's** certificate of the cost of completion referred to in Article 51, nor shall it constitute a defense to an action to recover the amount by which such certificate exceeds the amount which would have been payable to the **Contractor** hereunder but for its default.

ARTICLE 54. OTHER REMEDIES

54.1 In addition to the right to declare the **Contractor** in default pursuant to this Chapter X, the **Commissioner** shall have the absolute right, in his/her sole discretion and without a hearing, to complete or cause to be completed in the same manner as described in Articles 51 and 53, any or all unsatisfactory or uncompleted punch list **Work** that remains after the completion date specified in the **Final Approved Punch List**. A written notice of the exercise of this right shall be sent to the **Contractor** who shall immediately quit the **Site** in accordance with the provisions of Article 50.

54.2 The expense of completion permitted under Article 54.1, including any and all related and incidental costs, as so certified by the **Commissioner**, shall be charged against and deducted out of monies which have been earned by the **Contractor** prior to the date of the exercise of the right set forth in Article 54.1; the balance of such monies, if any, subject to the other provisions of this **Contract**, to be paid to the **Contractor** without interest after such completion. Should the expense of such completion, as certified by the **Commissioner**, exceed the total sum which would have been payable under the **Contract** if it had been completed by the **Contractor**, any excess shall be paid by the **Contractor**.

54.3 The previous provisions of this Chapter X shall be in addition to any and all other remedies available under **Law** or in equity.

54.4 The exercise by the **City** of any remedy set forth herein shall not be deemed a waiver by the **City** of any other legal or equitable remedy contained in this **Contract** or provided under **Law**.

**CHAPTER XI
MISCELLANEOUS PROVISIONS**

ARTICLE 55. CONTRACTOR'S WARRANTIES

55.1 In consideration of, and to induce, the award of this **Contract** to the **Contractor**, the **Contractor** represents and warrants:

55.1.1 That it is financially solvent, sufficiently experienced and competent to perform the **Work**; and

55.1.2 That the facts stated in its bid and the information given by it pursuant to the Information for Bidders is true and correct in all respects; and

55.1.3 That it has read and complied with all requirements set forth in the **Contract**.

ARTICLE 56. CLAIMS AND ACTIONS THEREON

56.1 Any claim, that is not subject to dispute resolution under the **PPB Rules** or this **Contract**, against the **City** for damages for breach of **Contract** shall not be made or asserted in any action, unless the **Contractor** shall have strictly complied with all requirements relating to the giving of notice and of information with respect to such claims, as herein before provided.

56.2 Nor shall any action be instituted or maintained on any such claims unless such action is commenced within six (6) months after **Substantial Completion**; except that:

56.2.1 Any claims arising out of events occurring after **Substantial Completion** and before **Final Acceptance** of the **Work** shall be asserted within six (6) months of **Final Acceptance** of the **Work**;

56.2.2 Any claims for monies deducted, retained or withheld under the provisions of this **Contract** shall be asserted within six (6) months after the date when such monies otherwise become due and payable hereunder; and

56.2.3 If the **Commissioner** exercises his/her right to terminate the **Contract** pursuant to Article 64, any such action shall be commenced within six (6) months of the date the **Commissioner** exercises said right.

ARTICLE 57. INFRINGEMENT

57.1 The **Contractor** shall be solely responsible for and shall defend, indemnify, and hold the **City** harmless from any and all claims (even if the allegations of the lawsuit are without merit) and judgments for damages and from costs and expenses to which the **City** may be subject to or which it may suffer or incur allegedly arising out of or in connection with any infringement by the **Contractor** of any copyright, trade secrets, trademark or patent rights or any other property or personal right of any third party by the **Contractor** and/or its **Subcontractors** in the performance or completion of the **Work**. Insofar as the facts or **Law** relating to any claim would preclude the **City** from being completely indemnified by the **Contractor**, the **City** shall be partially indemnified by the **Contractor** to the fullest extent permitted by **Law**.

ARTICLE 58. NO CLAIM AGAINST OFFICIALS, AGENTS OR EMPLOYEES

58.1 No claim whatsoever shall be made by the **Contractor** against any official, agent or employee of the **City** for, or on account of, anything done or omitted to be done in connection with this **Contract**.

ARTICLE 59. SERVICE OF NOTICES

59.1 The **Contractor** hereby designates the business address, fax number, and email address specified in its bid, as the place where all notices, directions or other communications to the **Contractor** may be delivered, or to which they may be mailed. Any notice, direction, or communication from either party to the other shall be in writing and shall be deemed to have been given when (i) delivered personally; (ii) sent by certified mail, return receipt requested; (iii) delivered by overnight or same day courier service in a properly addressed envelope with confirmation; or (iv) sent by fax or email and, unless receipt of the fax or e-mail is acknowledged by the recipient by fax or e-mail, deposited in a post office box regularly maintained by the United States Postal Service in a properly addressed, postage pre-paid envelope.

59.2 **Contractor's** notice address, email address, or fax number may be changed at any time by an instrument in writing, executed and acknowledged by the **Contractor**, and delivered to the **Commissioner**.

59.3 Nothing herein contained shall, however, be deemed to preclude or render inoperative the service of any notice, direction or other communication upon the **Contractor** personally, or, if the **Contractor** is a corporation, upon any officer thereof.

ARTICLE 60. UNLAWFUL PROVISIONS DEEMED STRICKEN FROM CONTRACT

60.1 If this **Contract** contains any unlawful provision not an essential part of the **Contract** and which shall not appear to have been a controlling or material inducement to the making thereof, the same shall be deemed of no effect and shall, upon notice by either party, be deemed stricken from the **Contract** without affecting the binding force of the remainder.

ARTICLE 61. ALL LEGAL PROVISIONS DEEMED INCLUDED

61.1 It is the intent and understanding of the parties to this **Contract** that each and every provision of **Law** required to be inserted in this **Contract** shall be and is inserted herein. Furthermore, it is hereby stipulated that every such provision is to be deemed to be inserted herein, and if, through mistake or otherwise, any such provision is not inserted, or is not inserted in correct form, then this **Contract** shall forthwith upon the application of either party be amended by such insertion so as to comply strictly with the **Law** and without prejudice to the rights of either party hereunder.

ARTICLE 62. TAX EXEMPTION

62.1 The **City** is exempt from payment of Federal, State, and local taxes, including sales and compensating use taxes of the State of New York and its cities and counties on all tangible personal property sold to the **City** pursuant to the provisions of this **Contract**. These taxes are not to be included in bids. However, this exemption does not apply to tools, machinery, equipment or other property leased by or to the **Contractor**, **Subcontractor** or **Materialman** or to tangible personal property which, even

though it is consumed, is not incorporated into the completed **Work** (consumable supplies) and tangible personal property that the **Contractor** is required to remove from the **Site** during or upon completion of the **Work**. The **Contractor** and its **Subcontractors** and **Materialmen** shall be responsible for and pay any and all applicable taxes, including sales and compensating use taxes, on such leased tools, machinery, equipment or other property and upon all such consumable supplies and tangible personal property that the **Contractor** is required to remove from the **Site** during or upon completion of the **Work**.

62.2 The **Contractor** agrees to sell and the **City** agrees to purchase all tangible personal property, other than consumable supplies and other tangible personal property that the **Contractor** is required to remove from the **Site** during or upon completion of the **Work**, that is required, necessary or proper for or incidental to the construction of the **Project** covered by this **Contract**. The sum paid under this **Contract** for such tangible personal property shall be in full payment and consideration for the sale of such tangible personal property.

62.2.1 The **Contractor** agrees to construct the **Project** and to perform all **Work**, labor and services rendered, necessary, proper or incidental thereto for the sum shown in the bid for the performance of such **Work**, labor, and services, and the sum so paid pursuant to this **Contract** for such **Work**, labor, and services, shall be in full consideration for the performance by the **Contractor** of all its duties and obligations under this **Contract** in connection with said **Work**, labor, and services.

62.3 20 NYCRR Section 541.3(d) provides that a **Contractor's** purchases of tangible personal property that is either incorporated into real property owned by a governmental entity or purchased for and sold to a governmental entity are exempt from sales and use tax. The **City** shall not pay sales tax for any such tangible personal property that it purchases from the **Contractor** pursuant to the **Contract**. With respect to such tangible personal property, the **Contractor**, at the request of the **City**, shall furnish to the **City** such bills of sale and other instruments as may be required by the **City**, properly executed, acknowledged and delivered assuring to the **City** title to such tangible personal property, free of liens and/or encumbrances, and the **Contractor** shall mark or otherwise identify all such tangible personal property as the property of the **City**.

62.4 Title to all tangible personal property to be sold by the **Contractor** to the **City** pursuant to the provisions of the **Contract** shall immediately vest in and become the sole property of the **City** upon delivery of such tangible personal property to the **Site**. Notwithstanding such transfer of title, the **Contractor** shall have the full and continuing responsibility to install such tangible personal property in accordance with the provisions of this **Contract**, protect it, maintain it in a proper condition and forthwith repair, replace and make good any damage thereto, theft or disappearance thereof, and furnish additional tangible personal property in place of any that may be lost, stolen or rendered unusable, without cost to the **City**, until such time as the **Work** covered by the **Contract** is fully accepted by the **City**. Such transfer of title shall in no way affect any of the **Contractor's** obligations hereunder. In the event that, after title has passed to the **City**, any of the tangible personal property is rejected as being defective or otherwise unsatisfactory, title to all such tangible personal property shall be deemed to have been transferred back to the **Contractor**.

62.5 The purchase by **Subcontractors** or **Materialmen** of tangible personal property to be sold hereunder shall be a purchase or procurement for resale to the **Contractor** (either directly or through other **Subcontractors**) and therefore not subject to the aforesaid sales and compensating use taxes, provided that the subcontracts and purchase agreements provide for the resale of such tangible personal property and that such subcontracts and purchase agreements are in a form similar to this **Contract** with respect to the separation of the sale of consumable supplies and tangible personal property that the **Contractor** is required to remove from the **Site** during or upon completion of the **Work** from the **Work** and labor, services, and any other matters to be provided, and provided further that the subcontracts and

purchase agreements provide separate prices for tangible personal property and all other services and matters. Such separation shall actually be followed in practice, including the separation of payments for tangible personal property from the payments for other **Work** and labor and other things to be provided.

62.6 The **Contractor** and its **Subcontractors** and **Materialmen** shall furnish a **Contractor Exempt Purchase Certificate** to all persons, firms or corporations from which they purchase tangible personal property for the performance of the **Work** covered by this **Contract**.

62.7 In the event any of the provisions of this Article 62 shall be deemed to be in conflict with any other provisions of this **Contract** or create any ambiguity, then the provisions of this Article 62 shall control.

ARTICLE 63. INVESTIGATION(S) CLAUSE

63.1 The parties to this **Contract** agree to cooperate fully and faithfully with any investigation, audit or inquiry conducted by a United States, a State of New York (State) or a **City** governmental agency or authority that is empowered directly or by designation to compel the attendance of witnesses and to examine witnesses under oath, or conducted by the Inspector General of a governmental agency that is a party in interest to the transaction, submitted bid, submitted proposal, contract, lease, permit or license that is the subject of the investigation, audit or inquiry.

63.2 If any person who has been advised that his/her statement, and any information from such statement, will not be used against him/her in any subsequent criminal proceeding refuses to testify before a grand jury or other governmental agency or authority empowered directly or by designation to compel the attendance of witnesses and to examine witnesses under oath concerning the award of or performance under any transaction, agreement, lease, permit, contract, or license entered into with the **City**, the State, or any political subdivision or public authority thereof, or the Port Authority of New York and New Jersey, or any local development corporation within the **City**, or any public benefit corporation organized under the **Laws** of the State of New York, or;

63.3 If any person refuses to testify for a reason other than the assertion of his/her privilege against self incrimination in an investigation, audit or inquiry conducted by a **City** or State governmental agency or authority empowered directly or by designation to compel the attendance of witnesses and to take testimony under oath, or by the Inspector General of the governmental agency that is a party in interest in, and is seeking testimony concerning the award of, or performance under any transaction, agreement, lease, permit, contract, or license entered into with the **City**, the State, or any political subdivision thereof or any local development corporation within the **City**, then;

63.4 The **Commissioner** whose **Agency** is a party in interest to the transaction, submitted bid, submitted proposal, contract, lease, permit, or license shall convene a hearing, upon not less than five (5) **Days'** written notice to the parties involved to determine if any penalties should attach for the failure of a person to testify.

63.5 If any non-governmental party to the hearing requests an adjournment, the **Commissioner** who convened the hearing may, upon granting the adjournment, suspend any contract, lease, permit, or license, pending the final determination pursuant to Article 63.7 without the **City** incurring any penalty or damages for delay or otherwise.

63.6 The penalties which may attach after a final determination by the **Commissioner** may include but shall not exceed:

63.6.1 The disqualification for a period not to exceed five (5) years from the date of an adverse determination for any person, or any entity of which such person was a member at the time the testimony was sought, from submitting bids for, or transacting business with, or entering into or obtaining any contract, lease, permit or license with or from the City; and/or

63.6.2 The cancellation or termination of any and all such existing City contracts, leases, permits or licenses that the refusal to testify concerns and that have not been assigned as permitted under this Contract, nor the proceeds of which pledged, to an unaffiliated and unrelated institutional lender for fair value prior to the issuance of the notice scheduling the hearing, without the City incurring any penalty or damages on account of such cancellation or termination; monies lawfully due for goods delivered, work done, rentals, or fees accrued prior to the cancellation or termination shall be paid by the City.

63.7 The Commissioner shall consider and address in reaching his/her determination and in assessing an appropriate penalty the factors in Articles 63.7.1 and 63.7.2. The Commissioner may also consider, if relevant and appropriate, the criteria established in Articles 63.7.3 and 63.7.4, in addition to any other information which may be relevant and appropriate:

63.7.1 The party's good faith endeavors or lack thereof to cooperate fully and faithfully with any governmental investigation or audit, including but not limited to the discipline, discharge, or disassociation of any person failing to testify, the production of accurate and complete books and records, and the forthcoming testimony of all other members, agents, assignees or fiduciaries whose testimony is sought.

63.7.2 The relationship of the person who refused to testify to any entity that is a party to the hearing, including but not limited to, whether the person whose testimony is sought has an ownership interest in the entity and/or the degree of authority and responsibility the person has within the entity.

63.7.3 The nexus of the testimony sought to the subject entity and its contracts, leases, permits or licenses with the City.

63.7.4 The effect a penalty may have on an unaffiliated and unrelated party or entity that has a significant interest in an entity subject to penalties under Article 63.6, provided that the party or entity has given actual notice to the Commissioner upon the acquisition of the interest, or at the hearing called for in Article 63.4, gives notice and proves that such interest was previously acquired. Under either circumstance the party or entity shall present evidence at the hearing demonstrating the potential adverse impact a penalty will have on such person or entity.

63.8 Definitions:

63.8.1 The term "license" or "permit" as used in this Article 63 shall be defined as a license, permit, franchise or concession not granted as a matter of right.

63.8.2 The term "person" as used in this Article 63 shall be defined as any natural person doing business alone or associated with another person or entity as a partner, director, officer, principal or employee.

63.8.3 The term "entity" as used in this Article 63 shall be defined as any firm, partnership, corporation, association, joint venture, or person that receives monies, benefits, licenses, leases, or permits from or through the City or otherwise transacts business with the City.

63.8.4 The term "member" as used in this Article 63 shall be defined as any person associated with another person or entity as a partner, director, officer, principal or employee.

63.9 In addition to and notwithstanding any other provision of this Contract, the Commissioner may in his/her sole discretion terminate this Contract upon not less than three (3) Days' written notice in the event the Contractor fails to promptly report in writing to the Commissioner of the Department of Investigations ("DOI") of the City any solicitation of money, goods, requests for future employment or other benefit or thing of value, by or on behalf of any employee of the City or other person, firm, corporation or entity for any purpose which may be related to the procurement or obtaining of this Contract by the Contractor, or affecting the performance of this Contract.

ARTICLE 64. TERMINATION BY THE CITY

64.1 In addition to termination pursuant to any other article of this Contract, the Commissioner may, at any time, terminate this Contract by written notice to the Contractor. In the event of termination, the Contractor shall, upon receipt of such notice, unless otherwise directed by the Commissioner:

64.1.1 Stop Work on the date specified in the notice;

64.1.2 Take such action as may be necessary for the protection and preservation of the City's materials and property;

64.1.3 Cancel all cancelable orders for material and equipment;

64.1.4 Assign to the City and deliver to the Site or another location designated by the Commissioner, any non-cancelable orders for material and equipment that is not capable of use except in the performance of this Contract and has been specifically fabricated for the sole purpose of this Contract and not incorporated in the Work;

64.1.5 Take no action which will increase the amounts payable by the City under this Contract.

64.2 In the event of termination by the City pursuant to this Article 64, payment to the Contractor shall be in accordance with Articles 64.2.1, 64.2.2 or 64.2.3, to the extent that each respective article applies.

64.2.1 Lump Sum Contracts or Items: On all lump sum Contracts, or on lump sum items in a Contract, the City will pay the Contractor the sum of the amounts described in Articles 64.2.1(a) and 64.2.1(b), less all payments previously made pursuant to this Contract. On lump sum Contracts only, the City will also pay the Contractor an additional sum as provided in Article 64.2.1(c).

64.2.1(a) For Work completed prior to the notice of termination, the Contractor shall be paid a pro rata portion of the lump sum bid amount, plus approved change orders, based upon the percent completion of the Work, as determined by the Commissioner. For the purpose of determining the pro rata portion of the lump sum bid amount to which the Contractor is entitled, the bid breakdown submitted in accordance with Article 41 shall be considered, but shall not be dispositive. The Commissioner's determination hereunder shall be final, binding, and conclusive.

64.2.1(b) For non-cancelable material and equipment that is not capable of use except in the performance of this **Contract** and has been specifically fabricated for the sole purpose of this **Contract**, but not yet incorporated in the **Work**, the **Contractor** shall be paid the lesser of the following, less salvage value:

64.2.1(b)(i) The Direct Cost, as defined in Article 64.2.4; or

64.2.1(b)(ii) The fair and reasonable value, if less than Direct Cost, of such material and equipment, plus necessary and reasonable delivery costs.

64.2.1(b)(iii) In addition, the **Contractor** shall be paid five (5%) percent of the amount described in Article 64.2.1(b)(i) or Article 64.2.1(b)(ii), whichever applies.

64.2.1(c) Except as otherwise provided in Article 64.2.1(d), on all lump sum **Contracts**, the **Contractor** shall be paid the percentage indicated below applied to the difference between the total lump sum bid amount and the total of all payments made prior to the notice of termination plus all payments allowed pursuant to Articles 64.2.1(a) and 64.2.1(b):

64.2.1(c)(i) Five (5%) percent of the first five million (\$5,000,000) dollars; and

64.2.1(c)(ii) Three (3%) percent of any amount between five million (\$5,000,000) dollars and fifteen million (\$15,000,000) dollars; plus

64.2.1(c)(iii) One (1%) percent of any amount over fifteen million (\$15,000,000) dollars.

64.2.1(d) In the event the **City** terminates a lump sum **Contract** pursuant to this Article 64 within ninety (90) **Days** after registration of the **Contract** with the **Comptroller**, the **Contractor** shall be paid one (1%) percent of the difference between the lump sum bid amount and the total of all payments made pursuant to this Article 64.2.

64.2.2 Unit Price Contracts or Items: On all unit price **Contracts**, or on unit price items in a **Contract**, the **City** will pay the **Contractor** the sum of the amounts described in Articles 64.2.2(a) and 64.2.2(b), less all payments previously made pursuant to this **Contract**:

64.2.2(a) For all completed units, the unit price stated in the **Contract**, and

64.2.2(b) For units that have been ordered but are only partially completed, the **Contractor** will be paid:

64.2.2(b)(i) A pro rata portion of the unit price stated in the **Contract** based upon the percent completion of the unit and

64.2.2(b)(ii) For non-cancelable material and equipment, payment will be made pursuant to Article 64.2.1(b).

64.2.3 Time and Materials Contracts or Items Based on Time and Material Records: On all **Contracts** or items in a **Contract** where payment for the **Work** is based on time and

material records, the **Contractor** shall be paid in accordance with Article 26, less all payments previously made pursuant to this **Contract**.

64.2.4 Direct Costs: Direct Costs as used in this Article 64.2 shall mean:

64.2.4(a) The actual purchase price of material and equipment, plus necessary and reasonable delivery costs,

64.2.4(b) The actual cost of labor involved in construction and installation at the **Site**, and

64.2.4(c) The actual cost of necessary bonds and insurance purchased pursuant to requirements of this **Contract** less any amounts that have been or should be refunded by the **Contractor's** sureties or insurance carriers.

64.2.4(d) Direct Costs shall not include overhead.

64.3 In no event shall any payments under this Article 64 exceed the **Contract** price for such items.

64.4 All payments pursuant to Article 64 shall be in the nature of liquidated damages and shall be accepted by the **Contractor** in full satisfaction of all claims against the **City**.

64.5 The **City** may deduct or set off against any sums due and payable pursuant to this Article 64, any deductions authorized by this **Contract** or by **Law** (including but not limited to liquidated damages) and any claims it may have against the **Contractor**. The **City's** exercise of the right to terminate the **Contract** pursuant to this Article 64 shall not impair or otherwise effect the **City's** right to assert any claims it may have against the **Contractor** in a plenary action.

64.6 Where the **Work** covered by the **Contract** has been substantially completed, as determined in writing by the **Commissioner**, termination of the **Work** shall be handled as an omission of **Work** pursuant to Articles 29 and 33, in which case a change order will be issued to reflect an appropriate reduction in the **Contract** sum, or if the amount is determined after final payment, such amount shall be paid by the **Contractor**.

ARTICLE 65. CHOICE OF LAW, CONSENT TO JURISDICTION AND VENUE

65.1 This **Contract** shall be deemed to be executed in the **City** regardless of the domicile of the **Contractor**, and shall be governed by and construed in accordance with the **Laws** of the State of New York and the **Laws** of the United States, where applicable.

65.2 The parties agree that any and all claims asserted against the **City** arising under this **Contract** or related thereto shall be heard and determined in the courts of the State of New York ("New York State Courts") located in the **City** and County of New York. To effect this **Contract** and intent, the **Contractor** agrees:

65.2.1 If the **City** initiates any action against the **Contractor** in Federal court or in a New York State Court, service of process may be made on the **Contractor** either in person, wherever such **Contractor** may be found, or by registered mail addressed to the **Contractor** at its address as set forth in this **Contract**, or to such other address as the **Contractor** may provide to the **City** in writing; and

65.2.2 With respect to any action between the **City** and the **Contractor** in a New York State Court, the **Contractor** hereby expressly waives and relinquishes any rights it might otherwise have:

65.2.2(a) To move to dismiss on grounds of forum non conveniens;

65.2.2(b) To remove to Federal Court; and

65.2.2(c) To move for a change of venue to a New York State Court outside New York County.

65.2.3 With respect to any action brought by the **City** against the **Contractor** in a Federal Court located in the **City**, the **Contractor** expressly waives and relinquishes any right it might otherwise have to move to transfer the action to a Federal Court outside the **City**.

65.2.4 If the **Contractor** commences any action against the **City** in a court located other than in the **City** and County of New York, upon request of the **City**, the **Contractor** shall either consent to a transfer of the action to a New York State Court of competent jurisdiction located in the **City** and County of New York or, if the Court where the action is initially brought will not or cannot transfer the action, the **Contractor** shall consent to dismiss such action without prejudice and may thereafter reinstate the action in a New York State Court of competent jurisdiction in New York County.

65.3 If any provision(s) of this Article 65 is held unenforceable for any reason, each and all other provision(s) shall nevertheless remain in full force and effect.

ARTICLE 66. PARTICIPATION IN AN INTERNATIONAL BOYCOTT

66.1 The **Contractor** agrees that neither the **Contractor** nor any substantially owned affiliated company is participating or shall participate in an international boycott in violation of the provisions of the Federal Export Administration Act of 1979, as amended, or the regulations of the United States Department of Commerce (Commerce Department) promulgated thereunder.

66.2 Upon the final determination by the Commerce Department or any other agency of the United States as to, or conviction of the **Contractor** or a substantially-owned affiliated company thereof for participation in an international boycott in violation of the provisions of the Export Administration Act of 1979, as amended, or the regulations promulgated thereunder, the **Comptroller** may, at his/her option, render forfeit and void this **Contract**.

66.3 The **Contractor** shall comply in all respects, with the provisions of Section 6-114 of the Administrative Code and the rules and regulations issued by the **Comptroller** thereunder.

ARTICLE 67. LOCALLY BASED ENTERPRISE PROGRAM

67.1 This **Contract** is subject to the requirements of Section 6-108.1 of the Administrative Code and regulations promulgated thereunder. No construction contract shall be awarded unless and until these requirements have been complied with in their entirety; however, compliance with this Article 67 is not required if the Agency sets Subcontractor Participation Goals for Minority- and Women-Owned Business Enterprises (M/WBEs).

67.2 Unless specifically waived by the **Commissioner** with the approval of the Division of Economic and Financial Opportunity of the City Department of Business Services, if any portion of the **Contract** is subcontracted, not less than ten (10%) percent of the total dollar amount of the **Contract** shall be awarded to locally based enterprises (LBEs); except that where less than ten (10%) percent of the total dollar amount of the **Contract** is subcontracted, such lesser percentage shall be so awarded.

67.3 The **Contractor** shall not require performance and payment bonds from LBE **Subcontractors**.

67.4 If the **Contractor** has indicated prior to award that no **Work** will be subcontracted, no **Work** shall be subcontracted without the prior approval of the **Commissioner**, which shall be granted only if the **Contractor** makes a good faith effort beginning at least six (6) weeks before the **Work** is to be performed to obtain LBE **Subcontractors** to perform the **Work**.

67.5 If the **Contractor** has not identified sufficient LBE **Subcontractors** prior to award, it shall sign a letter of compliance stating that it complies with Section 6-108.1 of the Administrative Code, recognizes that achieving the LBE requirement is a condition of its **Contract**, and shall submit documentation demonstrating its good faith efforts to obtain LBEs. After award, the **Contractor** shall begin to solicit LBE's to perform subcontracted **Work** at least six (6) weeks before the date such **Work** is to be performed and shall demonstrate that a good faith effort has been made to obtain LBEs on each subcontract until it meets the required percentage.

67.6 Failure of the **Contractor** to comply with the requirements of Section 6-108.1 of the Administrative Code and the regulations promulgated thereunder shall constitute a material breach of this **Contract**. Remedy for such breach may include the imposition of any or all of the following sanctions:

67.6.1 Reducing the **Contractor's** compensation by an amount equal to the dollar value of the percentage of the LBE subcontracting requirement not complied with;

67.6.2 Declaring the **Contractor** in default;

67.6.3 If the **Contractor** is an LBE, de-certifying and declaring the **Contractor** ineligible to participate in the LBE program for a period of up to three (3) years.

ARTICLE 68. ANTITRUST

68.1 The **Contractor** hereby assigns, sells, and transfers to the **City** all right, title, and interest in and to any claims and causes of action arising under the antitrust **Laws** of New York State or of the United States relating to the particular goods or services purchased or procured by the **City** under this **Contract**.

ARTICLE 69. MacBRIDE PRINCIPLES PROVISIONS

69.1 Notice To All Prospective **Contractors**:

69.1.1 Local Law No. 34 of 1991 became effective on September 10, 1991 and added Section 6-115.1 of the Administrative Code. The local **Law** provides for certain restrictions on **City Contracts** to express the opposition of the people of the **City** to employment discrimination practices in Northern Ireland to promote freedom of work-place opportunity.

69.1.2 Pursuant to Section 6-115.1, prospective **Contractors** for **Contracts** to provide goods or services involving an expenditure of an amount greater than ten thousand

(\$10,000.) dollars, or for construction involving an amount greater than fifteen thousand (\$15,000.) dollars, are asked to sign a rider in which they covenant and represent, as a material condition of their **Contract**, that any business operations in Northern Ireland conducted by the **Contractor** and any individual or legal entity in which the **Contractor** holds a ten (10%) percent or greater ownership interest in the **Contractor** will be conducted in accordance with the MacBride Principles of nondiscrimination in employment.

69.1.3 Prospective **Contractors** are not required to agree to these conditions. However, in the case of **Contracts** let by competitive sealed bidding, whenever the lowest responsible bidder has not agreed to stipulate to the conditions set forth in this notice and another bidder who has agreed to stipulate to such conditions has submitted a bid within five (5%) percent of the lowest responsible bid for a **Contract** to supply goods, services or construction of comparable quality, the **Agency** shall refer such bids to the Mayor, the Speaker or other officials, as appropriate, who may determine, in accordance with applicable **Law**, that it is in the best interest of the **City** that the **Contract** be awarded to other than the lowest responsible pursuant to Section 313(b)(2) of the **City Charter**.

69.1.4 In the case of **Contracts** let by other than competitive sealed bidding, if a prospective **Contractor** does not agree to these conditions, no **Agency**, elected official or the **City Council** shall award the **Contract** to that bidder unless the **Agency** seeking to use the goods, services or construction certifies in writing that the **Contract** is necessary for the **Agency** to perform its functions and there is no other responsible **Contractor** who will supply goods, services or construction of comparable quality at a comparable price.

69.2 In accordance with Section 6-115.1 of the Administrative Code, the **Contractor** stipulates that such **Contractor** and any individual or legal entity in which the **Contractor** holds a ten (10%) percent or greater ownership interest in the **Contractor** either:

69.2.1 Have no business operations in Northern Ireland, or

69.2.2 Shall take lawful steps in good faith to conduct any business operations they have in Northern Ireland in accordance with the MacBride Principles, and shall permit independent monitoring of their compliance with such principles.

69.3 For purposes of this Article, the following terms shall have the following meanings:

69.3.1 "MacBride Principles" shall mean those principles relating to nondiscrimination in employment and freedom of work-place opportunity which require employers doing business in Northern Ireland to:

69.3.1(a) increase the representation of individuals from under-represented religious groups in the workforce, including managerial, supervisory, administrative, clerical and technical jobs;

69.3.1(b) take steps to promote adequate security for the protection of employees from under-represented religious groups both at the work-place and while traveling to and from **Work**;

69.3.1(c) ban provocative religious or political emblems from the workplace;

69.3.1(d) publicly advertise all job openings and make special recruitment efforts to attract applicants from under-represented religious groups;

69.3.1(e) establish layoff, recall, and termination procedures which do not in practice favor a particular religious group;

69.3.1(f) abolish all job reservations, apprenticeship restrictions and different employment criteria which discriminate on the basis of religion;

69.3.1(g) develop training programs that will prepare substantial numbers of current employees from under-represented religious groups for skilled jobs, including the expansion of existing programs and the creation of new programs to train, upgrade, and improve the skills of workers from under-represented religious groups;

69.3.1(h) establish procedures to assess, identify, and actively recruit employees from under-represented religious groups with potential for further advancement; and

69.3.1(i) appoint a senior management staff member to oversee affirmative action efforts and develop a timetable to ensure their full implementation.

69.4 The **Contractor** agrees that the covenants and representations in Article 69.2 are material conditions to this **Contract**. In the event the **Agency** receives information that the **Contractor** who made the stipulation required by this Article 69 is in violation thereof, the **Agency** shall review such information and give the **Contractor** an opportunity to respond. If the **Agency** finds that a violation has occurred, the **Agency** shall have the right to declare the **Contractor** in default and/or terminate this **Contract** for cause and procure supplies, services or **Work** from another source in the manner the **Agency** deems proper. In the event of such termination, the **Contractor** shall pay to the **Agency**, or the **Agency** in its sole discretion may withhold from any amounts otherwise payable to the **Contractor**, the difference between the **Contract** price for the uncompleted portion of this **Contract** and the cost to the **Agency** of completing performance of this **Contract** either itself or by engaging another **Contractor** or **Contractors**. In the case of a requirement **Contract**, the **Contractor** shall be liable for such difference in price for the entire amount of supplies required by the **Agency** for the uncompleted term of **Contractor's Contract**. In the case of a construction **Contract**, the **Agency** shall also have the right to hold the **Contractor** in partial or total default in accordance with the default provisions of this **Contract**, and/or may seek debarment or suspension of the **Contractor**. The rights and remedies of the **Agency** hereunder shall be in addition to, and not in lieu of, any rights and remedies the **Agency** has pursuant to this **Contract** or by operation of Law.

ARTICLE 70. ELECTRONIC FILING/NYC DEVELOPMENT HUB

70.1 The **Contractor** shall electronically file all alteration type-2 and alteration type-3 applications via the New York City Development Hub Web site, except applications for the following types of minor alterations: enlargements, curb cuts, legalizations, fire alarms, builders pavement plans, and jobs filed on Landmark Preservation Commission calendared properties. All such filings must be professionally certified. Information about electronic filing via the New York City Development Hub is available on the City Department of Buildings Web site at www.nyc.gov/buildings.

ARTICLE 71. PROHIBITION OF TROPICAL HARDWOODS

71.1 Tropical hardwoods, as defined in Section 165 of the New York State Finance Law (Finance Law), shall not be utilized in the performance of this **Contract** except as expressly permitted by Section 165 of the Finance Law.

ARTICLE 72. CONFLICTS OF INTEREST

72.1 Section 2604 of the City Charter and other related provisions of the City Charter, the Administrative Code, and the Penal Law are applicable under the terms of this Contract in relation to conflicts of interest and shall be extended to Subcontractors authorized to perform Work, labor and services pursuant to this Contract and further, it shall be the duty and responsibility of the Contractor to so inform its respective Subcontractors. Notice is hereby given that, under certain circumstances, penalties may be invoked against the donor as well as the recipient of any form of valuable gift.

ARTICLE 73. MERGER CLAUSE

73.1 The written Contract herein, contains all the terms and conditions agreed upon by the parties hereto, and no other agreement, oral or otherwise, regarding the subject matter of this Contract shall be deemed to exist or to bind any of the parties hereto, or to vary any of the terms contained herein.

ARTICLE 74. STATEMENT OF WORK

74.1 The Contractor shall furnish all labor and materials and perform all Work in strict accordance with the Specifications and Addenda thereto, numbered 2.

ARTICLE 75. COMPENSATION TO BE PAID TO CONTRACTOR

75.1 The City will pay and the Contractor will accept in full consideration for the performance of the Contract, subject to additions and deductions as provided herein, the total sum of: *Thirty Six Million Six Hundred* Dollars, (\$*36,604,079.18*), this said sum being the amount at which the Contract was awarded to the Contractor at a public letting thereof, based upon the Contractor's bid for the Contract.

Four Thousand, Six Hundred Seventy Nine ¹⁸/₁₀₀

ARTICLE 76. ELECTRONIC FUNDS TRANSFER

76.1 In accordance with Section 6-107.1 of the Administrative Code, the Contractor agrees to accept payments under this Contract from the City by electronic funds transfer (EFT). An EFT is any transfer of funds, other than a transaction originated by check, draft or similar paper instrument, which is initiated through an electronic terminal, telephonic instrument or computer or magnetic tape so as to order, instruct or authorize a financial institution to debit or credit an account. Prior to the first payment made under this Contract, the Contractor shall designate one financial institution or other authorized payment agent and shall complete the attached "EFT Vendor Payment Enrollment Form" in order to provide the Commissioner of the City Department of Finance with information necessary for the Contractor to receive electronic funds transfer payments through a designated financial institution or authorized payment agent. The crediting of the amount of a payment to the appropriate account on the books of a financial institution or other authorized payment agent designated by the Contractor shall constitute full satisfaction by the City for the amount of the payment under this Contract. The account information supplied by the Contractor to facilitate the electronic funds transfer shall remain confidential to the fullest extent provided by Law.

76.2 The Commissioner may waive the application of the requirements of this Article 76 to payments on contracts entered into pursuant to Section 315 of the City Charter. In addition, the Commissioner of the Department of Finance and the Comptroller may jointly issue standards pursuant to

which the Agency may waive the requirements of this Article 76 for payment in the following circumstances: (i) for individuals or classes of individuals for whom compliance imposes a hardship; (ii) for classifications or types of checks; or (iii) in other circumstances as may be necessary in the interest of the City.

ARTICLE 77. RECORDS RETENTION

77.1 The Contractor agrees to retain all books, records, and other documents relevant to this Contract for six years after the final payment or termination of this Contract, whichever is later. City, state, and federal auditors and any other persons duly authorized by the City shall have full access to and the right to examine any such books, records, and other documents during the retention period.

ARTICLE 78. PARTICIPATION BY MINORITY-OWNED AND WOMEN-OWNED BUSINESS ENTERPRISES IN CITY PROCUREMENT

NOTICE TO ALL PROSPECTIVE CONTRACTORS

ARTICLE I. M/WBE PROGRAM

Local Law No. 129 of 2005 added and Local Law 1 of 2013 amended Section 6-129 of the Administrative Code of the City of New York (hereinafter "Section 6-129"). Section 6-129 establishes the program for participation in City procurement ("M/WBE Program") by minority-owned business enterprises ("MBEs") and women-owned business enterprises ("WBEs"), certified in accordance with Section 1304 of the New York City Charter. As stated in Section 6-129, the intent of the program is to address the impact of discrimination on the City's procurement process, and to promote the public interest in avoiding fraud and favoritism in the procurement process, increasing competition for City business, and lowering contract costs. The contract provisions contained herein are pursuant to Section 6-129, and the rules of the Department of Small Business Services ("DSBS") promulgated thereunder.

If this Contract is subject to the M/WBE Program established by Section 6-129, the specific requirements of MBE and/or WBE participation for this Contract are set forth in Schedule B of the Contract (entitled the "M/WBE Utilization Plan"), and are detailed below. The Contractor must comply with all applicable MBE and WBE requirements for this Contract.

All provisions of Section 6-129 are hereby incorporated in the Contract by reference and all terms used herein that are not defined herein shall have the meanings given such terms in Section 6-129. Article I, Part A, below, sets forth provisions related to the participation goals for construction, standard and professional services contracts. Article I, Part B, below, sets forth miscellaneous provisions related to the M/WBE Program.

PART A

PARTICIPATION GOALS FOR CONSTRUCTION, STANDARD AND PROFESSIONAL SERVICES CONTRACTS OR TASK ORDERS

1. The MBE and/or WBE Participation Goals established for this Contract or Task Orders issued pursuant to this Contract, ("Participation Goals"), as applicable, are set forth on Schedule B, Part I to this Contract (see Page 1, line 1 Total Participation Goals) or will be set forth on Schedule B, Part I to Task Orders issued pursuant to this Contract, as applicable.

The **Participation Goals** represent a percentage of the total dollar value of the Contract or Task Order, as applicable, that may be achieved by awarding subcontracts to firms certified with New York City Department of Small Business Services as MBEs and/or WBEs, and/or by crediting the participation of prime contractors and/or qualified joint ventures as provided in Section 3 below, unless the goals have been waived or modified by Agency in accordance with Section 6-129 and Part A, Sections 10 and 11 below, respectively.

2. If **Participation Goals** have been established for this Contract or Task Orders issued pursuant to this Contract, Contractor agrees or shall agree as a material term of the Contract that Contractor shall be subject to the **Participation Goals**, unless the goals are waived or modified by Agency in accordance with Section 6-129 and Part A, Sections 10 and 11 below, respectively.

3. If **Participation Goals** have been established for this Contract or Task Order issued pursuant to this Contract, a Contractor that is an MBE and/or WBE shall be permitted to count its own participation toward fulfillment of the relevant **Participation Goal**, provided that in accordance with Section 6-129 the value of Contractor's participation shall be determined by subtracting from the total value of the Contract or Task Order, as applicable, any amounts that the Contractor pays to direct subcontractors (as defined in Section 6-129(c)(13)), and provided further that a Contractor that is certified as both an MBE and a WBE may count its own participation either toward the goal for MBEs or the goal for WBEs, but not both.

A Contractor that is a qualified joint venture (as defined in Section 6-129(c)(30)) shall be permitted to count a percentage of its own participation toward fulfillment of the relevant **Participation Goal**. In accordance with Section 6-129, the value of Contractor's participation shall be determined by subtracting from the total value of the Contract or Task Order, as applicable, any amounts that Contractor pays to direct subcontractors, and then multiplying the remainder by the percentage to be applied to total profit to determine the amount to which an MBE or WBE is entitled pursuant to the joint venture agreement, provided that where a participant in a joint venture is certified as both an MBE and a WBE, such amount shall be counted either toward the goal for MBEs or the goal for WBEs, but not both.

4. A. If **Participation Goals** have been established for this Contract, a prospective contractor shall be required to submit with its bid or proposal, as applicable, a completed Schedule B, M/WBE Utilization Plan, Part II (see Pages 2-4) indicating: (a) whether the contractor is an MBE or WBE, or qualified joint venture; (b) the percentage of work it intends to award to direct subcontractors; and (c) in cases where the contractor intends to award direct subcontracts, a description of the type and dollar value of work designated for participation by MBEs and/or WBEs, and the time frames in which such work is scheduled to begin and end. In the event that this M/WBE Utilization Plan indicates that the bidder or proposer, as applicable, does not intend to meet the **Participation Goals**, the bid or proposal, as applicable, shall be deemed non-responsive, unless Agency has granted the bidder or proposer, as applicable, a pre-award waiver of the Participation Goals in accordance with Section 6-129 and Part A, Section 10 below.

B. (i) If this Contract is for a master services agreement or other requirements type contract that will result in the issuance of Task Orders that will be individually registered ("Master Services Agreement") and is subject to M/WBE **Participation Goals**, a prospective contractor shall be required to submit with its bid or proposal, as applicable, a completed Schedule B, M/WBE Participation Requirements for Master Services Agreements That Will Require Individually Registered Task Orders, Part II (page 2) indicating the prospective contractor's certification and required affirmations to make all reasonable good faith efforts to meet participation goals established on each individual Task Order issued pursuant to this Contract, or if a partial waiver is obtained or such goals are modified by the Agency, to meet the modified **Participation Goals** by soliciting and obtaining the participation of certified MBE and/or WBE firms. In the event that the Schedule B indicates that the bidder or proposer, as applicable, does not intend to meet the **Participation Goals** that may be established on Task Orders issued pursuant to this Contract, the bid or proposal, as applicable, shall be deemed nonresponsive.

(ii) **Participation Goals** on a Master Services Agreement will be established for individual Task Orders issued after the Master Services Agreement is awarded. If **Participation Goals** have been established on a Task Order, a contractor shall be required to submit a Schedule B – M/WBE Utilization Plan For Independently Registered Task Orders That Are Issued Pursuant to Master Services Agreements, Part II (see Pages 2-4) indicating: (a) whether the contractor is an MBE or WBE, or qualified joint venture; (b) the percentage of work it intends to award to direct subcontractors; and (c) in cases where the contractor intends to award direct subcontracts, a description of the type and dollar value of work designated for participation by MBEs and/or WBEs, and the time frames in which such work is scheduled to begin and end. The contractor must engage in good faith efforts to meet the **Participation Goals** as established for the Task Order unless Agency has granted the contractor a pre-award waiver of the Participation Goals in accordance with Section 6-129 and Part A, Section 10 below.

C. THE BIDDER/PROPOSER MUST COMPLETE THE SCHEDULE B INCLUDED HEREIN (SCHEDULE B, PART II). A SCHEDULE B SUBMITTED BY THE BIDDER/PROPOSER WHICH DOES NOT INCLUDE THE VENDOR CERTIFICATION AND REQUIRED AFFIRMATIONS (SEE SECTION V OF PART II) WILL BE DEEMED TO BE NON-RESPONSIVE, UNLESS A FULL WAIVER OF THE PARTICIPATION GOALS IS GRANTED (SCHEDULE B, PART III). IN THE EVENT THAT THE CITY DETERMINES THAT THE BIDDER/PROPOSER HAS SUBMITTED A SCHEDULE B WHERE THE VENDOR CERTIFICATION AND REQUIRED AFFIRMATIONS ARE COMPLETED BUT OTHER ASPECTS OF THE SCHEDULE B ARE NOT COMPLETE, OR CONTAIN A COPY OR COMPUTATION ERROR THAT IS AT ODDS WITH THE VENDOR CERTIFICATION AND AFFIRMATIONS, THE BIDDER/PROPOSER WILL BE NOTIFIED BY THE AGENCY AND WILL BE GIVEN FOUR (4) CALENDAR DAYS FROM RECEIPT OF NOTIFICATION TO CURE THE SPECIFIED DEFICIENCIES AND RETURN A COMPLETED SCHEDULE B TO THE AGENCY. FAILURE TO DO SO WILL RESULT IN A DETERMINATION THAT THE BID/PROPOSAL IS NON-RESPONSIVE. RECEIPT OF NOTIFICATION IS DEFINED AS THE DATE NOTICE IS E-MAILED OR FAXED (IF THE BIDDER/PROPOSER HAS PROVIDED AN E-MAIL ADDRESS OR FAX NUMBER), OR NO LATER THAN FIVE (5) CALENDAR DAYS FROM THE DATE OF MAILING OR UPON DELIVERY, IF DELIVERED.

5. Where an M/WBE Utilization Plan has been submitted, the Contractor shall, within 30 days of issuance by Agency of a notice to proceed, submit a list of proposed persons or entities to which it intends to award subcontracts within the subsequent 12 months. In the case of multiyear contracts, such list shall also be submitted every year thereafter. The Agency may also require the Contractor to report periodically about the contracts awarded by its direct subcontractors to indirect subcontractors (as defined in Section 6-129(c)(22)). **PLEASE NOTE: If this Contract is a public works project subject to GML §101(5) (i.e., a contract valued at or below \$3M for projects in New York City) or if the Contract is subject to a project labor agreement in accordance with Labor Law §222, and the bidder is required to identify at the time of bid submission its intended subcontractors for the Wicks trades (plumbing and gas fitting; steam heating, hot water heating, ventilating and air conditioning (HVAC); and electric wiring), the Contractor must identify all those to which it intends to award construction subcontracts for any portion of the Wicks trade work at the time of bid submission, regardless of what point in the life of the contract such subcontracts will occur. In identifying intended subcontractors in the bid submission, bidders may satisfy any Participation Goals established for this Contract by proposing one or more subcontractors that are MBEs and/or WBEs for any portion of the Wicks trade work. In the event that the Contractor's selection of a subcontractor is disapproved, the Contractor shall have a reasonable time to propose alternate subcontractors.**

6. MBE and WBE firms must be certified by DSBS in order for the Contractor to credit such firms' participation toward the attainment of the **Participation Goals**. Such certification must occur prior to the

firms' commencement of work. A list of MBE and WBE firms may be obtained from the DSBS website at www.nyc.gov/buycertified, by emailing DSBS at buyer@sbs.nyc.gov, by calling (212) 513-6356, or by visiting or writing DSBS at 110 William St., New York, New York, 10038, 7th floor. Eligible firms that have not yet been certified may contact DSBS in order to seek certification by visiting www.nyc.gov/getcertified, emailing MWBE@sbs.nyc.gov, or calling the DSBS certification helpline at (212) 513-6311. A firm that is certified as both an MBE and a WBE may be counted either toward the goal for MBEs or the goal for WBEs, but not both. No credit shall be given for participation by a graduate MBE or graduate WBE, as defined in Section 6-129(c)(20).

7. Where an M/WBE Utilization Plan has been submitted, the Contractor shall, with each voucher for payment, and/or periodically as Agency may require, submit statements, certified under penalty of perjury, which shall include, but not be limited to, the total amount the Contractor paid to its direct subcontractors, and, where applicable pursuant to Section 6-129(j), the total amount direct subcontractors paid to indirect subcontractors; the names, addresses and contact numbers of each MBE or WBE hired as a subcontractor by the Contractor, and, where applicable, hired by any of the Contractor's direct subcontractors; and the dates and amounts paid to each MBE or WBE. The Contractor shall also submit, along with its voucher for final payment: the total amount it paid to subcontractors, and, where applicable pursuant to Section 6-129(j), the total amount its direct subcontractors paid directly to their indirect subcontractors; and a final list, certified under penalty of perjury, which shall include the name, address and contact information of each subcontractor that is an MBE or WBE, the work performed by, and the dates and amounts paid to each.

8. If payments made to, or work performed by, MBEs or WBEs are less than the amount specified in the Contractor's M/WBE Utilization Plan, Agency shall take appropriate action, in accordance with Section 6-129 and Article II below, unless the Contractor has obtained a modification of its M/WBE Utilization Plan in accordance with Section 6-129 and Part A, Section 11 below.

9. Where an M/WBE Utilization Plan has been submitted, and the Contractor requests a change order the value of which exceeds the greater of 10 percent of the Contract or Task Order, as applicable, or \$500,000, Agency shall review the scope of work for the Contract or Task Order, as applicable, and the scale and types of work involved in the change order, and determine whether the **Participation Goals** should be modified.

10. Pre-award waiver of the **Participation Goals**. (a) A bidder or proposer, or contractor with respect to a Task Order, may seek a pre-award full or partial waiver of the **Participation Goals** in accordance with Section 6-129, which requests that Agency change one or more **Participation Goals** on the grounds that the **Participation Goals** are unreasonable in light of the availability of certified firms to perform the services required, or by demonstrating that it has legitimate business reasons for proposing a lower level of subcontracting in its M/WBE Utilization Plan.

(b) To apply for a full or partial waiver of the **Participation Goals**, a bidder, proposer, or contractor, as applicable, must complete Part III (Page 5) of Schedule B and submit such request no later than seven (7) calendar days prior to the date and time the bids, proposals, or Task Orders are due, in writing to the Agency by email at poped@ddc.nyc.gov or via facsimile at (718) 391-1886. Bidders, proposers, or contractors, as applicable, who have submitted requests will receive an Agency response by no later than two (2) calendar days prior to the due date for bids, proposals, or Task Orders; provided, however, that if that date would fall on a weekend or holiday, an Agency response will be provided by close-of-business on the business day before such weekend or holiday date.

(c) If the Agency determines that the **Participation Goals** are unreasonable in light of the availability of certified firms to perform the services required, it shall revise the solicitation and extend the deadline for bids and proposals, or revise the Task Order, as applicable.

(d) Agency may grant a full or partial waiver of the **Participation Goals** to a bidder, proposer or contractor, as applicable, who demonstrates—before submission of the bid, proposal or Task Order, as applicable—that it has legitimate business reasons for proposing the level of subcontracting in its **M/WBE Utilization Plan**. In making its determination, Agency shall consider factors that shall include, but not be limited to, whether the bidder, proposer or contractor, as applicable, has the capacity and the bona fide intention to perform the Contract without any subcontracting, or to perform the Contract without awarding the amount of subcontracts represented by the **Participation Goals**. In making such determination, Agency may consider whether the **M/WBE Utilization Plan** is consistent with past subcontracting practices of the bidder, proposer or contractor, as applicable, whether the bidder, proposer or contractor, as applicable, has made efforts to form a joint venture with a certified firm, and whether the bidder, proposer, or contractor, as applicable, has made good faith efforts to identify other portions of the Contract that it intends to subcontract.

11. **Modification of M/WBE Utilization Plan.** (a) A Contractor may request a modification of its **M/WBE Utilization Plan** after award of this Contract. **PLEASE NOTE: If this Contract is a public works project subject to GML §101(5) (i.e., a contract valued at or below \$3M for projects in New York City) or if the Contract is subject to a project labor agreement in accordance with Labor Law §222, and the bidder is required to identify at the time of bid submission its intended subcontractors for the Wicks trades (plumbing and gas fitting; steam heating, hot water heating, ventilating and air conditioning (HVAC); and electric wiring), the Contractor may request a Modification of its M/WBE Utilization Plan as part of its bid submission.** The Agency may grant a request for Modification of a Contractor's **M/WBE Utilization Plan** if it determines that the Contractor has established, with appropriate documentary and other evidence, that it made reasonable, good faith efforts to meet the **Participation Goals**. In making such determination, Agency shall consider evidence of the following efforts, as applicable, along with any other relevant factors:

- (i) The Contractor advertised opportunities to participate in the Contract, where appropriate, in general circulation media, trade and professional association publications and small business media, and publications of minority and women's business organizations;
- (ii) The Contractor provided notice of specific opportunities to participate in the Contract, in a timely manner, to minority and women's business organizations;
- (iii) The Contractor sent written notices, by certified mail or facsimile, in a timely manner, to advise MBEs or WBEs that their interest in the Contract was solicited;
- (iv) The Contractor made efforts to identify portions of the work that could be substituted for portions originally designated for participation by MBEs and/or WBEs in the **M/WBE Utilization Plan**, and for which the Contractor claims an inability to retain MBEs or WBEs;
- (v) The Contractor held meetings with MBEs and/or WBEs prior to the date their bids or proposals were due, for the purpose of explaining in detail the scope and requirements of the work for which their bids or proposals were solicited;
- (vi) The Contractor made efforts to negotiate with MBEs and/or WBEs as relevant to perform specific subcontracts, or act as suppliers or service providers;
- (vii) Timely written requests for assistance made by the Contractor to Agency's **M/WBE liaison officer** and to DSBS;
- (viii) Description of how recommendations made by DSBS and Agency were acted upon and an explanation of why action upon such recommendations did not lead to the desired level of participation of MBEs and/or WBEs.

Agency's **M/WBE officer** shall provide written notice to the Contractor of the determination.

(b) The Agency may modify the **Participation Goals** when the scope of the work has been changed by the Agency in a manner that affects the scale and types of work that the Contractor indicated in its **M/WBE Utilization Plan** would be awarded to subcontractors.

12. If this Contract is for an indefinite quantity of construction, standard or professional services or is a requirements type contract and the Contractor has submitted an M/WBE Utilization Plan and has committed to subcontract work to MBEs and/or WBEs in order to meet the **Participation Goals**, the Contractor will not be deemed in violation of the M/WBE Program requirements for this Contract with regard to any work which was intended to be subcontracted to an MBE and/or WBE to the extent that the Agency has determined that such work is not needed.

13. If **Participation Goals** have been established for this Contract or a Task Order issued pursuant to this Contract, at least once annually during the term of the Contract or Task Order, as applicable, Agency shall review the Contractor's progress toward attainment of its M/WBE Utilization Plan, including but not limited to, by reviewing the percentage of work the Contractor has actually awarded to MBE and/or WBE subcontractors and the payments the Contractor made to such subcontractors.

14. If **Participation Goals** have been established for this Contract or a Task Order issued pursuant to this Contract, Agency shall evaluate and assess the Contractor's performance in meeting those goals, and such evaluation and assessment shall become part of the Contractor's overall contract performance evaluation.

PART B: MISCELLANEOUS

1. The Contractor shall take notice that, if this solicitation requires the establishment of an M/WBE Utilization Plan, the resulting contract may be audited by DSBS to determine compliance with Section 6-129. See §6-129(e)(10). Furthermore, such resulting contract may also be examined by the City's Comptroller to assess compliance with the M/WBE Utilization Plan.

2. Pursuant to DSBS rules, construction contracts that include a requirement for an M/WBE Utilization Plan shall not be subject to the law governing Locally Based Enterprises set forth in Section 6-108.1 of the Administrative Code of the City of New York.

3. DSBS is available to assist contractors and potential contractors in determining the availability of MBEs and/or WBEs to participate as subcontractors, and in identifying opportunities that are appropriate for participation by MBEs and/or WBEs in contracts.

4. Prospective contractors are encouraged to enter into qualified joint venture agreements with MBEs and/or WBEs as defined by Section 6-129(c)(30).

5. By submitting a bid or proposal the Contractor hereby acknowledges its understanding of the M/WBE Program requirements set forth herein and the pertinent provisions of Section 6-129, and any rules promulgated thereunder, and if awarded this Contract, the Contractor hereby agrees to comply with the M/WBE Program requirements of this Contract and pertinent provisions of Section 6-129, and any rules promulgated thereunder, all of which shall be deemed to be material terms of this Contract. The Contractor hereby agrees to make all reasonable, good faith efforts to solicit and obtain the participation of MBEs and/or WBEs to meet the required **Participation Goals**.

ARTICLE II. ENFORCEMENT

1. If Agency determines that a bidder or proposer, as applicable, has, in relation to this procurement, violated Section 6-129 or the DSBS rules promulgated pursuant to Section 6-129, Agency may disqualify such bidder or proposer, as applicable, from competing for this Contract and the Agency may revoke such bidder's or proposer's prequalification status, if applicable.

2. Whenever Agency believes that the Contractor or a subcontractor is not in compliance with Section 6-129 or the DSBS rules promulgated pursuant to Section 6-129, or any provision of this Contract that implements Section 6-129, including, but not limited to any **M/WBE** Utilization Plan, Agency shall send a written notice to the Contractor describing the alleged noncompliance and offering the Contractor an opportunity to be heard. Agency shall then conduct an investigation to determine whether such Contractor or subcontractor is in compliance.

3. In the event that the Contractor has been found to have violated Section 6-129, the DSBS rules promulgated pursuant to Section 6-129, or any provision of this Contract that implements Section 6-129, including, but not limited to, any **M/WBE** Utilization Plan, Agency may determine that one of the following actions should be taken:

- (a) entering into an agreement with the Contractor allowing the Contractor to cure the violation;
- (b) revoking the Contractor's pre-qualification to bid or make proposals for future contracts;
- (c) making a finding that the Contractor is in default of the Contract;
- (d) terminating the Contract;
- (e) declaring the Contractor to be in breach of Contract;
- (f) withholding payment or reimbursement;
- (g) determining not to renew the Contract;
- (h) assessing actual and consequential damages;
- (i) assessing liquidated damages or reducing fees, provided that liquidated damages may be based on amounts representing costs of delays in carrying out the purposes of the **M/WBE** Program, or in meeting the purposes of the Contract, the costs of meeting utilization goals through additional procurements, the administrative costs of investigation and enforcement, or other factors set forth in the Contract;
- (j) exercising rights under the Contract to procure goods, services or construction from another contractor and charge the cost of such contract to the Contractor that has been found to be in noncompliance; or
- (k) taking any other appropriate remedy.

4. If an **M/WBE** Utilization Plan has been submitted, and pursuant to this Article II, Section 3, the Contractor has been found to have failed to fulfill its **Participation Goals** contained in its **M/WBE** Utilization Plan or the **Participation Goals** as modified by Agency pursuant to Article I, Part A, Section 11, Agency may assess liquidated damages in the amount of ten percent (10%) of the difference between the dollar amount of work required to be awarded to MBE and/or WBE firms to meet the **Participation Goals** and the dollar amount the Contractor actually awarded and paid, and/or credited, to MBE and/or WBE firms. In view of the difficulty of accurately ascertaining the loss which the City will suffer by reason of Contractor's failure to meet the **Participation Goals**, the foregoing amount is hereby fixed and agreed as the liquidated damages that the City will suffer by reason of such failure, and not as a penalty. Agency may deduct and retain out of any monies which may become due under this Contract the amount of any such liquidated damages; and in case the amount which may become due under this Contract shall be less than the amount of liquidated damages suffered by the City, the Contractor shall be liable to pay the difference.

5. Whenever Agency has reason to believe that an MBE and/or WBE is not qualified for certification, or is participating in a contract in a manner that does not serve a commercially useful function (as defined in Section 6-129(c)(8)), or has violated any provision of Section 6-129, Agency shall notify the Commissioner of DSBS who shall determine whether the certification of such business enterprise should be revoked.

6. Statements made in any instrument submitted to Agency pursuant to Section 6-129 shall be submitted under penalty of perjury and any false or misleading statement or omission shall be grounds for the application of any applicable criminal and/or civil penalties for perjury. The making of a false or fraudulent statement by an MBE and/or WBE in any instrument submitted pursuant to Section 6-129 shall, in addition, be grounds for revocation of its certification.

7. The Contractor's record in implementing its M/WBE Utilization Plan shall be a factor in the evaluation of its performance. Whenever Agency determines that a Contractor's compliance with an M/WBE Utilization Plan has been unsatisfactory, Agency shall, after consultation with the City Chief Procurement Officer, file an advice of caution form for inclusion in VENDEX as caution data.

IN WITNESS WHEREOF, the ^{Deputy} Commissioner, on behalf of the City of New York, and the Contractor, have executed this agreement in quadruplicate, two parts of which are to remain with the Commissioner, another to be filed with the Comptroller of the City, and the fourth to be delivered to the Contractor.

THE CITY OF NEW YORK

By: [Signature]
Deputy Commissioner

CONTRACTOR: Tully Construction Co., Inc.

By: [Signature]
(Member of Firm or Officer of Corporation)

Title: President
Peter K Tully - President

(Where Contractor is a Corporation, add):
Attest:

[Signature]
Secretary

Kenneth W. Tully



ACKNOWLEDGEMENT OF PRINCIPAL, IF A CORPORATION

State of NY County of Queens ss:

On this 19 day of May, 2017, before me personally came Peter K Tully to me known who, being by me duly sworn did depose and say that he resides at Laurelton, NY Tully Construction that he is the President of the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of the directors of said corporation, and that he signed his name thereto by like order.

DESPINA PHILIPS
Notary Public, State of New York
No. 01PH5003152
Qualified in Queens County
Commission Expires Oct. 19, 2018



Notary Public or Commissioner of Deeds

ACKNOWLEDGEMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____ County of _____ ss:

On this _____ day of _____, _____, before me personally appeared _____ to me known, and known to me to be one of the members of the firm of _____ described in and who executed the foregoing instrument; and he acknowledged to me that he executed the same as and for the act and deed of said firm.

Notary Public or Commissioner of Deeds

ACKNOWLEDGEMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____ County of _____ ss:

On this _____ day of _____, _____, before me personally appeared _____ to me known, and known to me to be the person described in and who executed the foregoing instrument; and acknowledged that he executed the same.

Notary Public or Commissioner of Deeds

ACKNOWLEDGEMENT BY COMMISSIONER

State of New York County of Queens ss:

On this 22 day of May, 2017, before me personally came Eric MacFarlane to me known, and known to be the Deputy Commissioner of the Department of Design and Construction of The City of New York, the person described as such in and who as such executed the foregoing instrument and acknowledged to me that he executed the same as Deputy Commissioner for the purposes therein mentioned.


Notary Public or Commissioner of Deeds

BRENDA A. BARREIRO
Notary Public, State of New York
No. 01BA6351073
Qualified in Kings County
Commission Expires Nov. 28, 2020

AUTHORITY

MAYOR'S CERTIFICATE NO. CBX
BUDGET DIRECTOR'S CERTIFICATE NO.

DATED
DATED

APPROPRIATION
COMMISSIONER'S CERTIFICATE

In conformity with the provisions of Section 6-101 of the Administrative Code of the City of New York, it is hereby certified that the estimated cost of the work, materials and supplies required by the within Contract, amounting to

*Thirty Six Million, Six Hundred
Four Thousand, Six Hundred seventy Nine 18/100*

*ENRICA A. BARRERO
Mayor, City of New York
OFFICE OF THE
COMPTROLLER
OF THE CITY OF NEW YORK*

Dollars (\$ 36,604,679.18)

is chargeable to the fund of the Department of Design and Construction entitled Code

Department of Design and Construction

I hereby certify that the specifications contained herein comply with the terms and conditions of the BUDGET.

S. [Signature]
Deputy Commissioner

COMPTROLLER'S CERTIFICATE

The City of New York _____

Pursuant to the provisions of Section 6-101 of the Administrative Code of the City of New York, I hereby certify that there remains unapplied and unexpended a balance of the above mentioned fund applicable to this Contract sufficient to pay the estimated expense of executing the same viz:

\$ _____

Comptroller

MAYOR'S CERTIFICATE OR
CERTIFICATE OF THE DIRECTOR
OF THE BUDGET

Performance Bond #1 (Pages 92 to 95): Use if the total contract price is \$5 Million Or Less. Performance Bond #1 has been approved by the U.S. Small Business Administration ("SBA") for participation in its Bond Guarantee Program.

PERFORMANCE BOND #1 (Page 1)

PERFORMANCE BOND #1

KNOW ALL PERSONS BY THESE PRESENTS,;

That we, _____

hereinafter referred to as the "Principal,"
and, _____

hereinafter referred to as the "Surety" ("Sureties") are held and firmly bound to THE CITY OF NEW YORK, hereinafter referred to as the "City" or to its successors and assigns in the penal sum of _____

(\$ _____) Dollars, lawful money of the United States for the payment of which said sum of money well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal is about to enter, or has entered, into a Contract in writing with the City for _____

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, his or its representatives or assigns, shall well and faithfully perform the said Contract and all modifications, amendments, additions and alterations thereto that may hereafter be made, according to its terms and its true intent and meaning, including repair and or replacement of defective work and guarantees of maintenance for the periods stated in the Contract, and shall fully indemnify and save harmless the City from all cost and damage which it may suffer by reason of the Principal's default of the Contract, and shall fully reimburse and repay the City for all outlay and expense which the City may incur in making

Performance Bond #1 (Pages 92 to 95): Use if the total contract price is \$5 Million Or Less. Performance Bond #1 has been approved by the U.S. Small Business Administration ("SBA") for participation in its Bond Guarantee Program.

PERFORMANCE BOND #1 (Page 2)

good any such default and shall protect the said City of New York against, and pay any and all amounts, damages, cost and judgments which may or shall be recovered against said City or its officers or agents or which the said City of New York may be called upon to pay any person or corporation by reason of any damages arising or growing out of the Principal's default of the Contract, then this obligation shall be null and void, otherwise to remain in full force and effect.

The Surety (Sureties), for value received, hereby stipulates and agrees, upon written notice from the City that the City has determined that the Principal is in default of the Contract, to (1) pay the City the cost to complete the contract as determined by the City in excess of the balance of the Contract held by the City, plus any damages or costs to which the City is entitled, up to the full amount of the above penal sum, (2) fully perform and complete the Work to be performed under the Contract, pursuant to the terms, conditions, and covenants thereof, or (3) tender a completion Contractor that is acceptable to the City. The Surety (Sureties) further agrees, at its option, either to notify the City that it elects to pay the city the cost of completion plus any applicable damages and costs under option (1) above, or to commence and diligently perform the Work specified in the Contract, including physical site work, within twenty-five (25) business days after written notice thereof from the City and, if the Surety elects to fully perform and complete the Work, then to complete all Work within the time set forth in the Contract or such other time as agreed to between the City and Surety in accordance with the Contract. If the Surety elects to tender payment pursuant to (1) above, then the Surety shall tender such amount within fifteen (15) business days notification from the City of the cost of completion. The Surety and the City reserve all rights and defenses each may have against the other; provided, however, that the Surety expressly agrees that its reservation of rights shall not provide a basis for non-performance of its obligation to pay the City the cost of completion, to commence and complete all Work as provided herein, or to tender a completion contractor.

The Surety (Sureties), for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety (Sureties) and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition, or change in or to the said Contract or the Work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or any moneys due or to become due thereunder; and said Surety (Sureties) does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, and waivers, and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to subcontractors shall have the same effect as to said Surety (Sureties) as though done or omitted to be done by or in relation to said Principal. Notwithstanding the above, if the City makes payments to the Principal before the time required by the contract that in the aggregate exceed \$100,000 or 10% of the Contract price, whichever is less, and that have not become earned prior to the Principal being found to be in default, then all payments made to the Principal before the time required by the Contract shall be added to the remaining contract value available to be paid for the completion of the Contract as if such sums had not been paid to the Principal, but shall not provide a basis for non-performance of its obligation to pay the City the cost of completion, to commence and to complete all Work as provided herein, or to tender a completion contractor.

Performance Bond #1 (Pages 92 to 95): Use if the total contract price is \$5 Million Or Less. Performance Bond #1 has been approved by the U.S. Small Business Administration ("SBA") for participation in its Bond Guarantee Program.

PERFORMANCE BOND #1 (Page 3)

IN WITNESS WHEREOF, The Principal and the Surety (Sureties) have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereunto affixed and these presents to be signed by their proper officers, this

_____ day of _____, 20_____
(Seal)

Principal (L.S.)

(Seal) By: _____
Surety

(Seal) By: _____
Surety

(Seal) By: _____
Surety

(Seal) By: _____
Surety

(Seal) By: _____
Surety

By: _____

Bond Premium Rate _____

Bond Premium Cost _____

If the Contractor (Principal) is a partnership, the bond should be signed by each of the individuals who are partners.

If the Contractor (Principal) is a corporation, the bond should be signed in its correct corporate name by a duly authorized officer, agent, or attorney-in-fact.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Contract.

Performance Bond #1 (Pages 92 to 95): Use if the total contract price is \$5 Million Or Less. Performance Bond #1 has been approved by the U.S. Small Business Administration ("SBA") for participation in its Bond Guarantee Program.

PERFORMANCE BOND #1 (Page 4)

ACKNOWLEDGMENT OF PRINCIPAL IF A CORPORATION

State of _____ County of _____ ss:

On this _____ day of _____, 20_____ before me personally came _____, to me known, who, being by me duly sworn did depose and say that he/she resides at _____;

that he/she is the _____ of the corporation described in and which executed the foregoing instrument; and that he/she signed his/her name to the foregoing instrument by order of the directors of said corporation as the duly authorized and binding act thereof.

Notary Public or Commissioner of Deeds.

ACKNOWLEDGMENT OF PRINCIPAL IF A PARTNERSHIP

State of _____ County of _____ ss:

On this _____ day of _____, 20_____ before me personally came _____, to me known, who, being by me duly sworn did depose and say that he/she resides at _____;

that he/she is _____ partner of _____, a limited/general partnership existing under the laws of the State of _____, the partnership described in and which executed the foregoing instrument; and that he/she signed his/her name to the foregoing instrument as the duly authorized and binding act of said partnership.

Notary Public or Commissioner of Deeds.

ACKNOWLEDGMENT OF PRINCIPAL IF AN INDIVIDUAL

State of _____ County of _____ ss:

On this _____ day of _____, 20_____ before me personally came _____, to me known, who, being by me duly sworn did depose and say that he/she resides at _____;

and that he/she is the individual whose name is subscribed to the within instrument and acknowledged to me that by his/her signature on the instrument, said individual executed the instrument.

Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties; (b) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer or other representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions of Surety under which Power of Attorney or other certificate of authority of its agent, officer or representative was issued, and (d) certified copy of latest published financial statement of assets and liabilities of Surety.

Affix Acknowledgments and Justification of Sureties.

Performance Bond #2 (Pages 96 to 99): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 1)

PERFORMANCE BOND #2

KNOW ALL PERSONS BY THESE PRESENTS;

That we, _____

hereinafter referred to as the "Principal,"
and, _____

hereinafter referred to as the "Surety" ("Sureties") are held and firmly bound to THE CITY OF NEW YORK, hereinafter referred to as the "City" or to its successors and assigns in the penal sum of _____

(\$ _____) Dollars, lawful money of the United States for the payment of which said sum of money well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal is about to enter, or has entered, into a Contract in writing with the City for _____

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, his or its representatives or assigns, shall well and faithfully perform the said Contract and all modifications, amendments, additions and alterations thereto that may hereafter be made, according to its terms and its true intent and meaning, including repair and or replacement of defective work and guarantees of maintenance for the periods stated in the Contract, and shall fully indemnify and save harmless the City from all cost and damage which it may suffer by reason of the Principal's default of the Contract, and shall fully reimburse and repay the City for all outlay and expense which the City may incur in making

Performance Bond #2 (Pages 96 to 99): Use if the total contract price is more than \$5 Million.

Bond #8245-21-06 Federal Insurance Company

Bond #015053851 Liberty Mutual Insurance Company

PERFORMANCE BOND #2 (Page 1)

PERFORMANCE BOND #2

KNOW ALL PERSONS BY THESE PRESENTS.:

That we, Tully Construction Co., Inc.

127-50 Northern Boulevard

Flushing, NY 11368

hereinafter referred to as the "Principal,"
and, Federal Insurance Company

Liberty Mutual Insurance Company

15 Mountain View Road

175 Berkeley Street

Warren, NJ 07059

Boston, MA 02116

hereinafter referred to as the "Surety" ("Sureties") are held and firmly bound to THE CITY OF NEW YORK, hereinafter referred to as the "City" or to its successors and assigns in the penal sum of Thirty Six Million Six Hundred Four Thousand Six Hundred Seventy Nine Dollars and 18/100

(\$ 36,604,679.18) Dollars, lawful money of the United States for the payment of which said sum of money well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal is about to enter, or has entered, into a Contract in writing with the City for

FMS ID: HWD10105, E-PIN: 85017B0049001, DDC PIN: 8502017HW0034C Atlantic Avenue Safety

Improvements from Georgia Avenue to Logan Street-Borough of Brooklyn.

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, his or its representatives or assigns, shall well and faithfully perform the said Contract and all modifications, amendments, additions and alterations thereto that may hereafter be made, according to its terms and its true intent and meaning, including repair and or replacement of defective work and guarantees of maintenance for the periods stated in the Contract, and shall fully indemnify and save harmless the City from all cost and damage which it may suffer by reason of the Principal's default of the Contract, and shall fully reimburse and repay the City for all outlay and expense which the City may incur in making

Performance Bond #2 (Pages 96 to 99): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 2)

good any such default and shall protect the said City of New York against, and pay any and all amounts, damages, cost and judgments which may or shall be recovered against said City or its officers or agents or which the said City of New York may be called upon to pay any person or corporation by reason of any damages arising or growing out of the Principal's default of the Contract, then this obligation shall be null and void, otherwise to remain in full force and effect.

The Surety (Sureties), for value received, hereby stipulates and agrees, upon written notice from the City that the City has determined that the Principal is in default of the Contract, to either (1) pay the full amount of the above penal sum in complete discharge and exoneration of this bond and of all the liabilities of the Surety relating to this bond, or (2) fully perform and complete the Work to be performed under the Contract, pursuant to the terms, conditions, and covenants thereof. The Surety (Sureties) further agrees, at its option, either to tender the penal sum or to commence and diligently perform the Work specified in the Contract, including physical site work, within twenty-five (25) business days after written notice thereof from the City and to complete all Work within the time set forth in the Contract or such other time as agreed to between the City and Surety in accordance with the Contract. The Surety and the City reserve all rights and defenses each may have against the other; provided, however, that the Surety expressly agrees that its reservation of rights shall not provide a basis for non-performance of its obligation to commence and to complete all Work as provided herein.

The Surety (Sureties), for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety (Sureties) and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition, or change in or to the said Contract or the Work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any Work to be performed or any moneys due or to become due thereunder; and said Surety (Sureties) does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers, and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to said Surety (Sureties) as though done or omitted to be done by or in relation to said Principal.

Performance Bond #2 (Pages 96 to 99): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 3)

IN WITNESS WHEREOF, The Principal and the Surety (Sureties) have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereunto affixed and these presents to be signed by their proper officers, this

18th day of May 20 17

(Seal) Tully Construction Co., Inc. (L.S.)
Principal

(Seal) By: Peter K. Tully, President
Surety

(Seal) By: Krystal L. Stravato, Attorney-In-Fact
Federal Insurance Company
Surety

(Seal) By: Krystal L. Stravato, Attorney-In-Fact
Liberty Mutual Insurance Company
Surety

(Seal) By: _____
Surety

(Seal) By: _____
Surety

By: _____

Bond Premium Rate Sliding Scale

Bond Premium Cost \$245,278.00

If the Contractor (Principal) is a partnership, the bond should be signed by each of the individuals who are partners.

If the Contractor (Principal) is a corporation, the bond should be signed in its correct corporate name by a duly authorized officer, agent, or attorney-in-fact.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Contract.

Performance Bond #2 (Pages 96 to 99): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 4)

ACKNOWLEDGMENT OF PRINCIPAL IF A CORPORATION

State of New York County of Queens ss:

On this 18th day of May, 20 17 before me personally came Peter K. Tully, to me known, who, being by me duly sworn did depose and say that he resides at Lattingtown, NY

_____ ; that he/she is the President of the corporation described in and which executed the foregoing instrument; that he/she signed his/her name to the foregoing instrument by order of the directors of said corporation as the duly authorized and binding act thereof.


Notary Public or Commissioner of Deeds.

CAROL R. GORDON
Notary Public, State of New York
No. 01GO4680187
Qualified in Queens County
Commission Expires April 30, 2018

ACKNOWLEDGMENT OF PRINCIPAL IF A PARTNERSHIP

State of _____ County of _____ ss:

On this _____ day of _____, 20 _____ before me personally came _____, to me known, who, being by me duly sworn did depose and say that he/she resides at _____

_____ ; that he/she is _____ partner of _____, a limited/general partnership existing under the laws of the State of _____, the partnership described in and which executed the foregoing instrument; and that he/she signed his/her name to the foregoing instrument as the duly authorized and binding act of said partnership.

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL IF AN INDIVIDUAL

State of _____ County of _____ ss:

On this _____ day of _____, 20 _____ before me personally came _____, to me known, who, being by me duly sworn did depose and say that he/she resides at _____

_____, and that he/she is the individual whose name is subscribed to the within instrument and acknowledged to me that by his/her signature on the instrument, said individual executed the instrument.

Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties; (b) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer or other representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions of Surety under which Power of Attorney or other certificate of authority of its agent, officer or representative was issued, and (d) certified copy of latest published financial statement of assets and liabilities of Surety.

Affix Acknowledgments and Justification of Sureties.

1950
1951
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Acknowledgement of Surety Company

State of New Jersey

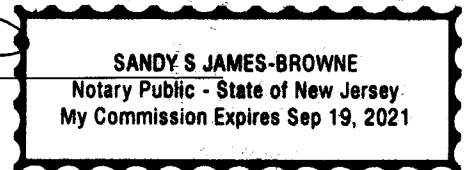
County of Morris

On the 18th day of May, 2017 before me personally appeared Krystal L. Stravato to me known, who being by me duly sworn, did depose and say; that (s)he is the attorney-in-fact of Federal Insurance Company, the corporation that executed the foregoing instrument, and acknowledged to me that such corporation executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, at my office in the above county, the day and year written above.



Notary Public



Acknowledgement of Surety Company

State of New Jersey

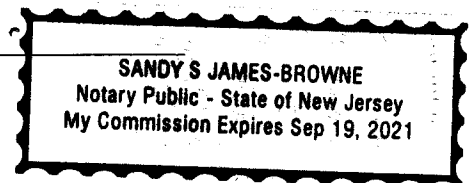
County of Morris

On the 18th day of May, 2017 before me personally appeared Krystal L. Stravato to me known, who being by me duly sworn, did depose and say; that (s)he is the attorney-in-fact of Liberty Mutual Insurance Company, the corporation that executed the foregoing instrument, and acknowledged to me that such corporation executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, at my office in the above county, the day and year written above.



Notary Public



~~SECRET~~
CONFIDENTIAL
CONFIDENTIAL
CONFIDENTIAL

~~SECRET~~
CONFIDENTIAL
CONFIDENTIAL
CONFIDENTIAL

FEDERAL INSURANCE COMPANY

STATEMENT OF ASSETS, LIABILITIES AND SURPLUS TO POLICYHOLDERS

Statutory Basis

DECEMBER 31, 2016

(in thousands of dollars)

<i>ASSETS</i>		<i>LIABILITIES AND SURPLUS TO POLICYHOLDERS</i>	
Cash and Short Term Investments.....	\$ (86,990)	Outstanding Losses and Loss Expenses	\$ 11,482,308
United States Government, State and Municipal Bonds	8,135,311	Unearned Premiums.....	2,723,875
Other Bonds.....	5,471,330	Ceded Reinsurance Premiums Payable.....	566,868
Stocks.....	130,689	Provision for Reinsurance	29,339
Other Invested Assets.....	<u>1,289,903</u>	Other Liabilities.....	<u>1,144,976</u>
TOTAL INVESTMENTS	<u>14,940,243</u>	TOTAL LIABILITIES	<u>15,947,366</u>
Investments in Affiliates:		Capital Stock.....	20,980
Chubb Investment Holdings, Inc.	3,727,406	Paid-In Surplus.....	3,106,809
Pacific Indemnity Company.....	2,926,619	Unassigned Funds	<u>8,296,020</u>
Executive Risk Indemnity Inc.....	1,250,965		
Great Northern Insurance Company	504,162		
Vigilant Insurance Company.....	319,505		
Chubb European Investment Holdings, SLP .	277,361	SURPLUS TO POLICYHOLDERS.....	<u>11,423,809</u>
Chubb Custom Insurance Company	214,956		
Chubb National Insurance Company	162,929		
Chubb Indemnity Insurance Company.....	163,668		
Other Affiliates	70,204		
Premiums Receivable	1,510,107		
Other Assets	<u>1,303,050</u>		
TOTAL ADMITTED ASSETS	<u>\$ 27,371,175</u>	TOTAL LIABILITIES AND SURPLUS TO POLICYHOLDERS.....	<u>\$ 27,371,175</u>

Investments are valued in accordance with requirements of the National Association of Insurance Commissioners.
At December 31, 2016, investments with a carrying value of \$565,702,495 were deposited with government authorities
as required by law.

State, County & City of New York, — ss:

Dawn M. Chloros, Assistant Secretary _____ of the Federal Insurance Company

being duly sworn, deposes and says that the foregoing Statement of Assets, Liabilities and Surplus to Policyholders of said Federal Insurance Company on December 31, 2016 is true and correct and is a true abstract of the Annual Statement of said Company as filed with the Secretary of the Treasury of the United States for the 12 months ending December 31, 2016.

Subscribed and sworn to before me
this March 3, 2017.

Jeanette Shipsey

Notary Public

JEANETTE SHIPSEY
Notary Public, State of New York
No. 02SH5074142
Qualified in Nassau County
Commission Expires March 10, 2019

Dawn M. Chloros

Assistant Secretary



LIBERTY MUTUAL INSURANCE COMPANY
 FINANCIAL STATEMENT — DECEMBER 31, 2016

Assets		Liabilities	
Cash and Bank Deposits.....	\$1,092,914,837	Unearned Premiums.....	\$6,929,723,299
*Bonds — U.S Government.....	1,406,763,970	Reserve for Claims and Claims Expense.....	17,233,877,300
*Other Bonds.....	11,379,916,523	Funds Held Under Reinsurance Treaties.....	208,362,823
*Stocks.....	10,349,761,988	Reserve for Dividends to Policyholders.....	944,909
Real Estate.....	290,265,760	Additional Statutory Reserve.....	39,649,905
Agents' Balances or Uncollected Premiums.....	4,709,977,463	Reserve for Commissions, Taxes and	
Accrued Interest and Rents.....	112,757,395	Other Liabilities.....	3,061,117,958
Other Admitted Assets.....	<u>14,659,523,751</u>	Total	\$27,473,676,194
		Special Surplus Funds.....	\$95,257,334
		Capital Stock.....	10,000,000
		Paid in Surplus.....	9,229,250,104
		Unassigned Surplus.....	7,193,698,055
		Surplus to Policyholders	<u>16,528,205,493</u>
Total Admitted Assets.....	<u>\$44,001,881,687</u>	Total Liabilities and Surplus	<u>\$44,001,881,687</u>



* Bonds are stated at amortized or investment value; Stocks at Association Market Values.
 The foregoing financial information is taken from Liberty Mutual Insurance Company's financial statement filed with the state of Massachusetts Department of Insurance.

I, TIM MIKOLAJEWSKI, Assistant Secretary of Liberty Mutual Insurance Company, do hereby certify that the foregoing is a true, and correct statement of the Assets and Liabilities of said Corporation, as of December 31, 2016, to the best of my knowledge and belief.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation at Seattle, Washington, this 23rd day of March, 2017.

T. Mikolajewski

Assistant Secretary

Power of Attorney

Federal Insurance Company | Vigilant Insurance Company | Pacific Indemnity Company

Know All by These Presents, That FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, and PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, do each hereby constitute and appoint Ricardo Davila, Will Griffin and Michael Marino of Miami, Florida; Thomas MacDonald, Krystal L. Stravato and Kevin T. Walsh, Jr. of Cedar Knolls, New Jersey; Theresa J. Foley and Frankie Grella of Jericho, New York; Neil C. Donovan, Gerard Leib and Mary C. McGinn of Berwyn, Pennsylvania

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY have each executed and attested these presents and affixed their corporate seals on this 30th day of March, 2017.

Dawn M. Chloros
Dawn M. Chloros, Assistant Secretary

Stephen M. Haney
Stephen M. Haney, Vice President



STATE OF NEW JERSEY
County of Hunterdon SS.

On this 30th day of March, 2017 before me, a Notary Public of New Jersey, personally came Dawn M. Chloros, to me known to be Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY, the companies which executed the foregoing Power of Attorney, and the said Dawn M. Chloros, being by me duly sworn, did depose and say that she is Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY and knows the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of said Companies; and that she signed said Power of Attorney as Assistant Secretary of said Companies by like authority; and that she is acquainted with Stephen M. Haney, and knows him to be Vice President of said Companies; and that the signature of Stephen M. Haney, subscribed to said Power of Attorney is in the genuine handwriting of Stephen M. Haney, and was thereto subscribed by authority of said Companies and in deponent's presence.

Notarial Seal



KATHERINE J. ADELAAR
NOTARY PUBLIC OF NEW JERSEY
No. 2318866
Commission Expires July 16, 2019

[Signature]
Notary Public

CERTIFICATION

Resolutions adopted by the Boards of Directors of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY on August 30, 2016:

"RESOLVED, that the following authorizations relate to the execution, for and on behalf of the Company, of bonds, undertakings, recognizances, contracts and other written commitments of the Company entered into in the ordinary course of business (each a "Written Commitment"):

- (1) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise.
(2) Each duly appointed attorney-in-fact of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise, to the extent that such action is authorized by the grant of powers provided for in such person's written appointment as such attorney-in-fact.
(3) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to appoint in writing any person the attorney-in-fact of the Company with full power and authority to execute, for and on behalf of the Company, under the seal of the Company or otherwise, such Written Commitments of the Company as may be specified in such written appointment, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
(4) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to delegate in writing to any other officer of the Company the authority to execute, for and on behalf of the Company, under the Company's seal or otherwise, such Written Commitments of the Company as are specified in such written delegation, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
(5) The signature of any officer or other person executing any Written Commitment or appointment or delegation pursuant to this Resolution, and the seal of the Company, may be affixed by facsimile on such Written Commitment or written appointment or delegation.

FURTHER RESOLVED, that the foregoing Resolution shall not be deemed to be an exclusive statement of the powers and authority of officers, employees and other persons to act for and on behalf of the Company, and such Resolution shall not limit or otherwise affect the exercise of any such power or authority otherwise validly granted or vested."

I, Dawn M. Chloros, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY (the "Companies") do hereby certify that

- (i) the foregoing Resolutions adopted by the Board of Directors of the Companies are true, correct and in full force and effect,
(ii) the Companies are duly licensed and authorized to transact surety business in all 50 of the United States of America and the District of Columbia and are authorized by the U.S. Treasury Department; further, Federal and Vigilant are licensed in the U.S. Virgin Islands, and Federal is licensed in Guam, Puerto Rico, and each of the Provinces of Canada except Prince Edward Island; and
(iii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Whitehouse Station, NJ, this May 18, 2017.



Dawn M. Chloros
Dawn M. Chloros, Assistant Secretary

IN THE EVENT YOU WISH TO NOTIFY US OF A CLAIM, VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT:
Telephone (908) 903-3493 Fax (908) 903-3656 e-mail: surety@chubb.com

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 7689055

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Kevin T. Walsh, Jr.; Krystal L. Stravato; Michael Marino; Thomas MacDonald

all of the city of Cedar Knolls, state of NJ each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 23rd day of March, 2017.



The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: David M. Carey
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 23rd day of March, 2017, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.



COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 18th day of May, 2017.



By: Renee C. Llewellyn
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or dual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

Payment Bond (Pages 100 to 103): Use for any contract for which a Payment Bond is required.

Bond #8245-21-06 Federal Insurance Company

Bond #015053851 Liberty Mutual Insurance Company

PAYMENT BOND (Page 1)

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS, That we, Tully Construction Co., Inc.

127-50 Northern Boulevard

Flushing, NY 11368

hereinafter referred to as the "Principal", and

Federal Insurance Company

Liberty Mutual Insurance Company

15 Mountain View Road

175 Berkeley Street

Warren, NJ 07059

Boston, MA 02116

hereinafter referred to as the "Surety" ("Sureties") are held and firmly bound to THE CITY OF NEW YORK, hereinafter referred to as the "City" or to its successors and assigns, in the penal sum of

Thirty Six Million Six Hundred Four Thousand Six Hundred Seventy Nine Dollars and 18/100

(\$36,604,679.18) Dollars, lawful money of the United States, for the payment of which said sum of money well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal is about to enter, or has entered, into a Contract in writing with the City for

FMS ID: HWD10105, E-PIN: 85017B0049001, DDC PIN: 8502017HW0034C Atlantic Avenue Safety

Improvements from Georgia Avenue to Logan Street-Borough of Brooklyn.

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, his or its representatives or assigns and other Subcontractors to whom Work under this Contract is sublet and his or their successors and assigns shall promptly pay or cause to be paid all lawful claims for

(a) Wages and compensation for labor performed and services rendered by all persons engaged in the prosecution of the Work under said Contract, and any amendment or extension thereof or addition thereto, whether such persons be agents servants or employees of the Principal or any such Subcontractor, including all persons so engaged who perform the work of laborers or mechanics at or in the vicinity of the site

Payment Bond (Pages 100 to 103): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 2)

of the Project regardless of any contractual relationship between the Principal or such Subcontractors, or his or their successors or assigns, on the one hand and such laborers or mechanics on the other, but not including office employees not regularly stationed at the site of the project; and

(b) Materials and supplies (whether incorporated in the permanent structure or not), as well as teams, fuels, oils, implements or machinery furnished, used or consumed by said Principal or any subcontractor at or in the vicinity of the site of the Project in the prosecution of the Work under said Contract and any amendment or extension thereof or addition thereto; then this obligation shall be void, otherwise to remain in full force and effect.

This bond is subject to the following additional conditions, limitations and agreements:

(a) The Principal and Surety (Sureties) agree that this bond shall be for the benefit of any materialmen or laborer having a just claim, as well as the City itself.

(b) All persons who have performed labor, rendered services or furnished materials and supplies, as aforesaid, shall have a direct right of action against the Principal and his, its or their successors and assigns, and the Surety (Sureties) herein, or against either or both or any of them and their successors and assigns. Such persons may sue in their own name, and may prosecute the suit to judgment and execution without the necessity of joining with any other persons as party plaintiff.

(c) The Principal and Surety (Sureties) agree that neither of them will hold the City liable for any judgment for costs of otherwise, obtained by either or both of them against a laborer or materialman in a suit brought by either a laborer or materialman under this bond for moneys allegedly due for performing work or furnishing material.

(d) The Surety (Sureties) or its successors and assigns shall not be liable for any compensation recoverable by an employee or laborer under the Workmen's Compensation Law.

(e) In no event shall the Surety (Sureties), or its successors or assigns, be liable for a greater sum than the penalty of this bond or be subject to any suit, action or proceeding hereon that is instituted by any person, firm, or corporation hereunder later than two years after the complete performance of said Contract and final settlement thereof.

The Principal, for himself and his successors and assigns, and the Surety (Sureties), for itself and its successors and assigns, do hereby expressly waive any objection that might be interposed as to the right of the City to require a bond containing the foregoing provisions, and they do hereby further expressly waive any defense which they or either of them might interpose to an action brought hereon by any person, firm or corporation, including subcontractors, materialmen and third persons, for work, labor, services, supplies or material performed rendered, or furnished as aforesaid upon the ground that there is no law authorizing the City to require the foregoing provisions to be place in this bond.

And the Surety (Sureties), for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety (Sureties), and its bonds shall be in no way impaired or affected by any extension of time, modification, omission, addition, or change in or of the said Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any part thereof, or of any Work to be performed, or any moneys due to become due thereunder and said Surety (Sureties) does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers, and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, Subcontractors, and other transferees shall have the same effect as to said Surety (Sureties) as though done or omitted to be done or in relation to said Principal.

Payment Bond (Pages 100 to 103): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 3)

IN WITNESS WHEREOF, the Principal and the Surety (Sureties) have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereunto affixed and these presents to be signed by their proper officers, this 18th day of May, 2017.

(Seal) Tully Construction Co., Inc. (L.S.)
Principal
By: Peter R. Tully, President

(Seal) Federal Insurance Company
Surety
By: Krystal L. Stravato, Attorney-In-Fact

(Seal) Liberty Mutual Insurance Company
Surety
By: Krystal L. Stravato, Attorney-In-Fact

(Seal) _____
Surety
By: _____

(Seal) _____
Surety
By: _____

If the Contractor (Principal) is a partnership, the bond should be signed by each of the individuals who are partners.

If the Contractor (Principal) is a corporation, the bond should be signed in its correct corporate name by a duly authorized officer, agent, or attorney-in-fact.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Contract.

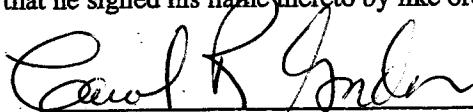
Payment Bond (Pages 100 to 103): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 4)

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of New York County of Queens ss:

On this 18th day of May, 2017, before me personally came Peter K. Tully to me known, who, being by me duly sworn did depose and say that he resides at Lattingtown, NY that he is the President of the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of the directors of said corporation, and that he signed his name thereto by like order.


Notary Public or Commissioner of Deeds

CAROL R. GORDON
Notary Public, State of New York
No. 01GO4680187
Qualified in Queens County
Commission Expires April 30, 2018

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____ County of _____ ss:

On this _____ day of _____, _____, before me personally appeared _____ to me known, and known to me to be one of the members of the firm of _____ described in and who executed the foregoing instrument; and he acknowledged to me that he executed the same as and for the act and deed of said firm.

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____ County of _____ ss:

On this _____ day of _____, _____, before me personally appeared _____ to me known, and known to me to be the person described in and who executed the foregoing instrument; and acknowledged that he executed the same.

Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties; (b) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer or other representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions of Surety under which Power of Attorney or other certificate of authority of its agent, officer or representative was issued, and (d) certified copy of latest published financial statement of assets and liabilities of Surety.

Affix Acknowledgments and Justification of Sureties.

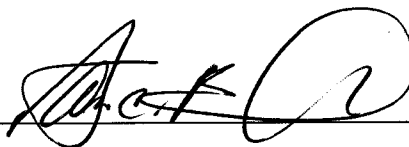
Acknowledgement of Surety Company

State of New Jersey

County of Morris

On the 18th day of May, 2017 before me personally appeared Krystal L. Stravato to me known, who being by me duly sworn, did depose and say; that (s)he is the attorney-in-fact of Federal Insurance Company, the corporation that executed the foregoing instrument, and acknowledged to me that such corporation executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, at my office in the above county, the day and year written above.



Notary Public

SANDY S JAMES-BROWNE
Notary Public - State of New Jersey
My Commission Expires Sep 19, 2021


Acknowledgement of Surety Company

State of New Jersey

County of Morris

On the 18th day of May, 2017 before me personally appeared Krystal L. Stravato to me known, who being by me duly sworn, did depose and say; that (s)he is the attorney-in-fact of Liberty Mutual Insurance Company, the corporation that executed the foregoing instrument, and acknowledged to me that such corporation executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, at my office in the above county, the day and year written above.



Notary Public

SANDY S JAMES-BROWNE
Notary Public - State of New Jersey
My Commission Expires Sep 19, 2021



1. The first part of the document
 2. The second part of the document
 3. The third part of the document
 4. The fourth part of the document
 5. The fifth part of the document

6. The sixth part of the document
 7. The seventh part of the document
 8. The eighth part of the document
 9. The ninth part of the document
 10. The tenth part of the document

FEDERAL INSURANCE COMPANY

STATEMENT OF ASSETS, LIABILITIES AND SURPLUS TO POLICYHOLDERS

Statutory Basis

DECEMBER 31, 2016

(in thousands of dollars)

<i>ASSETS</i>		<i>LIABILITIES AND SURPLUS TO POLICYHOLDERS</i>	
Cash and Short Term Investments.....	\$ (86,990)	Outstanding Losses and Loss Expenses	\$ 11,482,308
United States Government, State and Municipal Bonds	8,135,311	Unearned Premiums.....	2,723,875
Other Bonds.....	5,471,330	Ceded Reinsurance Premiums Payable.....	566,868
Stocks	130,689	Provision for Reinsurance	29,339
Other Invested Assets.....	1,289,903	Other Liabilities.....	1,144,976
TOTAL INVESTMENTS	14,940,243	TOTAL LIABILITIES	15,947,366
Investments in Affiliates:		Capital Stock.....	20,980
Chubb Investment Holdings, Inc.	3,727,406	Paid-In Surplus.....	3,106,809
Pacific Indemnity Company.....	2,926,619	Unassigned Funds	8,296,020
Executive Risk Indemnity Inc.....	1,250,965		
Great Northern Insurance Company	504,162		
Vigilant Insurance Company.....	319,505		
Chubb European Investment Holdings, SLP .	277,361	SURPLUS TO POLICYHOLDERS.....	11,423,809
Chubb Custom Insurance Company	214,956		
Chubb National Insurance Company	162,929		
Chubb Indemnity Insurance Company.....	163,668		
Other Affiliates	70,204		
Premiums Receivable	1,510,107		
Other Assets	1,303,050		
TOTAL ADMITTED ASSETS	\$ 27,371,175	TOTAL LIABILITIES AND SURPLUS TO POLICYHOLDERS.....	\$ 27,371,175

Investments are valued in accordance with requirements of the National Association of Insurance Commissioners.
At December 31, 2016, investments with a carrying value of \$565,702,495 were deposited with government authorities
as required by law.

State, County & City of New York, — ss:

Dawn M. Chloros, Assistant Secretary _____ of the Federal Insurance Company

being duly sworn, deposes and says that the foregoing Statement of Assets, Liabilities and Surplus to Policyholders of said Federal Insurance Company on December 31, 2016 is true and correct and is a true abstract of the Annual Statement of said Company as filed with the Secretary of the Treasury of the United States for the 12 months ending December 31, 2016.

Subscribed and sworn to before me
this March 3, 2017.

Jeanette Shipsey

Notary Public

JEANETTE SHIPSEY
Notary Public, State of New York
No. 02SH5074142
Qualified in Nassau County
Commission Expires March 10, 2019

Dawn M. Chloros

Assistant Secretary



LIBERTY MUTUAL INSURANCE COMPANY
FINANCIAL STATEMENT — DECEMBER 31, 2016

Assets	Liabilities
Cash and Bank Deposits..... \$1,092,914,837	Unearned Premiums..... \$6,929,723,299
*Bonds — U.S Government..... 1,406,763,970	Reserve for Claims and Claims Expense..... 17,233,877,300
*Other Bonds..... 11,379,916,523	Funds Held Under Reinsurance Treaties..... 208,362,823
*Stocks..... 10,349,761,988	Reserve for Dividends to Policyholders..... 944,909
Real Estate..... 290,265,760	Additional Statutory Reserve..... 39,649,905
Agents' Balances or Uncollected Premiums..... 4,709,977,463	Reserve for Commissions, Taxes and
Accrued Interest and Rents..... 112,757,395	Other Liabilities..... <u>3,061,117,958</u>
Other Admitted Assets..... <u>14,659,523,751</u>	Total..... \$27,473,676,194
Total Admitted Assets..... <u>\$44,001,881,687</u>	Special Surplus Funds..... \$95,257,334
	Capital Stock..... 10,000,000
	Paid in Surplus..... 9,229,250,104
	Unassigned Surplus..... 7,193,698,055
	Surplus to Policyholders..... 16,528,205,493
	Total Liabilities and Surplus..... <u>\$44,001,881,687</u>



* Bonds are stated at amortized or investment value; Stocks at Association Market Values.
The foregoing financial information is taken from Liberty Mutual Insurance Company's financial statement filed with the state of Massachusetts Department of Insurance.

I, TIM MIKOLAJEWSKI, Assistant Secretary of Liberty Mutual Insurance Company, do hereby certify that the foregoing is a true, and correct statement of the Assets and Liabilities of said Corporation, as of December 31, 2016, to the best of my knowledge and belief.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation at Seattle, Washington, this 23rd day of March, 2017.

T. Mikolajewski

Assistant Secretary

Power of Attorney

Federal Insurance Company | Vigilant Insurance Company | Pacific Indemnity Company

Know All by These Presents, That FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, and PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, do each hereby constitute and appoint Ricardo Davila, Will Griffin and Michael Marino of Miami, Florida; Thomas MacDonald, Krystal L. Stravato and Kevin T. Walsh, Jr. of Cedar Knolls, New Jersey; Theresa J. Foley and Frankie Grella of Jericho, New York; Neil C. Donovan, Gerard Leib and Mary C. McGinn of Berwyn, Pennsylvania

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY have each executed and attested these presents and affixed their corporate seals on this 30th day of March, 2017.

Dawn M. Chloros

Dawn M. Chloros, Assistant Secretary

Stephen M. Haney

Stephen M. Haney, Vice President



STATE OF NEW JERSEY

County of Hunterdon

ss.

On this 30th day of March, 2017 before me, a Notary Public of New Jersey, personally came Dawn M. Chloros, to me known to be Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY, the companies which executed the foregoing Power of Attorney, and the said Dawn M. Chloros, being by me duly sworn, did depose and say that she is Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY and knows the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of said Companies; and that she signed said Power of Attorney as Assistant Secretary of said Companies by like authority; and that she is acquainted with Stephen M. Haney, and knows him to be Vice President of said Companies; and that the signature of Stephen M. Haney, subscribed to said Power of Attorney is in the genuine handwriting of Stephen M. Haney, and was thereto subscribed by authority of said Companies and in deponent's presence.

Notarial Seal



KATHERINE J. ADELAAR
NOTARY PUBLIC OF NEW JERSEY
No. 2316665
Commission Expires July 16, 2019

[Signature]

Notary Public

CERTIFICATION

Resolutions adopted by the Boards of Directors of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY on August 30, 2016:

"RESOLVED, that the following authorizations relate to the execution, for and on behalf of the Company, of bonds, undertakings, recognizances, contracts and other written commitments of the Company entered into in the ordinary course of business (each a "Written Commitment"):

- (1) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise.
(2) Each duly appointed attorney-in-fact of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise, to the extent that such action is authorized by the grant of powers provided for in such person's written appointment as such attorney-in-fact.
(3) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to appoint in writing any person the attorney-in-fact of the Company with full power and authority to execute, for and on behalf of the Company, under the seal of the Company or otherwise, such Written Commitments of the Company as may be specified in such written appointment, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
(4) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to delegate in writing to any other officer of the Company the authority to execute, for and on behalf of the Company, under the Company's seal or otherwise, such Written Commitments of the Company as are specified in such written delegation, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
(5) The signature of any officer or other person executing any Written Commitment or appointment or delegation pursuant to this Resolution, and the seal of the Company, may be affixed by facsimile on such Written Commitment or written appointment or delegation.

FURTHER RESOLVED, that the foregoing Resolution shall not be deemed to be an exclusive statement of the powers and authority of officers, employees and other persons to act for and on behalf of the Company, and such Resolution shall not limit or otherwise affect the exercise of any such power or authority otherwise validly granted or vested."

I, Dawn M. Chloros, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY (the "Companies") do hereby certify that

- (i) the foregoing Resolutions adopted by the Board of Directors of the Companies are true, correct and in full force and effect,
(ii) the Companies are duly licensed and authorized to transact surety business in all 50 of the United States of America and the District of Columbia and are authorized by the U.S. Treasury Department; further, Federal and Vigilant are licensed in the U.S. Virgin Islands, and Federal is licensed in Guam, Puerto Rico, and each of the Provinces of Canada except Prince Edward Island; and
(iii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Whitehouse Station, NJ, this May 18, 2017.



Dawn M. Chloros

Dawn M. Chloros, Assistant Secretary

IN THE EVENT YOU WISH TO NOTIFY US OF A CLAIM, VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT:

Telephone (908) 903-3493 Fax (908) 903-3656 e-mail: surety@chubb.com

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 7689054

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Kevin T. Walsh, Jr.; Krystal L. Stravato; Michael Marino; Thomas MacDonald

all of the city of Cedar Knolls, state of NJ each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 23rd day of March, 2017.



The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: David M. Carey
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 23rd day of March, 2017, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.



COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV - OFFICERS - Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII - Execution of Contracts - SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization - By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 18th day of May, 20 17



By: Renee C. Llewellyn
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or annual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
05/22/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Construction Risk Partners a JLT Group Company Campus View Plaza 1250 Route 28, Suite 201 Branchburg, NJ 08876	1-908-566-1010	CONTACT NAME: Bob Watson PHONE (A/C, No, Ext): 646-625-7100 FAX (A/C, No): 646-625-7099 E-MAIL ADDRESS: certs@constructionriskpartners.com														
INSURED Tully Construction Co Inc 127-50 Northern Blvd Flushing, NY 11368		<table border="1"> <thead> <tr> <th>INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A: ARCH INS CO</td> <td>11150</td> </tr> <tr> <td>INSURER B: AMERICAN GUAR & LIAB INS</td> <td>26247</td> </tr> <tr> <td>INSURER C: ALTERRA AMER INS CO</td> <td>21296</td> </tr> <tr> <td>INSURER D:</td> <td></td> </tr> <tr> <td>INSURER E:</td> <td></td> </tr> <tr> <td>INSURER F:</td> <td></td> </tr> </tbody> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: ARCH INS CO	11150	INSURER B: AMERICAN GUAR & LIAB INS	26247	INSURER C: ALTERRA AMER INS CO	21296	INSURER D:		INSURER E:		INSURER F:	
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INSURER D:																
INSURER E:																
INSURER F:																

COVERAGES

CERTIFICATE NUMBER: 49903565

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS												
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC <input type="checkbox"/> OTHER:		11PKG8899906	03/31/17	03/31/18	EACH OCCURRENCE \$ 4,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 250,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 4,000,000 GENERAL AGGREGATE \$ 8,000,000 PRODUCTS - COMP/OP AGG \$ 8,000,000 \$												
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY <input checked="" type="checkbox"/> Comp \$500 <input checked="" type="checkbox"/> Co11 \$500		11PKG8899906	03/31/17	03/31/18	COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$												
B	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$		SXS 0191868-01	03/31/17	03/31/18	EACH OCCURRENCE \$ 25,000,000 AGGREGATE \$ 25,000,000 \$												
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input checked="" type="checkbox"/> N/A				<table border="1"> <thead> <tr> <th></th> <th>PER STATUTE</th> <th>OTH-ER</th> </tr> </thead> <tbody> <tr> <td>E.L. EACH ACCIDENT</td> <td></td> <td>\$</td> </tr> <tr> <td>E.L. DISEASE - EA EMPLOYEE</td> <td></td> <td>\$</td> </tr> <tr> <td>E.L. DISEASE - POLICY LIMIT</td> <td></td> <td>\$</td> </tr> </tbody> </table>		PER STATUTE	OTH-ER	E.L. EACH ACCIDENT		\$	E.L. DISEASE - EA EMPLOYEE		\$	E.L. DISEASE - POLICY LIMIT		\$
	PER STATUTE	OTH-ER																
E.L. EACH ACCIDENT		\$																
E.L. DISEASE - EA EMPLOYEE		\$																
E.L. DISEASE - POLICY LIMIT		\$																
C	Property		MAXA6IM0050762	06/05/16	06/05/17	Bus Pers Prop 40,000												

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Contract #HWD10105 - Atlantic Avenue Safety Improvements from Georgia Ave to Logan St - Borough of Brooklyn City of New York, including its officials and employees, The Long Island Railroad (LIRR), Metropolitan Transportation Authority (MTA), its subsidiaries and affiliated companies, New York State, including its officials and employees, and, FHW A, including its officials and employees are additional insureds as required by written contract. Business Personal Property limit applies at unnamed location.

CERTIFICATE HOLDER

The City of New York
 Department of Design and Construction
 30-30 Thomson Avenue
 Long Island City, NY 11101-3045
 USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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CERTIFICATION BY INSURANCE BROKER OR AGENT

The undersigned insurance broker represents to the City of New York that the attached Certificate of Insurance is accurate in all material respects.

Construction Risk Partners, LLC

[Name of broker or agent (typewritten)]

1250 Route 28, Suite 201, Branchburg, NJ 08876

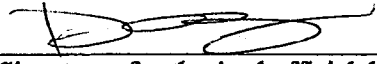
[Address of broker or agent (typewritten)]

dbest@constructionriskpartners.com

[Email address of broker or agent (typewritten)]

908-566-1010/908-566/1020

[Phone number/Fax number of broker or agent (typewritten)]



[Signature of authorized official, broker, or agent]

Darlene Best, Managing Account Executive

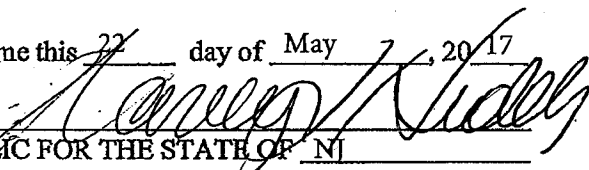
[Name and title of authorized official, broker, or agent (typewritten)]

State of NJ.....)

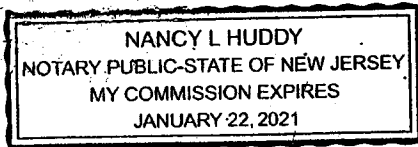
) ss.:

County of Somerset.....)

Sworn to before me this 22 day of May, 2017



NOTARY PUBLIC FOR THE STATE OF NJ





Workers' Compensation Board

CERTIFICATE OF NYS WORKERS' COMPENSATION INSURANCE COVERAGE

<p>1a. Legal Name & Address of Insured (use street address only)</p> <p>Tully Construction Co., Inc. 127-50 Northern Blvd Flushing, NY 11368</p> <p>Work Location of Insured (Only required if coverage is specifically limited to certain locations in New York State, i.e., a Wrap-Up Policy)</p>	<p>1b. Business Telephone Number of Insured</p> <p>718-446-7000</p> <p>1c. NYS Unemployment Insurance Employer Registration Number of Insured</p> <p>1d. Federal Employer Identification Number of Insured or Social Security Number</p> <p>112493726</p>
<p>2. Name and Address of Entity Requesting Proof of Coverage (Entity Being Listed as the Certificate Holder)</p> <p>The City of New York Department of Design and Construction 30-30 Thomson Avenue Long Island City, NY 11101-3045</p>	<p>3a. Name of Insurance Carrier</p> <p>Arch Indemnity Insurance Company</p> <p>3b. Policy Number of Entity Listed in Box "1a"</p> <p>14WCI8920106</p> <p>3c. Policy effective period</p> <p>03/31/17 to 03/31/18</p> <p>3d. The Proprietor, Partners or Executive Officers are</p> <p><input checked="" type="checkbox"/> included. (Only check box if all partners/officers included)</p> <p><input type="checkbox"/> all excluded or certain partners/officers excluded.</p>

This certifies that the insurance carrier indicated above in box "3" insures the business referenced above in box "1a" for workers' compensation under the New York State Workers' Compensation Law. **(To use this form, New York (NY) must be listed under Item 3A on the INFORMATION PAGE of the workers' compensation insurance policy).** The Insurance Carrier or its licensed agent will send this Certificate of Insurance to the entity listed above as the certificate holder in box "2".

Will the carrier notify the certificate holder within 10 days of a policy being cancelled for non-payment of premium or within 30 days if cancelled for any other reason or if the insured is otherwise eliminated from the coverage indicated on this certificate prior to the end of the policy effective period? YES NO

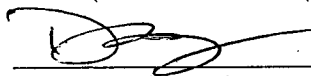
This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend or alter the coverage afforded by the policy listed, nor does it confer any rights or responsibilities beyond those contained in the referenced policy.

This certificate may be used as evidence of a Workers' Compensation contract of insurance only while the underlying policy is in effect.

Please Note: Upon cancellation of the workers' compensation policy indicated on this form, if the business continues to be named on a permit, license or contract issued by a certificate holder, the business must provide that certificate holder with a new Certificate of Workers' Compensation Coverage or other authorized proof that the business is complying with the mandatory coverage requirements of the New York State Workers' Compensation Law.

Under penalty of perjury, I certify that I am an authorized representative or licensed agent of the insurance carrier referenced above and that the named insured has the coverage as depicted on this form.

Approved by: Darlene Best
(Print name of authorized representative or licensed agent of insurance carrier)

Approved by:  5/22/17
(Signature) (Date)

Title: Managing Account Executive

Telephone Number of authorized representative or licensed agent of insurance carrier: 908-566-1010

Please Note: Only insurance carriers and their licensed agents are authorized to issue Form C-105.2. Insurance brokers are NOT authorized to issue it.

Workers' Compensation Law

Section 57. Restriction on issue of permits and the entering into contracts unless compensation is secured.

1. The head of a state or municipal department, board, commission or office authorized or required by law to issue any permit for or in connection with any work involving the employment of employees in a hazardous employment defined by this chapter, and notwithstanding any general or special statute requiring or authorizing the issue of such permits, shall not issue such permit unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that compensation for all employees has been secured as provided by this chapter. Nothing herein, however, shall be construed as creating any liability on the part of such state or municipal department, board, commission or office to pay any compensation to any such employee if so employed.
2. The head of a state or municipal department, board, commission or office authorized or required by law to enter into any contract for or in connection with any work involving the employment of employees in a hazardous employment defined by this chapter, notwithstanding any general or special statute requiring or authorizing any such contract, shall not enter into any such contract unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that compensation for all employees has been secured as provided by this chapter.

Performance Bond #2 (Pages 96 to 99): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 2)

good any such default and shall protect the said City of New York against, and pay any and all amounts, damages, cost and judgments which may or shall be recovered against said City or its officers or agents or which the said City of New York may be called upon to pay any person or corporation by reason of any damages arising or growing out of the Principal's default of the Contract, then this obligation shall be null and void, otherwise to remain in full force and effect.

The Surety (Sureties), for value received, hereby stipulates and agrees, upon written notice from the City that the City has determined that the Principal is in default of the Contract, to either (1) pay the full amount of the above penal sum in complete discharge and exoneration of this bond and of all the liabilities of the Surety relating to this bond, or (2) fully perform and complete the Work to be performed under the Contract, pursuant to the terms, conditions, and covenants thereof. The Surety (Sureties) further agrees, at its option, either to tender the penal sum or to commence and diligently perform the Work specified in the Contract, including physical site work, within twenty-five (25) business days after written notice thereof from the City and to complete all Work within the time set forth in the Contract or such other time as agreed to between the City and Surety in accordance with the Contract. The Surety and the City reserve all rights and defenses each may have against the other; provided, however, that the Surety expressly agrees that its reservation of rights shall not provide a basis for non-performance of its obligation to commence and to complete all Work as provided herein.

The Surety (Sureties), for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety (Sureties) and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition, or change in or to the said Contract or the Work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any Work to be performed or any moneys due or to become due thereunder; and said Surety (Sureties) does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers, and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to said Surety (Sureties) as though done or omitted to be done by or in relation to said Principal.

Performance Bond #2 (Pages 96 to 99): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 3)

IN WITNESS WHEREOF, The Principal and the Surety (Sureties) have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereunto affixed and these presents to be signed by their proper officers, this

_____ day of _____ 20_____ .

(Seal) _____ (L.S.)
Principal

(Seal) By: _____
Surety

(Seal) By: _____
Surety

(Seal) By: _____
Surety

(Seal) By: _____
Surety

(Seal) By: _____
Surety

By: _____

Bond Premium Rate _____

Bond Premium Cost _____

If the Contractor (Principal) is a partnership, the bond should be signed by each of the individuals who are partners.

If the Contractor (Principal) is a corporation, the bond should be signed in its correct corporate name by a duly authorized officer, agent, or attorney-in-fact.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Contract.

Performance Bond #2 (Pages 96 to 99): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 4)

ACKNOWLEDGMENT OF PRINCIPAL IF A CORPORATION

State of _____ County of _____ ss:

On this _____ day of _____, 20 _____ before me personally came _____, to me known, who, being by me duly sworn did depose and say that he resides at _____

_____ ; that he/she is the _____ of the corporation described in and which executed the foregoing instrument; that he/she signed his/her name to the foregoing instrument by order of the directors of said corporation as the duly authorized and binding act thereof.

Notary Public or Commissioner of Deeds.

ACKNOWLEDGMENT OF PRINCIPAL IF A PARTNERSHIP

State of _____ County of _____ ss:

On this _____ day of _____, 20 _____ before me personally came _____, to me known, who, being by me duly sworn did depose and say that he/she resides at _____

_____ ; that he/she is _____ partner of _____, a limited/general partnership existing under the laws of the State of _____, the partnership described in and which executed the foregoing instrument; and that he/she signed his/her name to the foregoing instrument as the duly authorized and binding act of said partnership.

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL IF AN INDIVIDUAL

State of _____ County of _____ ss:

On this _____ day of _____, 20 _____ before me personally came _____, to me known, who, being by me duly sworn did depose and say that he/she resides at _____

_____ , and that he/she is the individual whose name is subscribed to the within instrument and acknowledged to me that by his/her signature on the instrument, said individual executed the instrument.

Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties; (b) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer or other representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions of Surety under which Power of Attorney or other certificate of authority of its agent, officer or representative was issued, and (d) certified copy of latest published financial statement of assets and liabilities of Surety.

Affix Acknowledgments and Justification of Sureties.

Payment Bond (Pages 100 to 103): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 1)

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS, That we, _____

hereinafter referred to as the "Principal", and _____

hereinafter referred to as the "Surety" ("Sureties") are held and firmly bound to THE CITY OF NEW YORK, hereinafter referred to as the "City" or to its successors and assigns, in the penal sum of

(\$ _____) Dollars, lawful money of the United States, for the payment of which said sum of money well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal is about to enter, or has entered, into a Contract in writing with the City for

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, his or its representatives or assigns and other Subcontractors to whom Work under this Contract is sublet and his or their successors and assigns shall promptly pay or cause to be paid all lawful claims for

(a) Wages and compensation for labor performed and services rendered by all persons engaged in the prosecution of the Work under said Contract, and any amendment or extension thereof or addition thereto, whether such persons be agents servants or employees of the Principal or any such Subcontractor, including all persons so engaged who perform the work of laborers or mechanics at or in the vicinity of the site

Payment Bond (Pages 100 to 103): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 2)

of the Project regardless of any contractual relationship between the Principal or such Subcontractors, or his or their successors or assigns, on the one hand and such laborers or mechanics on the other, but not including office employees not regularly stationed at the site of the project; and

(b) Materials and supplies (whether incorporated in the permanent structure or not), as well as teams, fuels, oils, implements or machinery furnished, used or consumed by said Principal or any subcontractor at or in the vicinity of the site of the Project in the prosecution of the Work under said Contract and any amendment or extension thereof or addition thereto; then this obligation shall be void, otherwise to remain in full force and effect.

This bond is subject to the following additional conditions, limitations and agreements:

(a) The Principal and Surety (Sureties) agree that this bond shall be for the benefit of any materialmen or laborer having a just claim, as well as the City itself.

(b) All persons who have performed labor, rendered services or furnished materials and supplies, as aforesaid, shall have a direct right of action against the Principal and his, its or their successors and assigns, and the Surety (Sureties) herein, or against either or both or any of them and their successors and assigns. Such persons may sue in their own name, and may prosecute the suit to judgment and execution without the necessity of joining with any other persons as party plaintiff.

(c) The Principal and Surety (Sureties) agree that neither of them will hold the City liable for any judgment for costs of otherwise, obtained by either or both of them against a laborer or materialman in a suit brought by either a laborer or materialman under this bond for moneys allegedly due for performing work or furnishing material.

(d) The Surety (Sureties) or its successors and assigns shall not be liable for any compensation recoverable by an employee or laborer under the Workmen's Compensation Law.

(e) In no event shall the Surety (Sureties), or its successors or assigns, be liable for a greater sum than the penalty of this bond or be subject to any suit, action or proceeding hereon that is instituted by any person, firm, or corporation hereunder later than two years after the complete performance of said Contract and final settlement thereof.

The Principal, for himself and his successors and assigns, and the Surety (Sureties), for itself and its successors and assigns, do hereby expressly waive any objection that might be interposed as to the right of the City to require a bond containing the foregoing provisions, and they do hereby further expressly waive any defense which they or either of them might interpose to an action brought hereon by any person, firm or corporation, including subcontractors, materialmen and third persons, for work, labor, services, supplies or material performed rendered, or furnished as aforesaid upon the ground that there is no law authorizing the City to require the foregoing provisions to be place in this bond.

And the Surety (Sureties), for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety (Sureties), and its bonds shall be in no way impaired or affected by any extension of time, modification, omission, addition, or change in or of the said Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any part thereof, or of any Work to be performed, or any moneys due to become due thereunder and said Surety (Sureties) does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers, and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, Subcontractors, and other transferees shall have the same effect as to said Surety (Sureties) as though done or omitted to be done or in relation to said Principal.

Payment Bond (Pages 100 to 103): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 3)

IN WITNESS WHEREOF, the Principal and the Surety (Sureties) have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereunto affixed and these presents to be signed by their proper officers, this _____ day of _____, _____.

(Seal) _____ (L.S.)
Principal

By: _____

(Seal) _____
Surety

By: _____

(Seal) _____
Surety

By: _____

(Seal) _____
Surety

By: _____

(Seal) _____
Surety

By: _____

If the Contractor (Principal) is a partnership, the bond should be signed by each of the individuals who are partners.

If the Contractor (Principal) is a corporation, the bond should be signed in its correct corporate name by a duly authorized officer, agent, or attorney-in-fact.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Contract.

Payment Bond (Pages 100 to 103): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 4)

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of _____ County of _____ ss:

On this ____ day of _____, _____, before me personally came _____ to me known, who, being by me duly sworn did depose and say that he resides at _____ that he is the _____ of the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of the directors of said corporation, and that he signed his name thereto by like order.

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____ County of _____ ss:

On this ____ day of _____, _____, before me personally appeared _____ to me known, and known to me to be one of the members of the firm of _____ described in and who executed the foregoing instrument; and he acknowledged to me that he executed the same as and for the act and deed of said firm.

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____ County of _____ ss:

On this ____ day of _____, _____, before me personally appeared _____ to me known, and known to me to be the person described in and who executed the foregoing instrument; and acknowledged that he executed the same.

Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties; (b) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer or other representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions of Surety under which Power of Attorney or other certificate of authority of its agent, officer or representative was issued, and (d) certified copy of latest published financial statement of assets and liabilities of Surety.

Affix Acknowledgments and Justification of Sureties.

(NO TEXT ON THIS PAGE)

SCHEDULE OF WORKMEN, MECHANICS AND LABORERS

The following is a list of classifications for workmen, mechanics and laborers which are anticipated to be employed in the performance of work under this contract, followed by a schedule of the prevailing wage rates and supplemental benefits for all classifications as established by the Comptroller of the City of New York.

Request for interpretation or correction under Subsection A of Section No. 3 in the Information for Bidders includes all requests for clarification of the classification of trades to be employed in the performance of the work under this contract.

In the event that a trade not listed in the classification of trades required to be used at the time of the award of the contract is in fact employed during the performance of this contract, the Contractor shall be required to obtain from the agency the prevailing wage rates and supplementary benefits for the trades used and to complete the performance of this contract at the price at which the contract was awarded.

<u>CODE</u>	<u>CLASSIFICATION</u>
15 42 001	Rigger
15 42 002	Sign Erector
16 11 001	Gardener
16 11 002	Tree Pruner
16 11 003	Tree Remover
16 11 011	Asphalt Raker (Highway & Paving)
16 11 012	Tamper (Highway & Paving)
16 11 013	Curbsetter (Highway & Paving)
16 11 014	Formsetter (Highway & Paving)
16 11 015	Rammerman (Highway & Paving)
16 11 016	Laborer (Highway & Paving)
16 11 017	ALL OTHER TITLES (Highway & Paving)
16 23 001	Laborer
16 23 002	Operating Engineer (Heavy Construction-Maintenance)
16 23 003	Junior Operating Engineer
16 23 004	Junior Operating Engineer
16 23 005	Junior Operating Engineer
16 23 006	Fireman (Heavy Construction)
16 23 007	Oiler (Heavy Construction)
16 23 051	Surveyor-Heavy Construction
16 23 052	Surveyor-Heavy Construction-Instrument Man
16 23 053	Surveyor-Heavy Construction-Rodman
16 23 057	Surveyor-Land Surveying-Party Chief
16 23 058	Surveyor-Land Surveying-Instrument Man
16 23 059	Surveyor-Land Surveying-Rodman

<u>CODE</u>	<u>CLASSIFICATION</u>
16 23 061	Operating Engineer-Road & Heavy Construction
16 23 062	Operating Engineer-Paving
16 23 063	Operating Engineer-Concrete
16 23 071	Teamster-Heavy Equipment Trailer Driver
16 23 072	Teamster-Dump Truck Driver
16 23 073	Teamster-Flat Bed Trailer Driver (3-Axle)
16 23 074	Teamster-Redi-Mix (Sand and Gravel)
16 29 011	Drill Runners
17 11 001	Plumbers
17 21 001	Painter (Brush & Roller)
17 31 001	Electrician
17 41 001	Bricklayer
17 41 002	Mason Tender
17 41 004	Cement Mason
17 42 002	Metallic Lather
17 51 001	Carpenter
17 51 002	Dock Builder
17 71 001	Cement & Concrete Worker
17 91 001	Structural Iron Worker
17 95 001	Barman
17 96 021	Derrickmen & Riggers
17 99 001	Ornamental Iron Worker
17 99 002	Sandblaster
17 99 005	Pointers (Waterproofer)
17 99 011	Welders

Each classification may include trainees depending upon project staffing schedules and as required by the terms of this contract.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

LABOR LAW §220 PREVAILING WAGE SCHEDULE

Workers, Laborers and Mechanics employed on a public work project must receive not less than the prevailing rate of wage and benefits for the classification of work performed by each upon such public work. Pursuant to Labor Law §220 the Comptroller of the City of New York has promulgated this schedule solely for Workers, Laborers and Mechanics engaged by private contractors on New York City public work contracts.

This schedule is a compilation of separate determinations of the prevailing rate of wage and supplements made by the Comptroller for each trade classification listed herein pursuant to New York State Labor Law section 220 (5). The source of the wage and supplement rates, whether a collective bargaining agreement, survey data or other, is listed at the end of each classification.

Agency Chief Contracting Officers should contact the Bureau of Labor Law's Classification Unit with any questions concerning trade classifications, prevailing rates or prevailing practices with respect to procurement on New York City public works contracts. Contractors are advised to review the Comptroller's Prevailing Wage Schedule before bidding on public works contracts. Contractors with questions concerning trade classifications, prevailing rates or prevailing practices with respect to public works contracts in the procurement stage must contact the contracting agency responsible for the procurement.

Any error as to compensation under the prevailing wage law or other information as to trade classification, made by the contracting agency in the contract documents or in any other communication, will not preclude a finding against the contractor of prevailing wage violation.

Any questions concerning trade classifications, prevailing rates or prevailing practices on New York City public works contracts that have already been awarded may be directed to the Bureau of Labor Law's Classification Unit by calling (212) 669-7974. All callers must have the agency name and contract registration number available when calling with questions on public works contracts. Please direct all other compliance issues to: Bureau of Labor Law, Attn: Wasyi Kinach, P.E., Office of the Comptroller, 1 Centre Street, Room 1122, New York, N.Y. 10007; Fax (212) 669-4002.

The appropriate schedule of prevailing wages and benefits must be posted at all public work sites pursuant to Labor Law §220 (3-a) (a).

This schedule is applicable to work performed during the effective period, unless otherwise noted. Changes to this schedule are published on our web site www.comptroller.nyc.gov. Contractors must pay the wages and supplements in effect when the worker, laborer, mechanic performs the work. Preliminary schedules for future one-year periods appear in the City Record on or about June 1 each succeeding year. Final schedules appear on or about July 1 in the City Record and on our web site www.comptroller.nyc.gov.

The Comptroller's Office has attempted to include all overtime, shift and night differential, Holiday, Saturday, Sunday or other premium time work. However, this schedule does not set forth every prevailing practice with respect to such rates with which employers must comply. All such practices are nevertheless part of the employer's prevailing wage obligation and contained in the collective bargaining agreements of the prevailing wage unions. These collective bargaining agreements are available for inspection by appointment. Requests for appointments may be made by calling (212) 669-4002 Monday through Friday between the hours of 9 a.m. and 5 p.m.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Prevailing rates and ratios for apprentices are attached to this schedule in the Appendix. Pursuant to Labor Law §220 (3-e), only apprentices who are individually registered in a bona fide program to which the employer contractor is a participant, registered with the New York State Department of Labor, may be employed on a public work project. Workers who are not journey persons or not registered apprentices pursuant to Labor Law §220 (3-e) may not be substituted for apprentices and must be paid as journey persons.

Public Work construction, reconstruction, demolition, excavation, rehabilitation, repair, renovation, alteration, or improvement contracts awarded pursuant to a Project Labor Agreement ("PLA") in accordance with Labor Law section 222 may have different labor standards for shift, premium and overtime work. Please refer to the PLA's pre-negotiated labor agreements for wage and benefit rates applicable to work performed outside of the regular workday. More information is available at the Mayor's Office of Contract Services (MOCS) web page at <http://www.nyc.gov/html/mocs/html/vendors/pla.shtml>.

All the provisions of Labor Law section 220 remain applicable to PLA work including, but not limited to, the enforcement of prevailing wage requirements by the Comptroller; however, we will enforce shift, premium, overtime and other non-standard rates as they appear in a project's pre-negotiated labor agreement.

In order to meet their obligation to provide prevailing supplemental benefits to each covered employee, employers must either:

- 1) Provide bona-fide benefits which cost the employer no less than the prevailing supplemental benefits rate; or
- 2) Supplement the employee's hourly wage by an amount no less than the prevailing supplemental benefits rate; or
- 3) Provide a combination of bona-fide benefits and wage supplements which cost the employer no less than the prevailing supplemental benefits rate in total.

Particular attention should be given to the supplemental benefits requirement. Although in most instances the payment or provision for supplemental benefits is for each hour worked, some classifications require the payment or provision of supplemental benefits for each hour paid. Consequently, some prevailing practices require benefits to be purchased at the overtime, shift differential, Holiday, Saturday, Sunday or other premium time rate.

Benefits are paid for **EACH HOUR WORKED** unless otherwise noted.

Wasyi Kinach, P.E.
Director of Classifications
Bureau of Labor Law

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

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§220 PREVAILING WAGE SCHEDULE

ASBESTOS HANDLER

(Hazardous Material; Disturbs, removes, encapsulates, repairs, or encloses friable asbestos material)

Asbestos Handler

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$36.00

Supplemental Benefit Rate per Hour: \$16.45

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Sunday.

Time and one half the regular hourly rate after 40 hours in any work week.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Easter

Paid Holidays

None

(Local #78 and Local #12A)

BLASTER

Blaster

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$44.93

Supplemental Benefit Rate per Hour: \$46.24

Blaster (Hydraulic)

Effective Period: 7/1/2016 - 6/30/2017

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: \$45.78
Supplemental Benefit Rate per Hour: \$46.24

Blaster - Trac Drill Hydraulic

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$40.12
Supplemental Benefit Rate per Hour: \$46.24

Blaster - Wagon: Air Trac: Quarry Bar: Drillrunners

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$39.31
Supplemental Benefit Rate per Hour: \$46.24

Blaster - Operators of Jack Hammers

Chippers: Spaders: Concrete Breakers: and all other pneumatic tools of like usage: Walk Behind Self Propelled Hydraulic Asphalt and Concrete Breakers: Hydro (Water) Demolition

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$38.23
Supplemental Benefit Rate per Hour: \$46.24

Blaster - Powder Carriers

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$34.20
Supplemental Benefit Rate per Hour: \$46.24

Blaster - Hydraulic Trac Drill Chuck Tender

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$32.88
Supplemental Benefit Rate per Hour: \$46.24

Blaster - Chuck Tender & Nipper

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$32.10
Supplemental Benefit Rate per Hour: \$46.24

Blaster - Magazine Keepers: (Watch Person)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$17.80
Supplemental Benefit Rate per Hour: \$46.24

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Overtime Description

Magazine Keepers:

Time and one half for work performed in excess of forty (40) hours per week and for work performed on Saturdays, Sundays and Holidays.

All Other Employees:

Time and one-half for the first two hours of overtime Monday through Friday, the first ten hours, the first ten hours of work on Saturday and for Make-up Time. Double time for all hours over ten Monday through Saturday (except make-up hours) and for all hours worked on Sunday and Holidays.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

Single shift shall be 8 hours plus an unpaid lunch, starting at 8:00 A.M. (or between 6:00 A.M. and 10:00 A.M. on weekdays). When two (2) shifts are employed, each shift shall be 8 hours plus ½ hour unpaid lunch. When three (3) shifts are employed, each shift will work seven and one-half (7 ½) hours, but will be paid for eight (8) hours, since only one-half (½) hour is allowed for mealtime. When two (2) or more shifts are employed, single time will be paid for each shift. The first 8 hours of any and all work performed Monday through Friday inclusive of any off-shift shall be at the single time rate.

(Local #29)

BOILERMAKER

Boilermaker

Effective Period: 7/1/2016 - 12/31/2016

Wage Rate per Hour: \$53.36

Supplemental Benefit Rate per Hour: \$42.33

Supplemental Note: For time and one half overtime - \$62.88 For double overtime - \$83.42

Effective Period: 1/1/2017 - 6/30/2017

Wage Rate per Hour: \$55.23

Supplemental Benefit Rate per Hour: \$42.96

Supplemental Note: For time and one half overtime - \$63.82 For double overtime - \$84.68

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Overtime Description

For Repair and Maintenance work:

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

For New Construction work:

Double time the regular rate after an 8 hour day.

Double time the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Columbus Day

Election Day

Veteran's Day

Thanksgiving Day

Christmas Day

Quadruple time the regular rate for work on the following holiday(s).

Labor Day

Paid Holidays

Good Friday

Day after Thanksgiving

Day before Christmas

Day before New Year's Day

Shift Rates

When shifts are required, the first shift shall work eight (8) hours at the regular straight-time hourly rate. The second shift shall work seven and one-half (7 ½) hours and receive eight hours at the regular straight time hourly rate plus twenty-five cents (\$0.25) per hour. The third shift shall work seven (7) hours and receive eight hours at the regular straight time hourly rate plus fifty cents (\$0.50) per hour. A thirty (30) minute lunch period shall not be considered as time worked. Work in excess of the above shall be paid overtime at the appropriate new construction work or repair work overtime wage and supplemental benefit hourly rate.

(Local #5)

BRICKLAYER

Bricklayer

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$52.59

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: \$30.00

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

Overtime rates to be paid outside the regular scheduled work day.

(Bricklayer District Council)

CARPENTER - BUILDING COMMERCIAL

Building Commercial

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$52.50

Supplemental Benefit Rate per Hour: \$46.28

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Washington's Birthday

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays
None

Shift Rates

The second shift will receive one hour at the double time rate of pay for the last hour of the shift; eight hours pay for seven hours of work, nine hours pay for eight hours of work. There must be a first shift in order to work a second shift.

(Carpenters District Council)

CARPENTER - HEAVY CONSTRUCTION WORK
(Construction of Engineering Structures and Building Foundations)

Heavy Construction Work

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$51.63
Supplemental Benefit Rate per Hour: \$48.65

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).
New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Paid Holidays

None

Shift Rates

Off shift work commencing between 5:00 P.M. and 11:00 P.M. shall work eight and one half hours allowing for one half hour for lunch. The wage rate shall be 113% of the straight time hourly wage rate.

(Carpenters District Council)

CARPENTER - SIDEWALK SHED, SCAFFOLD AND HOIST

Carpenter - Hod Hoist

(Assisted by Mason Tender)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$50.50

Supplemental Benefit Rate per Hour: \$44.80

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

Shift Rates

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

The second shift will receive one hour at the double time rate of pay for the last hour of the shift; eight hours pay for seven hours of work, nine hours pay for eight hours of work. There must be a first shift in order to work a second shift.

(Carpenters District Council)

CEMENT & CONCRETE WORKER

Cement & Concrete Worker

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$42.48

Supplemental Benefit Rate per Hour: \$23.00

Supplemental Note: \$25.75 on Saturdays; \$28.50 on Sundays & Holidays

Cement & Concrete Worker - (Hired after 2/6/2016)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$32.00

Supplemental Benefit Rate per Hour: \$16.00

Supplemental Note: \$17.25 on Saturdays; \$18.50 on Sundays & Holidays

Overtime Description

Time and one half the regular rate after 7 hour day (time and one half the regular rate after an 8 hour day when working with Dockbuilders on pile cap forms and for work below street level to the top of the foundation wall, not to exceed 2 feet or 3 feet above the sidewalk-brick shelf, when working on the foundation and structure.)

Overtime

Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

1/2 day before Christmas Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

1/2 day before New Year's Day

Shift Rates

On shift work extending over a twenty-four hour period, all shifts are paid at straight time.

(Cement Concrete Workers District Council)

CEMENT MASON

Cement Mason

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$40.72

Supplemental Benefit Rate per Hour: \$38.96

Supplemental Note: For time and one half overtime - \$48.21; For double overtime - \$57.46

Overtime Description

Time and one-half the regular rate after an 8 hour day, double time the regular rate after 10 hours. Time and one-half the regular rate on Saturday, double time the regular rate after 10 hours. Double time the regular rate on Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

Any worker who reports to work on Christmas Eve or New Year's Eve pursuant to his employer's instruction shall be entitled to three (3) hours afternoon pay without working.

Shift Rates

For an off shift day, (work at times other than the regular 7:00 A.M. to 3:30 P.M. work day) a cement mason shall be paid at the regular hourly rate plus a 25% per hour differential. Four Days a week at Ten (10)hour day.

(Local #780) (BCA)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

CORE DRILLER

Core Driller

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: **\$37.82**
Supplemental Benefit Rate per Hour: **\$24.00**

Core Driller Helper

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: **\$30.17**
Supplemental Benefit Rate per Hour: **\$24.00**

Core Driller Helper(Third year in the industry)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: **\$27.15**
Supplemental Benefit Rate per Hour: **\$24.00**

Core Driller Helper (Second year in the industry)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: **\$24.14**
Supplemental Benefit Rate per Hour: **\$24.00**

Core Driller Helper (First year in the industry)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: **\$21.12**
Supplemental Benefit Rate per Hour: **\$24.00**

Overtime Description

Time and one half the regular rate for work on a holiday plus Holiday pay when worked.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Time and one half the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
Memorial Day
Independence Day
Labor Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Thanksgiving Day
Christmas Day

Shift Rates

The shift day shall be the continuous eight and one-half (8½) hours from 6:00 A.M. to 2:30 P.M. and from 2:30 P.M. to 11:00 P.M., including one-half (½) hour of employees regular rate of pay for lunch. When two (2) or more shifts are employed, single time shall be paid for each shift, but those employees employed on a shift other than from 8:00 A.M. to 5:00 P.M. shall, in addition, receive seventy-five cents (\$0.75) per hour differential for each hour worked. When three (3) shifts are needed, each shift shall work seven and one-half (7 ½) hours paid for eight (8) hours of labor and be permitted one-half (½) hour for mealtime.

(Carpenters District Council)

DERRICKPERSON AND RIGGER

Derrick Person & Rigger

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$45.48

Supplemental Benefit Rate per Hour: \$50.00

Supplemental Note: The above supplemental rate applies for work performed in Manhattan, Bronx, Brooklyn and Queens. \$51.42 - For work performed in Staten Island.

Overtime Description

The first two hours of overtime on weekdays and the first seven hours of work on Saturdays are paid at time and one half for wages and supplemental benefits. All additional overtimes is paid at double time for wages and supplemental benefits. Deduct \$1.42 from the Staten Island hourly benefits rate before computing overtime.

Overtime

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Washington's Birthday

Good Friday

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

(Local #197)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

DIVER

Diver (Marine)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$65.38

Supplemental Benefit Rate per Hour: \$48.65

Diver Tender (Marine)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$46.44

Supplemental Benefit Rate per Hour: \$48.65

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

When three shifts are utilized each shift shall work seven and one half-hours (7 1/2 hours) and paid for 8 hours, allowing for one half hour for lunch.

(Carpenters District Council)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

DOCKBUILDER - PILE DRIVER

Dockbuilder - Pile Driver

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$51.63

Supplemental Benefit Rate per Hour: \$48.65

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

Off shift work commencing between 5:00 P.M. and 11:00 P.M. shall work eight and one half hours allowing for one half hour for lunch. The wage rate shall be 113% of the straight time hourly wage rate.

(Carpenters District Council)

DRIVER: TRUCK (TEAMSTER)

Driver - Dump Truck

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$40.15

Supplemental Benefit Rate per Hour: \$43.39

Supplemental Note: Over 40 hours worked: at time and one half rate - \$18.44; at double time rate - \$24.58

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Driver - Tractor Trailer

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$41.46

Supplemental Benefit Rate per Hour: \$43.65

Supplemental Note: Over 40 hours worked: at time and one half rate - \$16.65; at double time rate - \$22.20

Driver - Euclid & Turnapull Operator

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$42.03

Supplemental Benefit Rate per Hour: \$43.65

Supplemental Note: Over 40 hours worked: at time and one half rate - \$16.65; at double time rate - \$22.20

Overtime Description

For Paid Holidays: Holiday pay for all holidays shall be prorated based two hours per day for each day worked in the holiday week, not to exceed 8 hours of holiday pay. For Thanksgiving week, the prorated share shall be 5 1/3 hours of holiday pay for each day worked in Thanksgiving week.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Shift Rates

Off single shift work commencing between 6:00 P.M. and 5:00 A.M. shall work eight and one half hours allowing for one half hour for lunch and receive 9 hours pay for 8 hours of work.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Driver Redi-Mix (Sand & Gravel)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$36.30

Supplemental Benefit Rate per Hour: \$40.02

Supplemental Note: Over 40 hours worked: time and one half rate \$13.90, double time rate \$18.53

Overtime Description.

For Paid Holidays: Employees working two (2) days in the calendar week in which the holiday falls are to paid for these holidays, provided they shape each remaining workday during that calendar week.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

President's Day
Columbus Day
Veteran's Day

Triple time the regular rate for work on the following holiday(s).

New Year's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Election Day
Thanksgiving Day
Christmas Day

(Local #282)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

ELECTRICIAN

(Including all low voltage cabling carrying data; video; and voice in combination with data and or video.)

Electrician "A" (Regular Day)

Effective Period: 7/1/2016 - 5/10/2017
Wage Rate per Hour: **\$54.00**
Supplemental Benefit Rate per Hour: **\$51.86**

Effective Period: 5/11/2017 - 6/30/2017
Wage Rate per Hour: **\$56.00**
Supplemental Benefit Rate per Hour: **\$54.35**

Electrician "A" (Regular Day Overtime)

Effective Period: 7/1/2016 - 5/10/2017
Wage Rate per Hour: **\$81.00**
Supplemental Benefit Rate per Hour: **\$55.24**

Effective Period: 5/11/2017 - 6/30/2017
Wage Rate per Hour: **\$84.00**
Supplemental Benefit Rate per Hour: **\$57.86**

Electrician "A" (Day Shift)

Effective Period: 7/1/2016 - 5/10/2017
Wage Rate per Hour: **\$54.00**
Supplemental Benefit Rate per Hour: **\$51.86**

Effective Period: 5/11/2017 - 6/30/2017
Wage Rate per Hour: **\$56.00**
Supplemental Benefit Rate per Hour: **\$54.35**

Electrician "A" (Day Shift Overtime After 8 hours)

Effective Period: 7/1/2016 - 5/10/2017
Wage Rate per Hour: **\$81.00**
Supplemental Benefit Rate per Hour: **\$55.24**

Effective Period: 5/11/2017 - 6/30/2017
Wage Rate per Hour: **\$84.00**
Supplemental Benefit Rate per Hour: **\$57.86**

Electrician "A" (Swing Shift)

Effective Period: 7/1/2016 - 5/10/2017

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: \$63.36
Supplemental Benefit Rate per Hour: \$59.01

Effective Period: 5/11/2017 - 6/30/2017
Wage Rate per Hour: \$65.71
Supplemental Benefit Rate per Hour: \$61.94

Electrician "A" (Swing Shift Overtime After 7.5 hours)

Effective Period: 7/1/2016 - 5/10/2017
Wage Rate per Hour: \$95.04
Supplemental Benefit Rate per Hour: \$62.98

Effective Period: 5/11/2017 - 6/30/2017
Wage Rate per Hour: \$98.57
Supplemental Benefit Rate per Hour: \$66.05

Electrician "A" (Graveyard Shift)

Effective Period: 7/1/2016 - 5/10/2017
Wage Rate per Hour: \$70.97
Supplemental Benefit Rate per Hour: \$65.05

Effective Period: 5/11/2017 - 6/30/2017
Wage Rate per Hour: \$73.60
Supplemental Benefit Rate per Hour: \$68.33

Electrician "A" (Graveyard Shift Overtime After 7 hours)

Effective Period: 7/1/2016 - 5/10/2017
Wage Rate per Hour: \$106.46
Supplemental Benefit Rate per Hour: \$69.50

Effective Period: 5/11/2017 - 6/30/2017
Wage Rate per Hour: \$110.40
Supplemental Benefit Rate per Hour: \$72.95

Overtime

Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on a holiday.
New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays
None

Shift Rates

When so elected by the Employer, one or more shifts of at least five days duration may be scheduled as follows:
Day Shift: 8:00 am to 4:30 pm, Swing Shift 4:30 pm to 12:30 am, Graveyard Shift: 12:30 am to 8:00 am.

For multiple shifts of temporary light and/or power, the temporary light and/or power employee shall be paid for 8 hours at the straight time rate. For three or less workers performing 8 hours temporary light and/or power the supplemental benefit rate is \$25.14 and effective 5/11/17 \$25.67.

Electrician "M" (First 8 hours)

"M" rated work shall be defined as jobbing: electrical work of limited duration and scope, also consisting of repairs and/or replacement of electrical and tele-data equipment. Includes all work necessary to retrofit, service, maintain and repair all kinds of lighting fixtures and local lighting controls and washing and cleaning of foregoing fixtures.

Effective Period: 7/1/2016 - 5/10/2017

Wage Rate per Hour: \$28.00

Supplemental Benefit Rate per Hour: \$21.85

First and Second Year "M" Wage Rate Per Hour: \$23.50

First and Second Year "M" Supplemental Rate: \$19.54

Effective Period: 5/11/2017 - 6/30/2017

Wage Rate per Hour: \$28.50

Supplemental Benefit Rate per Hour: \$22.10

First and Second Year "M" Wage Rate Per Hour: \$24.00

First and Second Year "M" Supplemental Rate: \$19.80

Electrician "M" (Overtime After First 8 hours)

"M" rated work shall be defined as jobbing: electrical work of limited duration and scope, also consisting of repairs and/or replacement of electrical and tele-data equipment. Includes all work necessary to retrofit, service, maintain and repair all kinds of lighting fixtures and local lighting controls and washing and cleaning of foregoing fixtures.

Effective Period: 7/1/2016 - 5/10/2017

Wage Rate per Hour: \$42.00

Supplemental Benefit Rate per Hour: \$23.60

First and Second Year "M" Wage Rate Per Hour: \$35.25

First and Second Year "M" Supplemental Rate: \$21.01

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Effective Period: 5/11/2017 - 6/30/2017

Wage Rate per Hour: \$42.75

Supplemental Benefit Rate per Hour: \$23.89

First and Second Year "M" Wage Rate Per Hour: \$36.00

First and Second Year "M" Supplemental Rate: \$21.30

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Unpaid Holidays

None

(Local #3)

ELECTRICIAN - ALARM TECHNICIAN

(Scope of Work - Inspect, test, repair, and replace defective, malfunctioning, or broken devices, components and controls of Fire, Burglar and Security Systems)

Alarm Technician

Effective Period: 7/1/2016 - 3/9/2017

Wage Rate per Hour: \$32.00

Supplemental Benefit Rate per Hour: \$15.47

Supplemental Note: \$13.97 only after 8 hours worked in a day

Effective Period: 3/10/2017 - 6/30/2017

Wage Rate per Hour: \$32.40

Supplemental Benefit Rate per Hour: \$16.10

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Supplemental Note: \$14.60 only after 8 hours worked in a day.

Overtime Description

Time and one half the regular rate for work on the following holidays: Columbus Day, Veterans Day, Day after Thanksgiving.

Double time the regular rate for work on the following holidays: New Year's day, Martin Luther King Jr. Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Paid Holidays

- New Year's Day
- Martin Luther King Jr. Day
- President's Day
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Veteran's Day
- Thanksgiving Day
- Day after Thanksgiving
- Christmas Day

Shift Rates

Night Differential is based upon a ten percent (10%) differential between the hours of 4:00 P.M. and 12:30 A.M. and a fifteen percent (15%) differential for the hours 12:00 A.M. to 8:00 A.M.

Vacation

- At least 1 year of employment.....ten (10) days
- 5 years or more of employment.....fifteen (15) days
- 10 years of employment.....twenty (20) days
- Plus one Personal Day per year

Sick Days:

One day per Year. Up to 4 vacation days may be used as sick days.

(Local #3)

ELECTRICIAN-STREET LIGHTING WORKER

Electrician - Electro Pole Electrician

Effective Period: 7/1/2016 - 5/17/2017

Wage Rate per Hour: \$54.00

Supplemental Benefit Rate per Hour: \$53.69

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Effective Period: 5/18/2017 - 6/30/2017
Wage Rate per Hour: \$56.00
Supplemental Benefit Rate per Hour: \$56.26

Electrician - Electro Pole Foundation Installer

Effective Period: 7/1/2016 - 5/17/2017
Wage Rate per Hour: \$40.93
Supplemental Benefit Rate per Hour: \$40.12

Effective Period: 5/18/2017 - 6/30/2017
Wage Rate per Hour: \$41.54
Supplemental Benefit Rate per Hour: \$41.02

Electrician - Electro Pole Maintainer

Effective Period: 7/1/2016 - 5/17/2017
Wage Rate per Hour: \$35.05
Supplemental Benefit Rate per Hour: \$36.11

Effective Period: 5/18/2017 - 6/30/2017
Wage Rate per Hour: \$35.58
Supplemental Benefit Rate per Hour: \$36.89

Overtime Description

Electrician - Electro Pole Electrician: Time and one half the regular rate after a 7 hour day and after 5 consecutive days worked per week.
Electrician - Electro Pole Foundation Installer: Time and one half the regular rate after 8 hours within a 24 hour period and Saturday and Sunday.
Electrician - Electro Pole Maintainer: Time and one half the regular rate after a 7 hour day and after 5 consecutive days worked per week. Saturdays and Sundays may be used as a make-up day at straight time when a day is lost during the week to inclement weather.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Holidays

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

(Local #3)

ELEVATOR CONSTRUCTOR

Elevator Constructor

Effective Period: 7/1/2016 - 3/16/2017

Wage Rate per Hour: **\$60.96**

Supplemental Benefit Rate per Hour: **\$32.65**

Effective Period: 3/17/2017 - 6/30/2017

Wage Rate per Hour: **\$62.64**

Supplemental Benefit Rate per Hour: **\$34.25**

Overtime Description

For New Construction: work performed after 7 or 8 hour day, Saturday, Sunday or between 4:30pm and 7:00am shall be paid at double time rate.

Existing buildings: work performed after an 8 hour day, Saturday, Sunday or between 5:30pm and 7:00 am shall be paid time and one half.

Overtime

Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Vacation

Employer contributes 8% of regular basic hourly rate as vacation pay for employees with more than 15 years of service, and 6% for employees with 5 to 15 years of service, and 4% for employees with less than 5 years of service.

(Local #1)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

ELEVATOR REPAIR & MAINTENANCE

Elevator Service/Modernization Mechanic

Effective Period: 7/1/2016 - 3/16/2017

Wage Rate per Hour: \$47.91

Supplemental Benefit Rate per Hour: \$32.51

Effective Period: 3/17/2017 - 6/30/2017

Wage Rate per Hour: \$49.14

Supplemental Benefit Rate per Hour: \$34.11

Overtime Description

For Scheduled Service Work: Double time - work scheduled in advance by two or more workers performed on Sundays, Holidays, and between midnight and 7:00am.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Time and one half the regular rate for work on a holiday plus the day's pay.

Public Holidays

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Shift Rates

Afternoon shift - regularly hourly rate plus a (15%) fifteen percent differential. Graveyard shift - time and one half the regular rate.

Vacation

Employer contributes 8% of regular basic hourly rate as vacation pay for employees with more than 15 years of service, and 6% for employees with 5 to 15 years of service, and 4% for employees with less than 5 years of service.

(Local #1)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

ENGINEER

Engineer - Heavy Construction Operating Engineer I

Cherrypickers 20 tons and over and Loaders (rubber tired and/or tractor type with a manufacturer's minimum rated capacity of six cubic yards and over).

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$65.94**

Supplemental Benefit Rate per Hour: **\$35.41**

Supplemental Note: **\$63.67** on overtime

Shift Wage Rate: **\$105.50**

Engineer - Heavy Construction Operating Engineer II

Backhoes, Basin Machines, Groover, Mechanical Sweepers, Bobcat, Boom Truck, Barrier Transport (Barrier Mover) & machines of similar nature. Operation of Churn Drills and machines of a similar nature, Stetco Silent Hoist and machines of similar nature, Vac-Alls, Meyers Machines, John Beam and machines of a similar nature, Ross Carriers and Travel Lifts and machines of a similar nature, Bulldozers, Scrapers and Turn-a-Pulls: Tugger Hoists (Used exclusively for handling excavated material); Tractors with attachments, Hyster and Roustabout Cranes, Cherrypickers. Austin Western, Grove and machines of a similar nature, Scoopmobiles, Monorails, Conveyors, Trenchers: Loaders-Rubber Tired and Tractor: Barber Greene and Eimco Loaders and Eimco Backhoes; Mighty Midget and similar breakers and Tampers, Curb and Gutter Pavers and Motor Patrol, Motor Graders and all machines of a similar nature. Locomotives 10 Tons or under. Mini-Max, Break-Tech and machines of a similar nature; Milling machines, robotic and demolition machines and machines of a similar nature, shot blaster, skid steer machines and machines of a similar nature including bobcat, pile rig rubber-tired excavator (37,000 lbs. and under), 2 man auger.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$63.98**

Supplemental Benefit Rate per Hour: **\$35.41**

Supplemental Note: **\$63.67** on overtime

Shift Wage Rate: **\$102.37**

Engineer - Heavy Construction Operating Engineer III

Minor Equipment such as Tractors, Post Hole Diggers, Ditch Witch (Walk Behind), Road Finishing Machines, Rollers five tons and under, Tugger Hoists, Dual Purpose Trucks, Fork Lifts, and Dempsey Dumpers, Fireperson.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$60.69**

Supplemental Benefit Rate per Hour: **\$35.41**

Supplemental Note: **\$63.67** on overtime

Shift Wage Rate: **\$97.10**

Engineer - Heavy Construction Maintenance Engineer I

Installing, Repairing, Maintaining, Dismantling and Manning of all equipment including Steel Cutting, Bending and Heat Sealing Machines, Mechanical Heaters, Grout Pumps, Bentonite Pumps & Plants, Screening Machines, Fusion Coupling Machines, Tunnel Boring Machines Moles and Machines of a similar nature, Power Packs, Mechanical Hydraulic Jacks; all drill rigs including but not limited to Churn, Rotary Caisson, Raised Bore & Drills

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

of a similar nature; Personnel, Inspection & Safety Boats or any boats used to perform functions of same, Mine Hoists, Whirlies, all Climbing Cranes, all Tower Cranes, including but not limited to Truck Mounted and Crawler Type and machines of similar nature; Maintaining Hydraulic Drills and machines of a similar nature; Well Point System-Installation and dismantling; Burning, Welding, all Pumps regardless of size and/or motor power, except River Cofferdam Pumps and Wells Point Pumps; Motorized Buggies (three or more); equipment used in the cleaning and televising of sewers, but not limited to jet-rodder/vacuum truck, vacall/vactor, closed circuit television inspection equipment; high powered water pumps, jet pumps; screed machines and concrete finishing machines of a similar nature; vermeers.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$63.68

Supplemental Benefit Rate per Hour: \$35.41

Supplemental Note: \$63.67 on overtime

Shift Wage Rate: \$101.89

Engineer - Heavy Construction Maintenance Engineer II

On Base Mounted Tower Cranes

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$83.66

Supplemental Benefit Rate per Hour: \$35.41

Supplemental Note: \$63.67 on overtime

Shift Wage Rate: \$133.86

Engineer - Heavy Construction Maintenance Engineer III

On Generators, Light Towers

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$42.01

Supplemental Benefit Rate per Hour: \$35.41

Supplemental Note: \$63.67 on overtime

Shift Wage Rate: \$67.22

Engineer - Heavy Construction Maintenance Engineer IV

On Pumps and Mixers including mud sucking

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$43.11

Supplemental Benefit Rate per Hour: \$35.41

Supplemental Note: \$63.67 on overtime

Shift Wage Rate: \$68.98

Engineer - Heavy Construction Oilers I

Gradalls, Cold Planer Grader, Concrete Pumps, Driving Truck Cranes, Driving and Operating Fuel and Grease

Effective Period: 7/1/2016 - 6/30/2017

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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Wage Rate per Hour: \$57.42
Supplemental Benefit Rate per Hour: \$35.41
Supplemental Note: \$63.67 on overtime
Shift Wage Rate: \$91.87

Engineer - Heavy Construction Oilers II

All gasoline, electric, diesel or air operated Shovels, Draglines, Backhoes, Keystones, Pavers, Guniting Machines, Battery of Compressors, Crawler Cranes, two-person Trenching Machines.

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$39.70
Supplemental Benefit Rate per Hour: \$35.41
Supplemental Note: \$63.67 on overtime
Shift Wage Rate: \$63.52

Engineer - Steel Erection Maintenance Engineers

Derrick, Travelers, Tower, Crawler Tower and Climbing Cranes

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$61.13
Supplemental Benefit Rate per Hour: \$35.41
Supplemental Note: \$63.67 on overtime
Shift Wage Rate: \$97.81

Engineer - Steel Erection Oiler I

On a Truck Crane

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$57.21
Supplemental Benefit Rate per Hour: \$35.41
Supplemental Note: \$63.67 on overtime
Shift Wage Rate: \$91.54

Engineer - Steel Erection Oiler II

On a Crawler Crane

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$43.54
Supplemental Benefit Rate per Hour: \$35.41
Supplemental Note: \$63.67 on overtime
Shift Wage Rate: \$69.66

Overtime Description

On jobs of more than one shift, if the next shift employee fails to report for work through any cause over which the employer has no control, the employee on duty who works the next shift continues to work at the single time rate.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Overtime

Double time the regular rate after an 8 hour day.
Double time the regular time rate for Saturday.
Double time the regular rate for Sunday.
Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
Lincoln's Birthday
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

Engineer - Building Work Maintenance Engineers I

Installing, repairing, maintaining, dismantling (of all equipment including: Steel Cutting and Bending Machines, Mechanical Heaters, Mine Hoists, Climbing Cranes, Tower Cranes, Linden Peine, Lorain, Liebherr, Mannes, or machines of a similar nature, Well Point Systems, Deep Well Pumps, Concrete Mixers with loading Device, Concrete Plants, Motor Generators when used for temporary power and lights), skid steer machines of a similar nature including bobcat.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$58.30

Supplemental Benefit Rate per Hour: \$35.41

Supplemental Note: \$63.67 on overtime

Engineer - Building Work Maintenance Engineers II

On Pumps, Generators, Mixers and Heaters

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$45.28

Supplemental Benefit Rate per Hour: \$35.41

Supplemental Note: \$63.67 on overtime

Engineer - Building Work Oilers I

All gasoline, electric, diesel or air operated Gradealls: Concrete Pumps, Overhead Cranes in Power Houses: Their duties shall be to assist the Engineer in oiling, greasing and repairing of all machines; Driving Truck Oilers: Driving and Operating Fuel and Grease Trucks, Cherrypickers (hydraulic cranes) over 70,000 GVW, and machines of a similar nature.

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\$220 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$55.42
Supplemental Benefit Rate per Hour: \$35.41
Supplemental Note: \$63.67 on overtime

Engineer - Building Work Oilers II

Oilers on Crawler Cranes, Backhoes, Trenching Machines, Gunite Machines, Compressors (three or more in Battery).

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$41.16
Supplemental Benefit Rate per Hour: \$35.41
Supplemental Note: \$63.67 on overtime

Overtime Description

On jobs of more than one shift, if an Employee fails to report for work through any cause over which the Employer has no control, the Employee on duty will continue to work at the rate of single time.

Overtime

Double time the regular rate after an 8 hour day.
Double time the regular time rate for Saturday.
Double time the regular rate for Sunday.
Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
Lincoln's Birthday
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

Shift Rates

Off Shift: double time the regular hourly rate.

(Local #15)

ENGINEER - CITY SURVEYOR AND CONSULTANT

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Party Chief

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$38.18

Supplemental Benefit Rate per Hour: \$20.15

Supplemental Note: Overtime Benefit Rate - \$27.65 per hour (time & one half) \$35.15 per hour (double time).

Instrument Person

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$31.47

Supplemental Benefit Rate per Hour: \$20.15

Supplemental Note: Overtime Benefit Rate - \$27.65 per hour (time & one half) \$35.15 per hour (double time).

Rodperson

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$27.24

Supplemental Benefit Rate per Hour: \$20.15

Supplemental Note: Overtime Benefit Rate - \$27.65 per hour (time & one half) \$35.15 per hour (double time).

Overtime Description

Time and one half the regular rate after an 8 hour day, Time and one half the regular rate for Saturday for the first eight hours worked, Double time the regular time rate for Saturday for work performed in excess of eight hours, Double time the regular rate for Sunday and Double time the regular rate for work on a holiday.

Paid Holidays

New Year's Day

Lincoln's Birthday

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

(Operating Engineer Local #15-D)

ENGINEER - FIELD (BUILDING CONSTRUCTION)

(Construction of Building Projects, Concrete Superstructures, etc.)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Field Engineer - BC Party Chief

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$60.10**

Supplemental Benefit Rate per Hour: **\$32.15**

Supplemental Note: Overtime Benefit Rate - \$44.90 per hour (time & one half) \$57.65 per hour (double time).

Field Engineer - BC Instrument Person

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$46.69**

Supplemental Benefit Rate per Hour: **\$32.15**

Supplemental Note: Overtime Benefit Rate - \$44.90 per hour (time & one half) \$57.65 per hour (double time).

Field Engineer - BC Rodperson

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$30.20**

Supplemental Benefit Rate per Hour: **\$32.15**

Supplemental Note: Overtime Benefit Rate - \$44.90 per hour (time & one half) \$57.65 per hour (double time).

Overtime Description

Time and one half the regular rate after a 7 hour work and time and one half the regular rate for Saturday for the first seven hours worked, Double time the regular time rate for Saturday for work performed in excess of seven hours, Double time the regular rate for Sunday and Double time the regular rate for work on a holiday.

Paid Holidays

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

(Operating Engineer Local #15-D)

ENGINEER - FIELD (HEAVY CONSTRUCTION)
(Construction of Roads, Tunnels, Bridges, Sewers, Building Foundations,
Engineering Structures etc.)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Field Engineer - HC Party Chief

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$68.09

Supplemental Benefit Rate per Hour: \$33.54

Supplemental Note: Overtime benefit rate - \$46.86 per hour (time & one half), \$60.18 per hour (double time).

Field Engineer - HC Instrument Person

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$49.98

Supplemental Benefit Rate per Hour: \$33.54

Supplemental Note: Overtime benefit rate - \$46.86 per hour (time & one half), \$60.18 per hour (double time).

Field Engineer - HC Rodperson

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$41.93

Supplemental Benefit Rate per Hour: \$33.54

Supplemental Note: Overtime benefit rate - \$46.86 per hour (time & one half), \$60.18 per hour (double time).

Overtime Description

Time and one half the regular rate after an 8 hour day, Time and one half the regular rate for Saturday for the first eight hours worked, Double time the regular time rate for Saturday for work performed in excess of eight hours, Double time the regular rate for Sunday and Double time the regular rate for work on a holiday.

Paid Holidays

New Year's Day

Lincoln's Birthday

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

(Operating Engineer Local #15-D)

ENGINEER - FIELD (STEEL ERECTION)

Field Engineer - Steel Erection Party Chief

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$63.64

Supplemental Benefit Rate per Hour: \$33.04

Supplemental Note: Overtime benefit rate - \$46.11 per hour (time & one half), \$59.18 per hour (double time).

Field Engineer - Steel Erection Instrument Person

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$49.59

Supplemental Benefit Rate per Hour: \$33.04

Supplemental Note: Overtime benefit rate - \$46.11 per hour (time & one half), \$59.18 per hour (double time).

Field Engineer - Steel Erection Rodperson

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$33.20

Supplemental Benefit Rate per Hour: \$33.04

Supplemental Note: Overtime benefit rate - \$46.11 per hour (time & one half), \$59.18 per hour (double time).

Overtime Description

Time and one half the regular rate for Saturday for the first eight hours worked.

Double time the regular rate for Saturday for work performed in excess of eight hours.

Overtime

Time and one half the regular rate after an 8 hour day.

Double time the regular rate for Sunday.

Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day

Lincoln's Birthday

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

(Operating Engineer Local #15-D)

ENGINEER - OPERATING

Operating Engineer - Road & Heavy Construction I

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Back Filling Machines, Cranes, Mucking Machines and Dual Drum Paver.

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$73.90
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$118.24

Operating Engineer - Road & Heavy Construction II

Backhoes, Power Shovels, Hydraulic Clam Shells, Steel Erection, Moles and machines of a similar nature.

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$76.51
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$122.42

Operating Engineer - Road & Heavy Construction III

Mine Hoists, Cranes, etc. (Used as Mine Hoists)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$78.96
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$126.34

Operating Engineer - Road & Heavy Construction IV

Gradealls, Keystones, Cranes on land or water (with digging buckets), Bridge Cranes, Vermeer Cutter and machines of a similar nature, Trenching Machines.

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$77.07
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$123.31

Operating Engineer - Road & Heavy Construction V

Pile Drivers & Rigs (employing Dock Builder foreperson): Derrick Boats, Tunnel Shovels.

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$75.55
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$120.88

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Operating Engineer - Road & Heavy Construction VI

Mixers (Concrete with loading attachment), Concrete Pavers, Cableways, Land Derricks, Power Houses (Low Air Pressure Units).

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$71.78
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$114.85

Operating Engineer - Road & Heavy Construction VII

Barrier Movers , Barrier Transport and Machines of a Similar Nature.

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$57.96
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$92.74

Operating Engineer - Road & Heavy Construction VIII

Utility Compressors

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$44.98
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$56.70

Operating Engineer - Road & Heavy Construction IX

Horizontal Boring Rig

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$68.25
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$109.20

Operating Engineer - Road & Heavy Construction X

Elevators (manually operated as personnel hoist).

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$62.73
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$100.37

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Operating Engineer - Road & Heavy Construction XI

Compressors (Portable 3 or more in battery), Driving of Truck Mounted Compressors, Well-point Pumps, Tugger Machines Well Point Pumps, Churn Drill.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$48.73

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: \$77.97

Operating Engineer - Road & Heavy Construction XII

All Drills and Machines of a similar nature.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$72.53

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: \$116.05

Operating Engineer - Road & Heavy Construction XIII

Concrete Pumps, Concrete Plant, Stone Crushers, Double Drum Hoist, Power Houses (other than above).

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$70.24

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: \$112.38

Operating Engineer - Road & Heavy Construction XIV

Concrete Mixer

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$67.16

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: \$107.46

Operating Engineer - Road & Heavy Construction XV

Compressors (Portable Single or two in Battery, not over 100 feet apart), Pumps (River Cofferdam) and Welding Machines, Push Button Machines, All Engines Irrespective of Power (Power-Pac) used to drive auxiliary equipment, Air, Hydraulic, etc.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$45.27

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$72.43

Operating Engineer - Road & Heavy Construction XVI

Concrete Breaking Machines, Hoists (Single Drum), Load Masters, Locomotives (over ten tons) and Dinkies over ten tons, Hydraulic Crane-Second Engineer.

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$64.13
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$102.61

Operating Engineer - Road & Heavy Construction XVII

On-Site concrete plant engineer, On-site Asphalt Plant Engineer, and Vibratory console.

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$64.63
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$103.41

Operating Engineer - Road & Heavy Construction XVIII

Tower Crane

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$92.76
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$148.42

Operating Engineer - Paving I

Asphalt Spreaders, Autogrades (C.M.I.), Roto/Mil

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$71.78
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$114.85

Operating Engineer - Paving II

Asphalt Roller

Effective Period: 7/1/2016 - 6/30/2017

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: \$69.91
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$111.86

Operating Engineer - Paving III

Asphalt Plants

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$59.14
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
Shift Wage Rate: \$94.62

Operating Engineer - Concrete I

Cranes

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$76.73
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours

Operating Engineer - Concrete II

Compressors

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$45.62
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours

Operating Engineer - Concrete III

Micro-traps (Negative Air Machines), Vac-All Remediation System.

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$61.31
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours

Operating Engineer - Steel Erection I

Three Drum Derricks

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$79.54
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Shift Wage Rate: \$127.26

Operating Engineer - Steel Erection II

Cranes, 2 Drum Derricks, Hydraulic Cranes, Fork Lifts and Boom Trucks.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$76.43

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: \$122.29

Operating Engineer - Steel Erection III

Compressors, Welding Machines.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$45.34

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: \$72.54

Operating Engineer - Steel Erection IV

Compressors - Not Combined with Welding Machine.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$43.17

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: \$69.07

Operating Engineer - Building Work I

Forklifts, Plaster (Platform machine), Plaster Bucket, Concrete Pump and all other equipment used for hoisting material.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$63.12

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Operating Engineer - Building Work II

Compressors, Welding Machines (Cutting Concrete-Tank Work), Paint Spraying, Sandblasting, Pumps (with the exclusion of Concrete Pumps), All Engines irrespective of Power (Power-Pac) used to drive Auxiliary Equipment, Air, Hydraulic, Jacking System, etc.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$47.26

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours

Operating Engineer - Building Work III

Double Drum

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$71.85
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours

Operating Engineer - Building Work IV

Stone Derrick, Cranes, Hydraulic Cranes Boom Trucks.

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$76.12
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours

Operating Engineer - Building Work V

mantling and Erection of Cranes, Relief Engineer.

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$70.13
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours

Operating Engineer - Building Work VI

4 Pole Hoist, Single Drum Hoists.

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$69.39
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours

Operating Engineer - Building Work VII

Rack & Pinion and House Cars

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$55.17
Supplemental Benefit Rate per Hour: \$31.10
Supplemental Note: \$56.50 overtime hours
For New House Car projects Wage Rate per Hour \$44.02

Overtime Description

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

On jobs of more than one shift, if an Employee fails to report for work through any cause over which the Employer has no control, the Employee on duty will continue to work at the rate of single time.

For House Cars and Rack & Pinion only: Overtime paid at time and one-half for all hours in excess of eight hours in a day, Saturday, Sunday and Holidays worked.

Overtime

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day

Lincoln's Birthday

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

Shift Rates

For Steel Erection Only: Shifts may be worked at the single time rate at other than the regular working hours (8:00 A.M. to 4:30 P.M.) on the following work ONLY: Heavy construction jobs on work below the street level, over railroad tracks and on building jobs.

(Operating Engineer Local #14)

FLOOR COVERER

(Interior vinyl composition tile, sheath vinyl linoleum and wood parquet tile including site preparation and synthetic turf not including site preparation)

Floor Coverer

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$50.50

Supplemental Benefit Rate per Hour: \$45.88

Overtime

Time and one half the regular rate after an 8 hour day.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.
1/2 day on New Year's Eve if work is performed in the A.M.

Shift Rates

Two shifts may be utilized with the first shift working 8:00 A.M. to the end of the shift at the straight time of pay. The second shift will receive one hour at double time rate for the last hour of the shift. (eight for seven, nine for eight).

(Carpenters District Council)

GLAZIER

(New Construction, Remodeling, and Alteration)

Glazier

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$44.45

Supplemental Benefit Rate per Hour: \$37.84

Supplemental Note: Supplemental Benefit Overtime Rate: \$46.84

Overtime Description

An optional 8th hour can be worked at straight time rate. If 9th hour is worked, then both hours or more (8th & 9th or more) will be at the double time rate of pay.

Overtime

Double time the regular rate after a 7 hour day.

Time and one half the regular time rate for Saturday.

Double time the regular rate for Sunday.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

Shift Rates

Shifts shall be any 7 hours beyond 4:00 P.M. for which the glazier shall receive 8 hours pay for 7 hours worked.

(Local #1281)

GLAZIER - REPAIR & MAINTENANCE

(For the Installation of Glass - All repair and maintenance work on a particular building, whenever performed, where the total cumulative contract value is under \$127,628. Except where enumerated (i.e. plate glass windows) does not apply to non-residential buildings.)

Craft Jurisdiction for repair, maintenance and fabrication

Plate glass replacement, Residential glass replacement, Residential mirrors and shower doors, Storm windows and storm doors, Residential replacement windows, Herculite door repairs, Door closer repairs, Retrofit apartment house (non commercial buildings), Glass tinting.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$23.78

Supplemental Benefit Rate per Hour: \$20.14

Overtime

Time and one half the regular rate after an 8 hour day.
Double time the regular rate for Sunday.
Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day
President's Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

(Local #1281)

HEAT AND FROST INSULATOR

Heat & Frost Insulator

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$57.78**

Supplemental Benefit Rate per Hour: **\$38.96**

Overtime Description

Double time shall be paid for supplemental benefits during overtime work.
One hour paid at time and one half.

Overtime

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Triple time the regular rate for work on the following holiday(s).

Labor Day

Paid Holidays

None

Start Rates

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

The first shift shall work seven hours at the regular straight time rate. The second and third shift shall work seven hours the regular straight time hourly rate plus a fourteen percent wage and benefit premium. Off hour work in occupied or retail buildings may be worked on weekdays with an increment of \$1.00 per hour and eight hours pay for seven (7) hours worked. Double time will apply for over seven (7) hours worked on weekdays, weekends or holidays.

(Local #12) (BCA)

**HOUSE WRECKER
(TOTAL DEMOLITION)**

House Wrecker - Tier A

On all work sites the first, second, eleventh and every third House Wrecker thereafter will be Tier A House Wreckers (i.e. 1st, 2nd, 11th, 14th etc). Other House Wreckers may be Tier B House Wreckers.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$36.33

Supplemental Benefit Rate per Hour: \$27.77

House Wrecker - Tier B

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$25.56

Supplemental Benefit Rate per Hour: \$20.45

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

(Mason Tenders District Council)

IRON WORKER - ORNAMENTAL

Iron Worker - Ornamental

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$43.75**

Supplemental Benefit Rate per Hour: **\$49.57**

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

Overtime Description

Time and one half the regular rate after a 7 hour day for a maximum of two hours on any regular work day (the 8th and 9th hour) and double time shall be paid for all work on a regular work day thereafter, time and one half the regular rate for Saturday for the first seven hours of work and double time shall be paid for all work on a Saturday thereafter.

Overtime

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

For off shift work - 8 hours pay for 7 hours of work. When two or three shifts are employed on a job, Monday through Friday, the workday for each shift shall be seven hours and paid for ten and one-half hours at the single time rate. When two or three shifts are worked on Saturday, Sunday or holidays, each shift shall be seven hours and paid fifteen and three-quarters hours.

(Local #580)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

IRON WORKER - STRUCTURAL

Iron Worker - Structural

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$49.50

Supplemental Benefit Rate per Hour: \$69.74

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

Overtime Description

Monday through Friday- the first eight hours are paid at straight time, the 9th and 10th hours are paid at time and one-half the regular rate, all additional weekday overtime is paid at double the regular rate. Saturdays- the first eight hours are paid at time and one-half the regular rate, double time thereafter. Sunday-all shifts are paid at double time.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.
1/2 day on New Year's Eve if work is performed in the A.M.

Shift Rates

Monday through Friday - First Shift: First eight hours are paid at straight time, the 9th & 10th hours are paid at time and a half, double time paid thereafter. Second and third Shifts: First eight hours are paid at time and one-half, double time thereafter. Saturdays: All shifts, first eight hours paid at time and one-half, double time thereafter: Sunday all shifts are paid at double time.

(Local #40 & #361)

LABORER

(Foundation, Concrete, Excavating, Street Pipe Layer and Common)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Laborer

Excavation and foundation work for buildings, heavy construction, engineering work, and hazardous waste removal in connection with the above work. Landscaping tasks in connection with heavy construction work, engineering work and building projects. Projects include, but are not limited to pollution plants, sewers, parks, subways, bridges, highways, etc.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$41.00

Supplemental Benefit Rate per Hour: \$38.63

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Thanksgiving Day

Christmas Day

Paid Holidays

Labor Day

Thanksgiving Day

Shift Rates

When two shifts are employed, single time rate shall be paid for each shift. When three shifts are found necessary, each shift shall work seven and one half hours (7 ½), but shall be paid for eight (8) hours of labor, and be permitted one half hour for lunch.

(Local #731)

LANDSCAPING

(Landscaping tasks, as well as tree pruning, tree removing, spraying and maintenance in connection with the planting of street trees and the planting of trees in city parks but not when such activities are performed as part of, or in connection with, other construction or reconstruction projects.)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Landscaper (Above 6 years experience)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$27.00
Supplemental Benefit Rate per Hour: \$14.55

Landscaper (3 - 6 years experience)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$26.00
Supplemental Benefit Rate per Hour: \$14.55

Landscaper (up to 3 years experience)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$23.50
Supplemental Benefit Rate per Hour: \$14.55

Groundperson

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$23.50
Supplemental Benefit Rate per Hour: \$14.55

Tree Remover / Pruner

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$32.00
Supplemental Benefit Rate per Hour: \$14.55

Landscaper Sprayer (Pesticide Applicator)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$22.00
Supplemental Benefit Rate per Hour: \$14.55

Watering - Plant Maintainer

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$17.00
Supplemental Benefit Rate per Hour: \$14.55

Overtime Description

For all overtime work performed, supplemental benefits shall include an additional seventy-five (\$0.75) cents per hour.

Overtime

Time and one half the regular rate after an 8 hour day.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Time and one half the regular rate for work on a holiday plus the day's pay.

Paid Holidays

New Year's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Shift Rates

Work performed on a 4pm to 12am shift has a 15% differential. Work performed on a 12am to 8am shift has a 20% differential.

(Local #175)

MARBLE MECHANIC

Marble Setter

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: **\$52.32**
Supplemental Benefit Rate per Hour: **\$37.64**

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: **\$52.74**
Supplemental Benefit Rate per Hour: **\$38.67**

Marble Finisher

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: **\$41.11**
Supplemental Benefit Rate per Hour: **\$35.91**

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: **\$41.46**
Supplemental Benefit Rate per Hour: **\$36.64**

Marble Polisher

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: **\$37.49**
Supplemental Benefit Rate per Hour: **\$27.80**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: \$37.93
Supplemental Benefit Rate per Hour: \$28.33

Overtime Description

Supplemental Benefit contributions are to be made at the applicable overtime rates. Time and one half the regular rate after a 7 hour day or time and one half the regular rate after an 8 hour day - chosen by Employer at the start of the project and then would last for the full duration of the project.

Overtime

Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

(Local #7)

MASON TENDER

Mason Tender

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$37.55
Supplemental Benefit Rate per Hour: \$29.04

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

The Employer may work two (2) shifts with the first shift at the straight time wage rate and the second shift receiving eight (8) hours paid for seven (7) hours work at the straight time wage rate.

(Local #79)

MASON TENDER (INTERIOR DEMOLITION WORKER)

(The erection, building, moving, servicing and dismantling of enclosures, scaffolding, barricades, protection and site safety structures etc., on Interior Demolition jobs.)

Mason Tender Tier A

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$36.19

Supplemental Benefit Rate per Hour: \$22.95

Mason Tender Tier B

On Interior Demolition job sites 33 1/3 % of the employees shall be classified as Tier A Interior Demolition Workers and 66 2/3 % shall be classified as Tier B Interior Demolition Workers; provided that the employer may employ more than 33 1/3 % Tier A Interior Demolition Workers on the job site. Where the number of employees on a job site is not divisible by 3, the first additional employee (above the number of employees divisible by three) shall be a Tier B Interior Demolition Worker, and the second additional employee shall be a Tier A Interior Demolition Worker.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$25.38

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: \$17.27

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

(Local #79)

METALLIC LATHER

Metallic Lather

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$44.53

Supplemental Benefit Rate per Hour: \$42.67

Supplemental Note: Supplemental benefits for overtime are paid at the appropriate overtime rate.

Overtime Description

Overtime would be time and one half the regular rate after a seven (7) or eight (8) hours workday, which would be set at the start of the job.

Overtime

Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Washington's Birthday
Memorial Day
Independence Day
Labor Day
Columbus Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Thanksgiving Day
Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.
1/2 day on New Year's Eve if work is performed in the A.M.

Shift Rates

There will be no shift differential paid on the first shift if more than one shift is employed. The shift differential will remain \$12/hour on the second and third shift for the first eight (8) hours if worked. There will be no pyramiding on overtime worked on second and third shifts. The time and one half (1.5x) rate will be against the base wage rate, not the shift differential

(Local #46)

MILLWRIGHT

Millwright

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$51.50

Supplemental Benefit Rate per Hour: \$52.41

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

1/2 day on New Year's Eve if work is performed in the A.M.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Shift Rates

The first shift shall receive the straight time rate of pay. The second shift receives the straight time rate of pay plus fifteen (15%) per cent. Members of the second shift shall be allowed one half hour to eat, with this time being included in the hours of the workday established. There must be a first shift to work a second shift. All additional hours worked shall be paid at the time and one-half rate of pay plus fifteen (15%) per cent for weekday hours.

(Local #740)

MOSAIC MECHANIC

Mosaic Mechanic - Mosaic & Terrazzo Mechanic

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$46.52

Supplemental Benefit Rate per Hour: \$39.84

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$50.86 per hour.

Mosaic Mechanic - Mosaic & Terrazzo Finisher

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$44.91

Supplemental Benefit Rate per Hour: \$39.83

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$50.85 per hour.

Mosaic Mechanic - Machine Operator Grinder

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$44.91

Supplemental Benefit Rate per Hour: \$39.83

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$50.85 per hour.

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Washington's Birthday

Good Friday

Independence Day

Labor Day

Columbus Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays
None

(Local #7)

PAINTER

Painter - Brush & Roller

Effective Period: 7/1/2016 - 4/30/2017
Wage Rate per Hour: \$42.50
Supplemental Benefit Rate per Hour: \$26.62
Supplemental Note: \$31.25 on overtime

Effective Period: 5/1/2017 - 6/30/2017
Wage Rate per Hour: \$44.10
Supplemental Benefit Rate per Hour: \$27.02
Supplemental Note: \$ 31.65 on overtime

Spray & Scaffold / Decorative / Sandblast

Effective Period: 7/1/2016 - 4/30/2017
Wage Rate per Hour: \$45.50
Supplemental Benefit Rate per Hour: \$26.62
Supplemental Note: \$ 31.25 on overtime

Effective Period: 5/1/2017 - 6/30/2017
Wage Rate per Hour: \$47.10
Supplemental Benefit Rate per Hour: \$27.02
Supplemental Note: \$ 31.65 on overtime

Overtime

Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

Year's Day
President's Day
Memorial Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Independence Day
Labor Day
Columbus Day
Thanksgiving Day
Christmas Day

Paid Holidays
None

(District Council of Painters #9)

PAINTER - METAL POLISHER

METAL POLISHER

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$28.88
Supplemental Benefit Rate per Hour: \$6.96

METAL POLISHER - NEW CONSTRUCTION

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$29.83
Supplemental Benefit Rate per Hour: \$6.96

METAL POLISHER - SCAFFOLD OVER 34 FEET

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$32.38
Supplemental Benefit Rate per Hour: \$6.96

Overtime Description

All work performed on Saturdays shall be paid at time-in-a half. The exception being; for suspended scaffold work and work deemed as a construction project; an eight (8) hour shift lost during the week due to circumstances beyond the control of the employer, up to a maximum of eight (8) hours per week, may be worked on Saturday at the straight time rate.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.
Triple time the regular rate for work on the following holiday(s).

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Paid Holidays

New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Shift Rates

Four Days a week at Ten (10) hours straight a day.

Local 8A-28A

PAINTER - STRIPER

Striper (paint)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$35.00

Supplemental Benefit Rate per Hour: \$12.32

Supplemental Note: Overtime Supplemental Benefit rate - \$8.02; New Hire Rate (0-3 months) - \$0.00

Lineperson (thermoplastic)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$39.00

Supplemental Benefit Rate per Hour: \$12.32

Supplemental Note: Overtime Supplemental Benefit rate - \$8.02; New Hire Rate (0-3 months) - \$0.00

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Time and one half the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
Good Friday
Memorial Day
Independence Day
Labor Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Columbus Day
Presidential Election Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Shift Rates

Employees hired before April 1, 2003: 15% night shift premium differential for work commenced at 9:00 PM or later.

Vacation

Employees with one to two years service shall accrue vacation based on hours worked: 250 hours worked - 1 day vacation; 500 hours worked - 2 days vacation; 750 hours worked - 3 days vacation; 900 hours worked - 4 days vacation; 1,000 hours worked - 5 days vacation. Employees with two to five years service receive two weeks vacation. Employees with five to twenty years service receive three weeks vacation. Employees with twenty to twenty-five years service receive four weeks vacation. Employees with 25 or more years service receive five weeks vacation. Vacation must be taken during winter months. 2 Personal Days except employees hired after 4/1/12 who do not have 2 years of service.

(Local #917)

PAINTER - STRUCTURAL STEEL

Painters on Structural Steel

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$49.00

Supplemental Benefit Rate per Hour: \$36.08

Painter - Power Tool

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$55.00

Supplemental Benefit Rate per Hour: \$36.08

Overtime Description

Supplemental Benefits shall be paid for each hour worked, up to forty (40) hours per week for the period of May 1st to November 15th or up to fifty (50) hours per week for the period of November 16th to April 30th.

Overtime

Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).
New Year's Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

Regular hourly rates plus a ten per cent (10%) differential

(Local #806)

PAPERHANGER

Paperhanger

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$43.58

Supplemental Benefit Rate per Hour: \$30.73

Supplemental Note: Supplemental benefits are to be paid at the appropriate straight time and overtime rate.

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

Shift Rates

Evening shift - 4:30 P.M. to 12:00 Midnight (regular rate of pay); any work performed before 7:00 A.M. shall be at
and one half the regular base rate of pay.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

(District Council of Painters #9)

PAVER AND ROADBUILDER

Paver & Roadbuilder - Formsetter

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$45.35
Supplemental Benefit Rate per Hour: \$38.95

Paver & Roadbuilder - Laborer

Paving and road construction work, regardless of material used, including but not limited to preparation of job sites, removal of old surfaces, asphalt and/or concrete, by whatever method, including but not limited to milling; laying of concrete; laying of asphalt for temporary, patchwork, and utility paving (but not production paving); site preparation and incidental work before the installation of rubberized materials and similar surfaces; installation and repair of temporary construction fencing; slurry seal coating, maintenance of safety surfaces; play equipment installation, and other related work.

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$41.48
Supplemental Benefit Rate per Hour: \$38.95

Production Paver & Roadbuilder - Screed Person

(Production paving is asphalt paving when using a paving machine or on a project where a paving machine is traditionally used)

Adjustment of paving machinery on production paving jobs.

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$45.95
Supplemental Benefit Rate per Hour: \$38.95

Production Paver & Roadbuilder - Raker

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$45.35
Supplemental Benefit Rate per Hour: \$38.95

Production Paver & Roadbuilder - Shoveler

General laborer (except removal of surfaces - see Paver and Roadbuilder-Laborer) including but not limited to tamper, AC paint and liquid tar work.

Effective Period: 7/1/2016 - 6/30/2017

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: \$42.06

Supplemental Benefit Rate per Hour: \$38.95

Overtime Description

If an employee works New Year's Day or Christmas Day, they receive the single time rate plus 25%.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

Memorial Day

Independence Day

Labor Day

Columbus Day

Thanksgiving Day

Shift Rates

When two shifts are employed, the work period for each shift shall be a continuous eight (8) hours. When three shifts are employed, each shift will work seven and one half (7 ½) hours but will be paid for eight (8) hours since only one half (1/2) hour is allowed for meal time.

When two or more shifts are employed, single time will be paid for each shift.

Night Work - On night work, the first eight (8) hours of work will be paid for at the single time rate, except that production paving work shall be paid at 10% over the single time rate for the screed person, rakers and shovelers directly involved only. This differential is to be paid when there is only one shift and the shift works at night. All other workers will be exempt. Hours worked over eight (8) hours during said shift shall be paid for at the time and one-half rate.

(Local #1010)

PLASTERER

Plasterer

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$43.93

Supplemental Benefit Rate per Hour: \$28.10

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Martin Luther King Jr. Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

When it is not possible to conduct alteration work during regular work hours, in a building occupied by tenants, said work shall proceed on a shift basis: however work over seven (7) hours in any twenty four (24) hour period, the time after seven (7) hours shall be considered overtime.

The second shift shall start at a time between 3:30 p.m. and 7:00 p.m. and shall consist of seven (7) working hours and shall receive eight (8) hours of wages and benefits at the straight time rate. The workers on the second shift shall be allowed one-half (½) hour to eat with this time being included in the seven (7) hours of work.

(Local #262)

PLASTERER - TENDER

Plasterer - Tender

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$37.55

Supplemental Benefit Rate per Hour: \$29.04

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Double time the regular rate for work on the following holiday(s).

New Year's Day
Washington's Birthday
Memorial Day
Independence Day
Labor Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

When work commences outside regular work hours, workers receive an hour additional (differential) wage and supplement payment. Eight hours pay for seven hours work or nine hours pay for eight hours work.

(Mason Tenders District Council)

PLUMBER

Plumber

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$65.67

Supplemental Benefit Rate per Hour: \$29.28

Supplemental Note: Overtime supplemental benefit rate per hour: \$58.28

Plumber - Temporary Services

Temporary Services - When there are no Plumbers on the job site, there may be three shifts designed to cover the entire twenty-four hour period, including weekends if necessary, at the following rate straight time.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$52.56

Supplemental Benefit Rate per Hour: \$23.40

Overtime Description

Double time the regular rate after a 7 hour day - unless for new construction site work where the plumbing contract price is \$1.5 million or less, the hours of labor can be 8 hours per day at the employers option. On Alteration jobs when other mechanical trades at the site are working an eighth hour at straight time, then the plumber shall also work an eighth hour at straight time.

Overtime

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Shift Rates

Shift work, when directly specified in public agency or authority documents where plumbing contract is \$8 million or less, will be permitted. 30% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shifts Monday to Friday. 50% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shift work performed on weekends. For shift work on holidays, double time wages and fringe benefits shall be paid.

(Plumbers Local #1)

PLUMBER (MECHANICAL EQUIPMENT AND SERVICE)
(Mechanical Equipment and Service work shall include any repair and/or replacement of the present plumbing system.)

Plumber

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$39.42

Supplemental Benefit Rate per Hour: \$14.19

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Thanksgiving Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Day after Thanksgiving
Christmas Day

Paid Holidays

None

(Plumbers Local # 1)

PLUMBER (RESIDENTIAL RATES FOR 1, 2 AND 3 FAMILY HOME CONSTRUCTION)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$45.47**

Supplemental Benefit Rate per Hour: **\$21.26**

Overtime

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

Shift Rates

30% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shifts Monday to Friday.
50% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shift work performed on weekends. For shift work on holidays, double time wages and fringe benefits shall be paid.

(Plumbers Local #1)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

PLUMBER: PUMP & TANK
Oil Trades (Installation and Maintenance)

Plumber - Pump & Tank

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$63.52

Supplemental Benefit Rate per Hour: \$22.91

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

Shift Rates

All work outside the regular workday (8:00 A.M. to 3:30 P.M.) is to be paid at time and one half the regular hourly rate

(Plumbers Local #1)

**POINTER, WATERPROOFER, CAULKER, SANDBLASTER,
STEAMBLASTER**
(Exterior Building Renovation)

Journey person

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$50.04

Supplemental Benefit Rate per Hour: \$26.15

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

one

Shift Rates

All work outside the regular work day (an eight hour workday between the hours of 6:00 A.M. and 4:30 P.M.) is to be paid at time and one half the regular rate.

(Bricklayer District Council)

ROOFER

Roofer

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$40.70

Supplemental Benefit Rate per Hour: \$30.17

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Time and one half the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

Second shift - Regular hourly rate plus a 10% differential. Third shift - Regular hourly rate plus a 15% differential.

(Local #8)

SHEET METAL WORKER

Sheet Metal Worker

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$47.70

Supplemental Benefit Rate per Hour: \$46.45

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

Sheet Metal Worker - Fan Maintenance

(The temporary operation of fans or blowers in new or existing buildings for heating and/or ventilation, and/or air conditioning prior to the completion of the project.)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$38.16

Supplemental Benefit Rate per Hour: \$46.45

Sheet Metal Worker - Duct Cleaner

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$12.90

Supplemental Benefit Rate per Hour: \$8.07

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

Shift Rates

Work that can only be performed outside regular working hours (eight hours of work between 7:30 A.M. and 3:30 P.M.) - First shift (work between 3:30 P.M. and 11:30 P.M.) - 10% differential above the established hourly rate.
Second shift (work between 11:30 P.M. and 7:30 A.M.) - 15% differential above the established hourly rate.

For Fan Maintenance: On all full shifts of fan maintenance work the straight time hourly rate of pay will be paid each shift, including nights, Saturdays, Sundays, and holidays.

(Local #28)

SHEET METAL WORKER - SPECIALTY
(Decking & Siding)

Sheet Metal Specialty Worker

The first worker to perform this work must be paid at the rate of the Sheet Metal Worker. The second and third workers shall be paid the Specialty Worker Rate. The ratio of One Sheet Metal Worker, then Two Specialty Workers shall be utilized thereafter.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$43.25

Supplemental Benefit Rate per Hour: \$24.41

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

Overtime

and one half the regular rate after an 8 hour day.

and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

(Local #28)

SHIPYARD WORKER

Shipyard Mechanic - First Class

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$28.33
Supplemental Benefit Rate per Hour: \$3.04

Shipyard Mechanic - Second Class

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$22.18
Supplemental Benefit Rate per Hour: \$2.80

Shipyard Laborer - First Class

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$20.45
Supplemental Benefit Rate per Hour: \$2.74

Shipyard Laborer - Second Class

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$14.36
Supplemental Benefit Rate per Hour: \$2.50

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Shipyard Dockhand - First Class

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$22.70
Supplemental Benefit Rate per Hour: \$2.82

Shipyard Dockhand - Second Class

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$16.01
Supplemental Benefit Rate per Hour: \$2.57

Overtime Description

Work performed on holiday is paid double time the regular hourly wage rate plus holiday pay.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day
Martin Luther King Jr. Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Based on Survey Data

SIGN ERECTOR
(Sheet Metal, Plastic, Electric, and Neon)

Sign Erector

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$46.85
Supplemental Benefit Rate per Hour: \$48.57

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Overtime

Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.
Time and one half the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
Washington's Birthday
Memorial Day
Independence Day
Labor Day
Columbus Day
Election Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Shift Rates

Time and one half the regular hourly rate is to be paid for all hours worked outside the regular workday either (7:00 A.M. through 2:30 P.M.) or (8:00 A.M. through 3:30 P.M.)

(Local #137)

STEAMFITTER

Steamfitter I

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$55.50
Supplemental Benefit Rate per Hour: \$54.29
Supplemental Note: Overtime supplemental benefit rate: \$107.84

Steamfitter -Temporary Services

The steamfitters shall not do any other work and shall not be permitted to work more than one shift in a twenty-four hour day. When steamfitters are present during the regular working day, no temporary services steamfitter will be required

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$42.18
Supplemental Benefit Rate per Hour: \$44.08

Overtime

Double time the regular rate after a 7 hour day.
Double time the regular time rate for Saturday.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

Shift Rates

Work performed between 3:30 P.M. and 7:00 A.M. and on Saturdays, Sundays and Holidays shall be at double time the regular hourly rate and paid at the overtime supplemental benefit rate above.

Steamfitter II

For heating, ventilation, air conditioning and mechanical public works contracts with a dollar value not to exceed \$15,000,000 and for fire protection/sprinkler public works contracts not to exceed \$1,500,000.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$55.50

Supplemental Benefit Rate per Hour: \$54.29

Supplemental Note: Overtime supplemental benefit rate: \$107.84

Steamfitter -Temporary Services

The steamfitters shall not do any other work and shall not be permitted to work more than one shift in a twenty-four hour day. When steamfitters are present during the regular working day, no temporary services steamfitter will be required.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$42.18

Supplemental Benefit Rate per Hour: \$44.08

Overtime

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

Shift Rates

May be performed outside of the regular workday except Saturday, Sunday and Holidays. A shift shall consist of eight working hours. All work performed in excess of eight hours shall be paid at double time. No shift shall commence after 7:00 P.M. on Friday or 7:00 P.M. the day before holidays. All work performed after 12:01 A.M. Saturday or 12:01 A.M. the day before a Holiday will be paid at double time. When shift work is performed the wage rate for regular time worked is a thirty percent premium together with fringe benefits.

On Transit Authority projects, where work is performed in the vicinity of tracks all shift work on weekends and holidays may be performed at the regular shift rates.

Local #638

**STEAMFITTER - REFRIGERATION AND AIR CONDITIONER
(Maintenance and Installation Service Person)**

Refrigeration and Air Conditioner Mechanic

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$39.50
Supplemental Benefit Rate per Hour: \$15.06

Refrigeration and Air Conditioner Service Person V

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$32.46
Supplemental Benefit Rate per Hour: \$13.53

Refrigeration and Air Conditioner Service Person IV

Effective Period: 7/1/2016 - 6/30/2017

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: \$26.89

Supplemental Benefit Rate per Hour: \$12.26

Refrigeration and Air Conditioner Service Person III

Filter changing and maintenance thereof, oil and greasing, tower and coil cleaning, scraping and painting, general housekeeping, taking of water samples.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$23.08

Supplemental Benefit Rate per Hour: \$11.31

Refrigeration and Air Conditioner Service Person II

Filter changing and maintenance thereof, oil and greasing, tower and coil cleaning, scraping and painting, general housekeeping, taking of water samples.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$19.14

Supplemental Benefit Rate per Hour: \$10.43

Refrigeration and Air Conditioner Service Person I

Filter changing and maintenance thereof, oil and greasing, tower and coil cleaning, scraping and painting, general housekeeping, taking of water samples.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$14.00

Supplemental Benefit Rate per Hour: \$9.46

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Independence Day

Labor Day

Veteran's Day

Thanksgiving Day

Christmas Day

Double time and one half the regular rate for work on the following holiday(s).

Martin Luther King Jr. Day

President's Day

Memorial Day

Columbus Day

Paid Holidays

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Christmas Day

(Local #638B)

STONE MASON - SETTER

Stone Mason - Setters

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$51.08
Supplemental Benefit Rate per Hour: \$38.10

Overtime

Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Washington's Birthday
Good Friday
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

Shift Rates

For all work outside the regular workday (8:00 A.M. to 3:30 P.M. Monday through Friday), the pay shall be straight time plus a ten percent (10%) differential.

(Bricklayers District Council)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

TAPER

Drywall Taper

Effective Period: 7/1/2016 - 12/27/2016

Wage Rate per Hour: \$47.32

Supplemental Benefit Rate per Hour: \$22.68

Effective Period: 12/28/2016 - 6/30/2017

Wage Rate per Hour: \$47.82

Supplemental Benefit Rate per Hour: \$22.68

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Thanksgiving Day

Christmas Day

Paid Holidays

Any worker who reports to work on Christmas Eve or New Year's Eve pursuant to his employer's instruction shall be entitled to three (3) hours afternoon pay without working.

Shift Rates

Time and one half the regular rate outside the regular work hours (8:00 A.M. through 3:30 P.M.)

(Local #1974)

TELECOMMUNICATION WORKER

(Office Installation Only)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Telecommunication Worker

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$40.35

Supplemental Benefit Rate per Hour: \$13.19

Supplemental Note: The above rate applies for Manhattan, Bronx, Brooklyn, Queens. \$12.64 for Staten Island only.

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

- New Year's Day
- Lincoln's Birthday
- Washington's Birthday
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Election Day
- Veteran's Day
- Thanksgiving Day
- Christmas Day

Paid Holidays

- New Year's Day
- Lincoln's Birthday
- Washington's Birthday
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Election Day
- Veteran's Day
- Thanksgiving Day
- Christmas Day

Employees have the option of observing either Martin Luther King's Birthday or the day after Thanksgiving instead of Lincoln's Birthday

Shift Rates

For any workday that starts before 8A.M. or ends after 6P.M. there is a 10% differential for the applicable worker's hourly rate.

Vacation

- After 6 months.....one week.
- After 12 months but less than 7 years.....two weeks.
- After 7 or more but less than 15 years.....three weeks.
- After 15 years or more but less than 25 years.....four weeks.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

(C.W.A.)

TILE FINISHER

Tile Finisher

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$40.69

Supplemental Benefit Rate per Hour: \$30.58

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

Shift Rates

Off shift work day (work performed outside the regular 8:00 A.M. to 3:30 P.M. workday): shift differential of one and one quarter (1¼) times the regular straight time rate of pay for the seven hours of actual off-shift work.

(Local #7)

TILE LAYER - SETTER

Tile Layer - Setter

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$52.68
Supplemental Benefit Rate per Hour: \$34.48

Overtime

Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Shift Rates

Off shift work day (work performed outside the regular 8:00 A.M. to 3:30 P.M. workday): shift differential of one and one quarter (1¼) times the regular straight time rate of pay for the seven hours of actual off-shift work.

(Local #7)

TIMBERPERSON

Timberperson

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$46.99
Supplemental Benefit Rate per Hour: \$48.26

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.
Time and one half the regular hourly rate after 40 hours in any work week.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

Off shift work commencing between 5:00 P.M. and 11:00 P.M. shall work eight and one half hours allowing for one half hour for lunch. The wage rate shall be 113% of the straight time hourly wage rate.

(Local #1536)

TUNNEL WORKER

Blasters, Mucking Machine Operators (Compressed Air Rates)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$60.97
Supplemental Benefit Rate per Hour: \$50.72

Tunnel Workers (Compressed Air Rates)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$58.86
Supplemental Benefit Rate per Hour: \$49.03

Top Nipper (Compressed Air Rates)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$57.78
Supplemental Benefit Rate per Hour: \$48.16

Outside Lock Tender, Outside Gauge Tender, Muck Lock Tender (Compressed Air Rates)

Effective Period: 7/1/2016 - 6/30/2017

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: \$56.74
Supplemental Benefit Rate per Hour: \$47.25

Bottom Bell & Top Bell Signal Person: Shaft Person (Compressed Air Rates)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$56.74
Supplemental Benefit Rate per Hour: \$47.25

Changehouse Attendant: Powder Watchperson (Compressed Air Rates)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$49.69
Supplemental Benefit Rate per Hour: \$44.69

Blasters (Free Air Rates)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$58.19
Supplemental Benefit Rate per Hour: \$48.68

Tunnel Workers (Free Air Rates)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$55.69
Supplemental Benefit Rate per Hour: \$46.61

All Others (Free Air Rates)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$51.45
Supplemental Benefit Rate per Hour: \$43.13

Microtunneling (Free Air Rates)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: \$44.55
Supplemental Benefit Rate per Hour: \$37.29

Overtime Description

For Repair-Maintenance Work on Existing Equipment and Facilities - Time and one half the regular rate after a 7 hour day, or for Saturday, or for Sunday. Double time the regular rate for work on a holiday.
For Small-Bore Micro Tunneling Machines - Time and one-half the regular rate shall be paid for all overtime.

Overtime

Double time the regular rate after an 8 hour day.
Double time the regular time rate for Saturday.
Double time the regular rate for Sunday.
Double time the regular rate for work on the following holiday(s).

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Paid Holidays

New Year's Day
Lincoln's Birthday
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Election Day
Veteran's Day
Thanksgiving Day
Christmas Day

(Local #147)

WELDER

**TO BE PAID AT THE RATE OF THE JOURNEYPERSON IN THE TRADE
PERFORMING THE WORK.**

(NO TEXT ON THIS PAGE)

OFFICE OF THE COMPTROLLER

CITY OF NEW YORK

220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

APPENDIX

Pursuant to Labor Law §220 (3-e), only apprentices who are individually registered in a bona fide program to which the employer contractor is a participant and registered with the New York State Department of Labor, may be employed on a public work project.

Any employee listed on a payroll at an apprentice wage rate, who is not registered as above, shall be paid the journey person wage rate for the classification of work he actually performed.

Apprentice ratios are established to ensure the proper safety, training and supervision of apprentices. A ratio establishes the number of journey workers required for each apprentice in a program and on a job site. Ratios are interpreted as follows: in the case of a 1:1, 1:4 ratio, there must be one journey worker for the first apprentice, and four additional journey workers for each subsequent apprentice.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

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OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

ASBESTOS HANDLER

(Ratio of Apprentice Journeyperson: 1 to 1, 1 to 3)

Asbestos Handler (First 1000 Hours)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 78% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.45

Asbestos Handler (Second 1000 Hours)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.45

Asbestos Handler (Third 1000 Hours)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 83% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.45

Asbestos Handler (Fourth 1000 Hours)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 89% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.45

(Local #78)

BOILERMAKER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Boilermaker (First Year)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$30.43
Effective 1/1/2017 - Supplemental Benefit Rate Per Hour: \$30.84

Boilermaker (Second Year: 1st Six Months)

Effective Period: 7/1/2016 - 6/30/2017

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$32.13
Effective 1/1/2017 - Supplemental Benefit Rate Per Hour: \$32.57

Boilermaker (Second Year: 2nd Six Months)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$33.82
Effective 1/1/2017 - Supplemental Benefit Rate Per Hour: \$34.29

Boilermaker (Third Year: 1st Six Months)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$35.53
Effective 1/1/2017 - Supplemental Benefit Rate Per Hour: \$36.03

Boilermaker (Third Year: 2nd Six Months)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 85% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$37.23
Effective 1/1/2017 - Supplemental Benefit Rate Per Hour: \$37.76

Boilermaker (Fourth Year: 1st Six Months)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$38.93
Effective 1/1/2017 - Supplemental Benefit Rate Per Hour: \$39.51

Boilermaker (Fourth Year: 2nd Six Months)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 95% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$40.63
Effective 1/1/2017 - Supplemental Benefit Rate Per Hour: \$41.22

(Local #5)

BRICKLAYER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Bricklayer (First 750 Hours)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$18.35

Bricklayer (Second 750 Hours)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$18.35

Bricklayer (Third 750 Hours)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$18.35

Bricklayer (Fourth 750 Hours)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$18.35

Bricklayer (Fifth 750 Hours)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 90% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$18.35

Bricklayer (Sixth 750 Hours)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 95% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$18.35

(Bricklayer District Council)

CARPENTER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Carpenter (First Year)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 40% of Journeyman's rate
Supplemental Benefit Rate Per Hour For Building Apprentice: \$31.34

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate Per Hour For Heavy Apprentice: \$32.52

Carpenter (Second Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Benefit Rate Per Hour For Building Apprentice: \$31.34

Supplemental Benefit Rate Per Hour For Heavy Apprentice: \$32.52

Carpenter (Third Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 65% of Journeyman's rate

Supplemental Benefit Rate Per Hour For Building Apprentice: \$31.34

Supplemental Benefit Rate Per Hour For Heavy Apprentice: \$32.52

Carpenter (Fourth Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 80% of Journeyman's rate

Supplemental Benefit Rate Per Hour For Building Apprentice: \$31.34

Supplemental Benefit Rate Per Hour For Heavy Apprentice: \$32.52

(Carpenters District Council)

CEMENT MASON

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Cement Mason (First Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 50% of Journeyman's Rate

Cement Mason (Second Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 60% of Journeyman's Rate

Cement Mason (Third Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 70% of Journeyman's Rate

(Local #780)

CEMENT AND CONCRETE WORKER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Cement & Concrete Worker (First 1333 hours)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.25

Cement & Concrete Worker (Second 1333 hours)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$21.08

Cement & Concrete Worker (Last 1334 hours)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$21.90

Cement & Concrete Worker (Hired after 2/6/2016 - First 1334 hours)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: \$17.00
Supplemental Benefit Rate Per Hour: \$10.75

Cement & Concrete Worker (Hired after 2/6/2016 - Second 1334 hours)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: \$22.10
Supplemental Benefit Rate Per Hour: \$15.13

Cement & Concrete Worker (Hired after 2/6/2016 - Last 1334 hours)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: \$27.20
Supplemental Benefit Rate Per Hour: \$15.63

(Cement Concrete Workers District Council)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

DERRICKPERSON & RIGGER (STONE)
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Derrickperson & Rigger (stone) - First Year

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Benefit Rate Per Hour: 50% of Journeyman's rate

Derrickperson & Rigger (stone) - Second Year: 1st Six Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Benefit Rate Per Hour: 75% of Journeyman's rate

Derrickperson & Rigger (stone) - Second Year: 2nd Six Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Benefit Rate Per Hour: 75% of Journeyman's rate

Derrickperson & Rigger (stone) - Third Year

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 90% of Journeyman's rate
Supplemental Benefit Rate Per Hour: 75% of Journeyman's rate

(Local #197)

DOCKBUILDER/PILE DRIVER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 6)

Dockbuilder/Pile Driver (First Year)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 40% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$32.52

Dockbuilder/Pile Driver (Second Year)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 50% of Journeyman's rate

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Supplemental Benefit Rate Per Hour: \$32.52

Dockbuilder/Pile Driver (Third Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$32.52

Dockbuilder/Pile Driver (Fourth Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 80% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$32.52

(Carpenters District Council)

ELECTRICIAN

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Electrician (First Term: 0-6 Months)

Effective Period: 7/1/2016 - 5/10/2017

Wage Rate per Hour: \$13.50

Supplemental Benefit Rate per Hour: \$12.12

Overtime Supplemental Rate Per Hour: \$13.01

Effective Period: 5/11/2017 - 6/30/2017

Wage Rate per Hour: \$14.00

Supplemental Benefit Rate per Hour: \$12.37

Overtime Supplemental Rate Per Hour: \$13.29

Electrician (First Term: 7-12 Months)

Effective Period: 7/1/2016 - 5/10/2017

Wage Rate per Hour: \$14.50

Supplemental Benefit Rate per Hour: \$12.63

Overtime Supplemental Rate Per Hour: \$13.58

Effective Period: 5/11/2017 - 6/30/2017

Wage Rate per Hour: \$15.00

Supplemental Benefit Rate per Hour: \$12.88

Overtime Supplemental Rate Per Hour: \$13.87

Electrician (Second Term: 0-6 Months)

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Effective Period: 7/1/2016 - 5/10/2017
Wage Rate per Hour: **\$15.50**
Supplemental Benefit Rate per Hour: **\$13.14**
Overtime Supplemental Rate Per Hour: **\$14.16**

Effective Period: 5/11/2017 - 6/30/2017
Wage Rate per Hour: **\$16.00**
Supplemental Benefit Rate per Hour: **\$13.39**
Overtime Supplemental Rate Per Hour: **\$14.44**

Electrician (Second Term: 7-12 Months)

Effective Period: 7/1/2016 - 5/10/2017
Wage Rate per Hour: **\$16.50**
Supplemental Benefit Rate per Hour: **\$13.64**
Overtime Supplemental Rate Per Hour: **\$14.73**

Effective Period: 5/11/2017 - 6/30/2017
Wage Rate per Hour: **\$17.00**
Supplemental Benefit Rate per Hour: **\$13.90**
Overtime Supplemental Rate Per Hour: **\$15.02**

Electrician (Third Term: 0-6 Months)

Effective Period: 7/1/2016 - 5/10/2017
Wage Rate per Hour: **\$17.50**
Supplemental Benefit Rate per Hour: **\$14.15**
Overtime Supplemental Rate Per Hour: **\$15.31**

Effective Period: 5/11/2017 - 6/30/2017
Wage Rate per Hour: **\$18.00**
Supplemental Benefit Rate per Hour: **\$14.41**
Overtime Supplemental Rate Per Hour: **\$15.59**

Electrician (Third Term: 7-12 Months)

Effective Period: 7/1/2016 - 5/10/2017
Wage Rate per Hour: **\$18.50**
Supplemental Benefit Rate per Hour: **\$14.66**
Overtime Supplemental Rate Per Hour: **\$15.88**

Effective Period: 5/11/2017 - 6/30/2017
Wage Rate per Hour: **\$19.00**
Supplemental Benefit Rate per Hour: **\$14.92**
Overtime Supplemental Rate Per Hour: **\$16.17**

Electrician (Fourth Term: 0-6 Months)

Effective Period: 7/1/2016 - 5/10/2017

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\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Wage Rate per Hour: \$19.50
Supplemental Benefit Rate per Hour: \$15.17
Overtime Supplemental Rate Per Hour: \$16.45

Effective Period: 5/11/2017 - 6/30/2017
Wage Rate per Hour: \$20.00
Supplemental Benefit Rate per Hour: \$15.43
Overtime Supplemental Rate Per Hour: \$16.75

Electrician (Fourth Term: 7-12 Months)

Effective Period: 7/1/2016 - 5/10/2017
Wage Rate per Hour: \$21.50
Supplemental Benefit Rate per Hour: \$16.19
Overtime Supplemental Rate Per Hour: \$17.60

Effective Period: 5/11/2017 - 6/30/2017
Wage Rate per Hour: \$22.00
Supplemental Benefit Rate per Hour: \$16.44
Overtime Supplemental Rate Per Hour: \$17.89

Electrician (Fifth Term: 0-12 Months)

Effective Period: 7/1/2016 - 5/10/2017
Wage Rate per Hour: \$23.50
Supplemental Benefit Rate per Hour: \$19.54
Overtime Supplemental Rate Per Hour: \$21.01

Effective Period: 5/11/2017 - 6/30/2017
Wage Rate per Hour: \$24.00
Supplemental Benefit Rate per Hour: \$19.80
Overtime Supplemental Rate Per Hour: \$21.30

Electrician (Fifth Term: 13-18 Months)

Effective Period: 7/1/2016 - 5/10/2017
Wage Rate per Hour: \$28.00
Supplemental Benefit Rate per Hour: \$21.85
Overtime Supplemental Rate Per Hour: \$23.60

Effective Period: 5/11/2017 - 6/30/2017
Wage Rate per Hour: \$28.50
Supplemental Benefit Rate per Hour: \$22.10
Overtime Supplemental Rate Per Hour: \$23.89

Overtime Description

Overtime Wage paid at time and one half the regular rate

Local #3)

ELEVATOR CONSTRUCTOR
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 2)

Elevator (Constructor) - First Year

Effective Period: 7/1/2016 - 3/16/2017
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$28.24

Effective Period: 3/17/2017 - 6/30/2017
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$29.72

Elevator (Constructor) - Second Year

Effective Period: 7/1/2016 - 3/16/2017
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Rate Per Hour: \$28.67

Effective Period: 3/17/2017 - 6/30/2017
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Rate Per Hour: \$30.15

Elevator (Constructor) - Third Year

Effective Period: 7/1/2016 - 3/16/2017
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Rate Per Hour: \$29.52

Effective Period: 3/17/2017 - 6/30/2017
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Rate Per Hour: \$31.03

Elevator (Constructor) - Fourth Year

Effective Period: 7/1/2016 - 3/16/2017
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Rate Per Hour: \$30.37

Effective Period: 3/17/2017 - 6/30/2017
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Rate Per Hour: \$31.91

(Local #1)

ELEVATOR REPAIR & MAINTENANCE
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 2)

Elevator Service/Modernization Mechanic (First Year)

Effective Period: 7/1/2016 - 3/16/2017
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Benefit Per Hour: \$28.33

Effective Period: 3/17/2017 - 6/30/2017
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Benefit Per Hour: \$29.80

Elevator Service/Modernization Mechanic (Second Year)

Effective Period: 7/1/2016 - 3/16/2017
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Benefit Per Hour: \$28.74

Effective Period: 3/17/2017 - 6/30/2017
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Benefit Per Hour: \$30.23

Elevator Service/Modernization Mechanic (Third Year)

Effective Period: 7/1/2016 - 3/16/2017
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Benefit Per Hour: \$29.58

Effective Period: 3/17/2017 - 6/30/2017
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Benefit Per Hour: \$31.09

Elevator Service/Modernization Mechanic (Fourth Year)

Effective Period: 7/1/2016 - 3/16/2017
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Benefit Per Hour: \$30.42

Effective Period: 3/17/2017 - 6/30/2017
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Benefit Per Hour: \$31.95

(Local #1)

ENGINEER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 5)

Engineer - First Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$24.28**

Supplemental Benefit Rate per Hour: **\$23.41**

Engineer - Second Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$30.35**

Supplemental Benefit Rate per Hour: **\$23.41**

Engineer - Third Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$33.38**

Supplemental Benefit Rate per Hour: **\$23.41**

Engineer - Fourth Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$36.41**

Supplemental Benefit Rate per Hour: **\$23.41**

(Local #15)

ENGINEER - OPERATING

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 5)

Operating Engineer - First Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour 40% of Journeyman's Rate

Supplemental Benefit Per Hour: **\$20.85**

Operating Engineer - Second Year

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Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 50% of Journeyman's Rate
Supplemental Benefit Per Hour: \$20.85

Operating Engineer - Third Year

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 60% of Journeyman's Rate
Supplemental Benefit Per Hour: \$20.85

(Local #14)

FLOOR COVERER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Floor Coverer (First Year)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 40% of Journeyman's rate
Supplemental Rate Per Hour: \$31.14

Floor Coverer (Second Year)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$31.14

Floor Coverer (Third Year)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Rate Per Hour: \$31.14

Floor Coverer (Fourth Year)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$31.14

(Carpenters District Council)

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GLAZIER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Glazier (First Year)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 40% of Journeyman's rate
Supplemental Rate Per Hour: \$14.14

Glazier (Second Year)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$23.77

Glazier (Third Year)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$26.73

Glazier (Fourth Year)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$32.14

(Local #1281)

HEAT & FROST INSULATOR

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Heat & Frost Insulator (First Year)

Effective Period: 7/1/2016 - 6/30/2017
Wage and Supplemental Rate Per Hour: 40% of Journeyman's rate

Heat & Frost Insulator (Second Year)

Effective Period: 7/1/2016 - 6/30/2017
Wage and Supplemental Rate Per Hour: 60% of Journeyman's rate

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Heat & Frost Insulator (Third Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 70% of Journeyman's rate

Heat & Frost Insulator (Fourth Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 80% of Journeyman's rate

(Local #12)

HOUSE WRECKER

(TOTAL DEMOLITION)

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

House Wrecker - First Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$21.17

Supplemental Benefit Rate per Hour: \$17.99

House Wrecker - Second Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$22.32

Supplemental Benefit Rate per Hour: \$17.99

House Wrecker - Third Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$23.97

Supplemental Benefit Rate per Hour: \$17.99

House Wrecker - Fourth Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$26.53

Supplemental Benefit Rate per Hour: \$17.99

(Mason Tenders District Council)

IRON WORKER - ORNAMENTAL

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Iron Worker (Ornamental) - 1st Ten Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$37.90

Iron Worker (Ornamental) - 11 -16 Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Rate Per Hour: \$39.06

Iron Worker (Ornamental) - 17 - 22 Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$40.23

Iron Worker (Ornamental) - 23 - 28 Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: \$42.57

Iron Worker (Ornamental) - 29 - 36 Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$44.90

(Local #580)

IRON WORKER - STRUCTURAL

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 6)

Iron Worker (Structural) - 1st Six Months

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Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$25.85

Supplemental Benefit Rate per Hour: \$48.35

Iron Worker (Structural) - 7- 18 Months

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$26.45

Supplemental Benefit Rate per Hour: \$48.35

Iron Worker (Structural) - 19 - 36 months

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$27.05

Supplemental Benefit Rate per Hour: \$48.35

(Local #40 and #361)

**LABORER (FOUNDATION, CONCRETE, EXCAVATING, STREET PIPE
LAYER & COMMON)**

(Ratio Apprentice to Journeyperson: 1 to 1, 1 to 3)

**Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - First
1000 hours**

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 50% of Journeyperson's rate

Supplemental Rate Per Hour: \$38.63

**Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) -
Second 1000 hours**

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 60% of Journeyperson's rate

Supplemental Rate Per Hour: \$38.63

**Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) -
Third 1000 hours**

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 75% of Journeyperson's rate

Supplemental Rate Per Hour: \$38.63

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**Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) -
Fourth 1000 hours**

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Rate Per Hour: \$38.63

(Local #731)

**MARBLE MECHANICS
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)**

Cutters & Setters - First 750 Hours

Effective Period: 7/1/2016 - 6/30/2017
Wage and Supplemental Rate Per Hour: 50% of Journeyperson's rate

NO BENEFITS PAID DURING THE FIRST TWO MONTHS (PROBATIONARY PERIOD)

Cutters & Setters - Second 750 Hours

Effective Period: 7/1/2016 - 6/30/2017
Wage and Supplemental Rate Per Hour: 55% of Journeyperson's rate

Cutters & Setters - Third 750 Hours

Effective Period: 7/1/2016 - 6/30/2017
Wage and Supplemental Rate Per Hour: 65% of Journeyperson's rate

Cutters & Setters - Fourth 750 Hours

Effective Period: 7/1/2016 - 6/30/2017
Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

Cutters & Setters - Fifth 750 Hours

Effective Period: 7/1/2016 - 6/30/2017
Wage and Supplemental Rate Per Hour: 85% of Journeyperson's rate

Cutters & Setters - Sixth 750 Hours

Effective Period: 7/1/2016 - 6/30/2017
Wage and Supplemental Rate Per Hour: 95% of Journeyperson's rate

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Polishers & Finishers - First 750 Hours

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 50% of Journeyperson's rate

NO BENEFITS PAID DURING THE FIRST TWO MONTHS (PROBATIONARY PERIOD)

Polishers & Finishers - Second 750 Hours

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Polishers & Finishers - Third 750 Hours

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

Polishers & Finishers - Fourth 750 Hours

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 90% of Journeyperson's rate

(Local #7)

MASON TENDER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Mason Tender - First Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$21.39

Supplemental Benefit Rate per Hour: \$19.10

Mason Tender - Second Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$22.54

Supplemental Benefit Rate per Hour: \$19.10

Mason Tender - Third Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$24.29

Supplemental Benefit Rate per Hour: \$19.15

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Mason Tender - Fourth Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$26.95

Supplemental Benefit Rate per Hour: \$19.15

(Local #79)

METALLIC LATHER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Metallic Lather (First Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$23.01

Supplemental Benefit Rate per Hour: \$17.95

Metallic Lather (Second Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$28.11

Supplemental Benefit Rate per Hour: \$17.95

Metallic Lather (Third Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$33.21

Supplemental Benefit Rate per Hour: \$17.95

(Local #46)

MILLWRIGHT

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Millwright (First Year)

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Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$28.33

Supplemental Benefit Rate per Hour: \$34.28

Millwright (Second Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$33.48

Supplemental Benefit Rate per Hour: \$37.88

Millwright (Third Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$38.63

Supplemental Benefit Rate per Hour: \$42.13

Millwright (Fourth Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$48.93

Supplemental Benefit Rate per Hour: \$48.69

Local #740)

PAVER AND ROADBUILDER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Paver and Roadbuilder - First Year (Minimum 1000 hours)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$27.55

Supplemental Benefit Rate per Hour: \$18.20

Paver and Roadbuilder - Second Year (Minimum 1000 hours)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$29.19

Supplemental Benefit Rate per Hour: \$18.20

(Local #1010)

PAINTER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Painter - Brush & Roller - First Year

Effective Period: 7/1/2016 - 4/30/2017

Wage Rate per Hour: **\$17.00**

Supplemental Benefit Rate per Hour: **\$12.38**

Effective Period: 5/1/2017 - 6/30/2017

Wage Rate per Hour: **\$17.64**

Supplemental Benefit Rate per Hour: **\$12.78**

Painter - Brush & Roller - Second Year

Effective Period: 7/1/2016 - 4/30/2017

Wage Rate per Hour: **\$21.25**

Supplemental Benefit Rate per Hour: **\$16.23**

Effective Period: 5/1/2017 - 6/30/2017

Wage Rate per Hour: **\$22.05**

Supplemental Benefit Rate per Hour: **\$16.63**

Painter - Brush & Roller - Third Year

Effective Period: 7/1/2016 - 4/30/2017

Wage Rate per Hour: **\$25.50**

Supplemental Benefit Rate per Hour: **\$19.14**

Effective Period: 5/1/2017 - 6/30/2017

Wage Rate per Hour: **\$26.46**

Supplemental Benefit Rate per Hour: **\$19.54**

Painter - Brush & Roller - Fourth Year

Effective Period: 7/1/2016 - 4/30/2017

Wage Rate per Hour: **\$34.00**

Supplemental Benefit Rate per Hour: **\$24.52**

Effective Period: 5/1/2017 - 6/30/2017

Wage Rate per Hour: **\$35.28**

Supplemental Benefit Rate per Hour: **\$24.92**

(District Council of Painters)

PAINTER - METAL POLISHER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Metal Polisher (First Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$11.75

Supplemental Benefit Rate per Hour: \$5.13

Metal Polisher (Second Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$13.00

Supplemental Benefit Rate per Hour: \$5.13

Metal Polisher (Third Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$15.75

Supplemental Benefit Rate per Hour: \$5.13

(Local 8A-28)

PAINTER - STRUCTURAL STEEL

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Painters - Structural Steel (First Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 40% of Journeyman's rate

Painters - Structural Steel (Second Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 60% of Journeyman's rate

Painters - Structural Steel (Third Year)

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Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 80% of Journeyman's rate

(Local #806)

PLASTERER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Plasterer - First Year: 1st Six Months

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 40% of Journeyman's rate

Supplemental Rate Per Hour: \$15.91

Plasterer - First Year: 2nd Six Months

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 45% of Journeyman's rate

Supplemental Rate Per Hour: \$16.39

Plasterer - Second Year: 1st Six Months

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 55% of Journeyman's rate

Supplemental Rate Per Hour: \$18.36

Plasterer - Second Year: 2nd Six Months

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 60% of Journeyman's rate

Supplemental Rate Per Hour: \$19.44

Plasterer - Third Year: 1st Six Months

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 70% of Journeyman's rate

Supplemental Rate Per Hour: \$21.61

Plasterer - Third Year: 2nd Six Months

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 75% of Journeyman's rate

Supplemental Rate Per Hour: \$22.69

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(Local #530)

PLASTERER - TENDER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Plasterer Tender - First Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$21.39

Supplemental Benefit Rate per Hour: \$19.10

Plasterer Tender - Second Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$22.54

Supplemental Benefit Rate per Hour: \$19.10

Plasterer Tender - Third Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$24.29

Supplemental Benefit Rate per Hour: \$19.15

Plasterer Tender - Fourth Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$26.95

Supplemental Benefit Rate per Hour: \$19.15

(Local #79)

PLUMBER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Plumber - First Year: 1st Six Months

Effective Period: 7/1/2016 - 6/30/2017

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$14.00**
Supplemental Benefit Rate per Hour: **\$0.71**

Plumber - First Year: 2nd Six Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: **\$14.00**
Supplemental Benefit Rate per Hour: **\$2.96**

Plumber - Second Year

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: **\$24.07**
Supplemental Benefit Rate per Hour: **\$13.21**

Plumber - Third Year

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: **\$26.17**
Supplemental Benefit Rate per Hour: **\$13.21**

Plumber - Fourth Year

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: **\$29.02**
Supplemental Benefit Rate per Hour: **\$13.21**

Plumber - Fifth Year: 1st Six Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: **\$30.42**
Supplemental Benefit Rate per Hour: **\$13.21**

Plumber - Fifth Year: 2nd Six Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate per Hour: **\$42.49**
Supplemental Benefit Rate per Hour: **\$13.21**

(Plumbers Local #1)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

**POINTER, WATERPROOFER, CAULKER, SANDBLASTER,
STEAMBLASTER**

(Exterior Building Renovation)

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Pointer, Waterproofer, Caulker, Sandblaster, Steamblaster - First Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$26.52

Supplemental Benefit Rate per Hour: \$12.10

Pointer, Waterproofer, Caulker, Sandblaster, Steamblaster - Second Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$27.89

Supplemental Benefit Rate per Hour: \$16.75

Pointer, Waterproofer, Caulker, Sandblaster, Steamblaster - Third Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$33.98

Supplemental Benefit Rate per Hour: \$19.50

Pointer, Waterproofer, Caulker, Sandblaster, Steamblaster - Fourth Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$40.80

Supplemental Benefit Rate per Hour: \$20.35

(Bricklayer District Council)

ROOFER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 2)

Roofer - First Year

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 35% of Journeyperson's Rate

Roofer - Second Year

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 50% of Journeyman's Rate

Roofer - Third Year

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 60% of Journeyman's Rate

Roofer - Fourth Year

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 75% of Journeyman's Rate

(Local #8)

SHEET METAL WORKER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Sheet Metal Worker (0-6 Months)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 25% of Journeyman's rate

Supplemental Rate Per Hour: \$6.35

Sheet Metal Worker (7-18 Months)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 35% of Journeyman's rate

Supplemental Rate Per Hour: \$17.12

Sheet Metal Worker (19-30 Months)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 45% of Journeyman's rate

Supplemental Rate Per Hour: \$23.54

Sheet Metal Worker (31-36 Months)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 55% of Journeyman's rate

Supplemental Rate Per Hour: \$27.70

Sheet Metal Worker (37-42 Months)

Effective Period: 7/1/2016 - 6/30/2017

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$29.11

Sheet Metal Worker (43-48 Months)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: \$33.96

Sheet Metal Worker (49-54 Months)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Rate Per Hour: \$36.07

Sheet Metal Worker (55-60 Months)

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$38.15

(Local #28)

SIGN ERECTOR

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Sign Erector - First Year: 1st Six Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 35% of Journeyman's rate
Supplemental Rate Per Hour: \$13.95

Sign Erector - First Year: 2nd Six Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 40% of Journeyman's rate
Supplemental Rate Per Hour: \$15.83

Sign Erector - Second Year: 1st Six Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 45% of Journeyman's rate
Supplemental Rate Per Hour: \$17.72

Sign Erector - Second Year: 2nd Six Months

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$19.60

Sign Erector - Third Year: 1st Six Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Rate Per Hour: \$26.23

Sign Erector - Third Year: 2nd Six Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$28.24

Sign Erector - Fourth Year: 1st Six Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Rate Per Hour: \$30.98

Sign Erector - Fourth Year: 2nd Six Months

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: \$33.06

Sign Erector - Fifth Year

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Rate Per Hour: \$35.15

Sign Erector - Sixth Year

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$37.22

(Local #137)

STEAMFITTER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Steamfitter - First Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate and Supplemental Per Hour: 40% of Journeyperson's rate

Steamfitter - Second Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate and Supplemental Rate Per Hour: 50% of Journeyperson's rate.

Steamfitter - Third Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate and Supplemental Rate per Hour: 65% of Journeyperson's rate.

Steamfitter - Fourth Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate and Supplemental Rate Per Hour: 80% of Journeyperson's rate.

Steamfitter - Fifth Year

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate and Supplemental Rate Per Hour: 85% of Journeyperson's rate.

(Local #638)

STONE MASON - SETTER

(Ratio Apprentice of Journeyperson: 1 to 1, 1 to 2)

Stone Mason - Setters - First 750 Hours

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Second 750 Hours

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate Per Hour: 60% of Journeyperson's rate

Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Third 750 Hours

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: 50% of Journeyman's rate

Stone Mason - Setters - Fourth 750 Hours

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: 50% of Journeyman's rate

Stone Mason - Setters - Fifth 750 Hours

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 90% of Journeyman's rate
Supplemental Rate Per Hour: 50% of Journeyman's rate

Stone Mason - Setters - Sixth 750 Hours

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 100% of Journeyman's rate
Supplemental Rate Per Hour: 50% of Journeyman's rate

(Bricklayers District Council)

TAPER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Drywall Taper - First Year

Effective Period: 7/1/2016 - 6/30/2017
Wage and Supplemental Rate Per Hour: 40% of Journeyman's rate

Drywall Taper - Second Year

Effective Period: 7/1/2016 - 6/30/2017
Wage and Supplemental Rate Per Hour: 60% of Journeyman's rate

Drywall Taper - Third Year

Effective Period: 7/1/2016 - 6/30/2017
Wage and Supplemental Rate Per Hour: 80% of Journeyman's rate

(Local #1974)

TILE LAYER - SETTER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Tile Layer - Setter - First 750 Hours

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

Tile Layer - Setter - Second 750 Hours

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 55% of Journeyman's rate

Tile Layer - Setter - Third 750 Hours

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 65% of Journeyman's rate

Tile Layer - Setter - Fourth 750 Hours

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 75% of Journeyman's rate

Tile Layer - Setter - Fifth 750 Hours

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 85% of Journeyman's rate

Tile Layer - Setter - Sixth 750 Hours

Effective Period: 7/1/2016 - 6/30/2017

Wage and Supplemental Rate Per Hour: 95% of Journeyman's rate

(Local #7)

TIMBERPERSON

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 6)

Timberperson - First Year

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Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 40% of Journeyman's rate
Supplemental Rate Per Hour: \$32.33

Timberperson - Second Year

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$32.33

Timberperson - Third Year

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Rate Per Hour: \$32.33

Timberperson - Fourth Year

Effective Period: 7/1/2016 - 6/30/2017
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$32.33

(Local #1536)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

LABOR LAW §230 AND NYC ADMINISTRATIVE CODE §6-130
BUILDING SERVICE EMPLOYEES

**PREVAILING WAGE FOR BUILDING SERVICE EMPLOYEES ON NYC CONTRACTS PURSUANT
TO LABOR LAW §230 ET SEQ.**

Building service employees on public contracts must receive not less than the prevailing rate of wage and supplements for the classification of work performed. In accordance with Labor Law §230 et seq. the Comptroller of the City of New York has promulgated this schedule of prevailing wages and supplemental benefits for building service employees engaged on New York City public building service contracts in excess of \$1,500.00. Prevailing rates are required to be annexed to and form part of the contract pursuant to §231 (4).

This schedule is a compilation of separate determinations of the prevailing rate of wage and supplements made by the Comptroller for each trade classification listed herein pursuant to New York State Labor Law section 234 (1). The source of the wage and supplement rates, whether a collective bargaining agreement, survey data or other, is listed at the end of each classification.

Agency Chief Contracting Officers should contact the Bureau of Labor Law's Classification Unit with any questions concerning trade classifications, prevailing rates or prevailing practices with respect to procurement on New York City building services contracts. Contractors are advised to review the Comptroller's Prevailing Wage Schedule before bidding on building services contracts. Contractors with questions concerning trade classifications, prevailing rates or prevailing practices with respect to building services contracts in the procurement stage must contact the contracting agency responsible for the procurement.

Any error as to compensation under the prevailing wage law or other information as to trade classification, made by the contracting agency in the contract documents or in any other communication, will not preclude a finding against the contractor of prevailing wage violation.

Any questions concerning trade classifications, prevailing rates or prevailing practices on New York City building services contracts that have already been awarded may be directed to the Bureau of Labor Law's Classification Unit by calling (212) 669-7974. All callers must have the agency name and contract registration number available when calling with questions on building services contracts. Please direct all other compliance issues to: Bureau of Labor Law, Attn: Wasyl Kinach, P.E., Office of the Comptroller, 1 Centre Street, Room 1122, New York, N.Y. 10007; Fax (212) 669-4002.

**PREVAILING WAGE FOR BUILDING SERVICE EMPLOYEES IN BUILDINGS WITH TAX
ABATEMENTS PURSUANT TO REAL PROPERTY TAX LAW §421-A**

Covered Landlords shall ensure that all building service employees performing work in buildings with 50 or more dwelling units for which construction was commenced after December 27, 2007 but no later than December 31, 2015, that receive a tax abatement pursuant to Real Property Tax Law §421-a, are paid no less than the prevailing wage listed in the Labor Law §230 Prevailing Wage Schedule, unless the New York City Department of Housing Preservation and Development certifies that, at initial occupancy, at least 50 percent of the dwelling units are affordable to individuals or families with a gross household income at or below 125 percent of the area median income and that any such units which are

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

located in rental buildings will be subject to restrictions to insure that they will remain affordable for the entire period during which they receive benefits under Real Property Tax Law §421-a.

PREVAILING WAGE FOR BUILDING SERVICE EMPLOYEES IN NEW YORK CITY LEASED OR FINANCIALLY ASSISTED FACILITIES PURSUANT TO NYC ADMINISTRATIVE CODE § 6-130

Covered landlords & covered financial assistance recipients shall ensure that all building service employees performing building service work at the premises to which a lease or financial assistance pertains are paid no less than the prevailing wage listed in the Labor Law §230 Prevailing Wage Schedule.

Covered Landlords include:

Businesses (other than not-for-profit organizations) leasing to New York City agencies commercial office space or commercial office facilities of 10,000 square feet or more where the City leases or rents no less than 51% of the total square footage of the building to which the lease applies (no less than 80% in Staten Island or in an area not defined as an exclusion area pursuant to section 421-a of the real property tax law on the date of enactment of the local law).

Covered Financial Assistance Recipients include:

Businesses (other than not-for-profit organizations) with annual gross revenues of five million dollars or more who have received financial assistance from the City of New York (as defined in New York City Administrative Code §6-130) with a total value of one million dollars or more.

Exemptions: Business Improvement Districts and employers with manufacturing operations at the premises to which the financial assistance pertains.

The information is intended to assist you in meeting your prevailing wage obligation. You should consult New York City Administrative Code §6-130 to determine whether you are covered by this prevailing wage law. New York City Administrative Code § 6-130 requires the City to maintain an updated list of covered landlords and financial assistance recipients who are subject to the prevailing wage requirement.

Labor Law § 231 (6) and NYC Administrative Law §6-130 requires contractors to post on the site of the work a current copy of this schedule of wages and supplements.

This schedule is applicable to work performed during the effective period, unless otherwise noted. Changes to this schedule are published on our web site www.comptroller.nyc.gov. Contractors must pay the wages and supplements in effect when the building service employee performs the work. Preliminary schedules for future one-year periods appear in the City Record on or about June 1 each succeeding year. Final schedules appear on or about July 1 in the City Record and on our web site www.comptroller.nyc.gov.

Contractors are solely responsible for maintaining original payroll records delineating, among other things, the hours worked by each employee within a given classification.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

Some of the rates in this schedule are based on collective bargaining agreements. The Comptroller's Office has attempted to include all overtime, shift and night differential, Holiday, Saturday, Sunday or other premium time work. However, this schedule does not set forth every prevailing practice with respect to such rates with which employers must comply. All such practices are nevertheless part of the employer's prevailing wage obligation and contained in the collective bargaining agreements of the prevailing wage unions. These collective bargaining agreements are available for inspection by appointment. Requests for appointments may be made by calling (212) 669-4443, Monday through Friday between the hours of 9 a.m. and 5 p.m.

In order to meet their obligation to provide prevailing supplemental benefits to each covered employee, employers must either:

- 1) Provide bona-fide benefits which cost the employer no less than the prevailing supplemental benefits rate; or
- 2) Supplement the employee's hourly wage by an amount no less than the prevailing supplemental benefits rate; or
- 3) Provide a combination of bona-fide benefits and wage supplements which cost the employer no less than the prevailing supplemental benefits rate in total.

Particular attention should be given to the supplemental benefits requirement. Although in most instances the payment or provision for supplemental benefits is for each hour worked, some classifications require the payment or provision of supplemental benefits for each hour paid. Consequently, some prevailing practices require benefits to be purchased at the overtime, shift differential, Holiday, Saturday, Sunday or other premium time rate.

Benefits are paid for EACH HOUR WORKED unless otherwise noted.

**OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE**



**The City of New York
Office of the Comptroller
Bureau Of Labor Law
1 Centre Street
New York, NY 10007**

**Scott M. Stringer
Comptroller**

If you are a Covered Building Service Employee and you have been paid less than the Prevailing Wage and Benefits, please contact us at 212-669-4443 or download our complaint form from our website at WWW.COMPTROLLER.NYC.GOV (click on the Bureau of Labor Law).

Si es un empleado de servicios a edificios elegible y recibió menos del sueldo prevalente y beneficios, por favor contáctenos en 212-669-4443 o descarga un formulario de reclamo del sitio del Internet WWW.COMPTROLLER.NYC.GOV (oprime "Oficina de Derecho Laboral").

**Wasyf Kinach, P.E.
Director of Classifications
Bureau of Labor Law**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

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OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

BUILDING CLEANER AND MAINTAINER (OFFICE)

Office Building Class "A" Handyperson (Over 280,000 square feet gross area)

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: **\$26.95**
Supplemental Benefit Rate per Hour: **\$10.98**
Supplemental Note: for new hire 0-3 months of employment - \$0.00

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: **\$27.60**
Supplemental Benefit Rate per Hour: **\$11.56**
Supplemental Note: for new hire 0-3 months of employment - \$0.00

Office Building Class "A" Foreperson, Starter (Over 280,000 square feet gross area)

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: **\$26.84**
Supplemental Benefit Rate per Hour: **\$10.98**
Supplemental Note: for new hire 0-3 months of employment - \$0.00

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: **\$27.49**
Supplemental Benefit Rate per Hour: **\$11.56**
Supplemental Note: for new hire 0-3 months of employment - \$0.00

Office Building Class "A" Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director (Over 280,000 square feet gross area)

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: **\$24.62**
Supplemental Benefit Rate per Hour: **\$10.98**
Supplemental Note: for new hire 0-3 months of employment - \$0.00; for new hire 4-12 months of employment - \$8.09; for new hire 13-24 months of employment - \$10.65

NEW HIRE: Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director may be paid 75% of the wage rate above for the first 21 months of employment, 85% of the wage rate above for the 22nd through 42nd months of employment, and upon the completion of 42 months of employment employee shall be paid the full wage rate.

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: **\$25.22**
Supplemental Benefit Rate per Hour: **\$11.56**
Supplemental Note: for new hire 0-3 months of employment - \$0.00; for new hire 4-12 months of employment - \$8.57; for new hire 13-24 months of employment - \$11.23

NEW HIRE: Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director may be paid 75% of the wage rate above for the first 21 months of employment, 85% of the wage rate above for the 22nd through 42nd months of employment, and upon the completion of 42 months of employment employee shall be paid the full wage rate.

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Office Building Class "B" Handyperson (Over 120,000 and less than 280,000 square feet gross area)

Effective Period: 7/1/2016 - 12/31/2016

Wage Rate per Hour: **\$26.92**

Supplemental Benefit Rate per Hour: **\$10.98**

Supplemental Note: for new hire 0-3 months of employment - \$0.00

Effective Period: 1/1/2017 - 6/30/2017

Wage Rate per Hour: **\$27.57**

Supplemental Benefit Rate per Hour: **\$11.56**

Supplemental Note: for new hire 0-3 months of employment - \$0.00

Office Building Class "B" Foreperson, Starter (Over 120,000 and less than 280,000 square feet gross area)

Effective Period: 7/1/2016 - 12/31/2016

Wage Rate per Hour: **\$26.80**

Supplemental Benefit Rate per Hour: **\$10.98**

Supplemental Note: for new hire 0-3 months of employment - \$0.00

Effective Period: 1/1/2017 - 6/30/2017

Wage Rate per Hour: **\$27.45**

Supplemental Benefit Rate per Hour: **\$11.56**

Supplemental Note: for new hire 0-3 months of employment - \$0.00

Office Building Class "B" Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director (Over 120,000 and less than 280,000 square feet gross area)

Effective Period: 7/1/2016 - 12/31/2016

Wage Rate per Hour: **\$24.59**

Supplemental Benefit Rate per Hour: **\$10.98**

Supplemental Note: for new hire 0-3 months of employment - \$0.00; for new hire 4-12 months of employment - \$8.09; for new hire 13-24 months of employment - \$10.65

NEW HIRE: Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director may be paid 75% of the wage rate above for the first 21 months of employment, 85% of the wage rate above for the 22nd through 42nd months of employment, and upon the completion of 42 months of employment employee shall be paid the full wage rate.

Effective Period: 1/1/2017 - 6/30/2017

Wage Rate per Hour: **\$25.19**

Supplemental Benefit Rate per Hour: **\$11.56**

Supplemental Note: for new hire 0-3 months of employment - \$0.00; for new hire 4-12 months of employment - \$8.57; for new hire 13-24 months of employment - \$11.23

NEW HIRE: Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director may be paid 75% of the wage rate above for the first 21 months of employment, 85% of the wage rate above for the 22nd through 42nd months of employment, and upon the completion of 42 months of employment employee shall be paid the full wage rate.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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Office Building Class "C" Handyperson (Less than 120,000 square feet gross area)

Effective Period: 7/1/2016 - 12/31/2016

Wage Rate per Hour: **\$26.87**

Supplemental Benefit Rate per Hour: **\$10.98**

Supplemental Note: for new hire 0-3 months of employment - \$0.00

Effective Period: 1/1/2017 - 6/30/2017

Wage Rate per Hour: **\$27.52**

Supplemental Benefit Rate per Hour: **\$11.56**

Supplemental Note: for new hire 0-3 months of employment - \$0.00

Office Building Class "C" Foreperson, Starter (Less than 120,000 square feet gross area)

Effective Period: 7/1/2016 - 12/31/2016

Wage Rate per Hour: **\$26.76**

Supplemental Benefit Rate per Hour: **\$10.98**

Supplemental Note: for new hire 0-3 months of employment - \$0.00

Effective Period: 1/1/2017 - 6/30/2017

Wage Rate per Hour: **\$27.41**

Supplemental Benefit Rate per Hour: **\$11.56**

Supplemental Note: for new hire 0-3 months of employment - \$0.00

Office Building Class "C" Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director (Less than 120,000 square feet gross area)

Effective Period: 7/1/2016 - 12/31/2016

Wage Rate per Hour: **\$24.55**

Supplemental Benefit Rate per Hour: **\$10.98**

Supplemental Note: for new hire 0-3 months of employment - \$0.00; for new hire 4-12 months of employment - \$8.09; for new hire 13-24 months of employment - \$10.65

NEW HIRE: Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director may be paid 75% of the wage rate above for the first 21 months of employment, 85% of the wage rate above for the 22nd through 42nd months of employment, and upon the completion of 42 months of employment employee shall be paid the full wage rate.

Effective Period: 1/1/2017 - 6/30/2017

Wage Rate per Hour: **\$25.15**

Supplemental Benefit Rate per Hour: **\$11.56**

Supplemental Note: for new hire 0-3 months of employment - \$0.00; for new hire 4-12 months of employment - \$8.57; for new hire 13-24 months of employment - \$11.23

NEW HIRE: Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director may be paid 75% of the wage rate above for the first 21 months of employment, 85% of the wage rate above for the 22nd through 42nd months of employment, and upon the completion of 42 months of employment employee shall be paid the full wage rate.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

For all BUILDING CLEANER AND MAINTAINER (OFFICE) titles, New Hire shall be defined as an employee who has not worked any hours during the previous six-month period, and Months of Employment shall be defined as an Employee's total length of service with the Employer or at the Facility, whichever is greater.

Overtime Description

Supplemental Benefits shall be paid for each hour paid, up to forty (40) paid hours per week.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Time and one half the regular rate for work on a holiday plus the day's pay.

Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Vacation

Less than 6 months of work.....no vacation

6 months of work.....three (3) days

1 year of work.....ten (10) days

5 years of work.....fifteen (15) days

15 years of work.....twenty (20) days

21 years of work.....twenty-one (21) days

22 years of work.....twenty-two (22) days

23 years of work.....twenty-three (23) days

24 years of work.....twenty-four (24) days

25 years or more of work.....twenty-five (25) days

Plus two Personal Days per year.

Sick Leave:

10 sick days per year.

Unused sick leave paid in the succeeding January, one full day pay for each unused sick day.

(Local #32 B/J)

BUILDING CLEANER AND MAINTAINER (RESIDENTIAL)

Residential Building Handyperson

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2016 - 12/31/2016

Wage Rate per Hour: \$25.43

Supplemental Benefit Rate per Hour: \$10.90

Supplemental Note: for new hire 0-3 months of employment - \$0.00

Effective Period: 1/1/2017 - 4/20/2017

Wage Rate per Hour: \$25.43

Supplemental Benefit Rate per Hour: \$11.48

Supplemental Note: for new hire 0-3 months of employment - \$0.00

Effective Period: 4/21/2017 - 6/30/2017

Wage Rate per Hour: \$26.18

Supplemental Benefit Rate per Hour: \$11.48

Supplemental Note: for new hire 0-3 months of employment - \$0.00

Residential Building Cleaner/Porter, Doorman, Elevator Operator

Effective Period: 7/1/2016 - 12/31/2016

Wage Rate per Hour: \$23.06

Supplemental Benefit Rate per Hour: \$10.90

Supplemental Note: for new hire 0-3 months of employment - \$0.00; for new hire 4-12 months of employment - \$8.09; for new hire 13-24 months of employment - \$10.65

NEW HIRE - Cleaner/Porter, Doorman, Elevator Operator: 0-21 months may be paid 75% of the hourly wage rate published above, 22-42 months may be paid 85% of the hourly wage rate published above. Upon completion of 42 months of employment, the new hire shall be paid the full wage rate. Upon completion of two years of employment the new hire receives the full supplemental benefit rate.

Effective Period: 1/1/2017 - 4/20/2017

Wage Rate per Hour: \$23.06

Supplemental Benefit Rate per Hour: \$11.48

Supplemental Note: for new hire 0-3 months of employment - \$0.00; for new hire 4-12 months of employment - \$8.57; for new hire 13-24 months of employment - \$11.23

NEW HIRE - Cleaner/Porter, Doorman, Elevator Operator: 0-21 months may be paid 75% of the hourly wage rate published above, 22-42 months may be paid 85% of the hourly wage rate published above. Upon completion of 42 months of employment, the new hire shall be paid the full wage rate. Upon completion of two years of employment the new hire receives the full supplemental benefit rate.

Effective Period: 4/21/2017 - 6/30/2017

Wage Rate per Hour: \$23.75

Supplemental Benefit Rate per Hour: \$11.48

Supplemental Note: for new hire 0-3 months of employment - \$0.00; for new hire 4-12 months of employment - \$8.57; for new hire 13-24 months of employment - \$11.23

NEW HIRE - Cleaner/Porter, Doorman, Elevator Operator: 0-21 months may be paid 75% of the hourly wage rate published above, 22-42 months may be paid 85% of the hourly wage rate published above. Upon completion of 42 months of employment, the new hire shall be paid the full wage rate. Upon completion of two years of employment the new hire receives the full supplemental benefit rate.

Overtime Description

Supplemental Benefits shall be paid for each hour paid, up to forty (40) paid hours per week.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for work on a holiday plus the day's pay.
Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

- New Year's Day
- Martin Luther King Jr. Day
- President's Day
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Election Day
- Thanksgiving Day
- Christmas Day

Vacation

- 6 months.....three (3) days
 - 1 year.....ten (10) days
 - 5 years.....fifteen (15) days
 - 15 years.....twenty (20) days
 - 21 years.....twenty-one (21) days
 - 22 years.....twenty-two (22) days
 - 23 years.....twenty-three (23) days
 - 24 years.....twenty-four (24) days
 - 25 years.....twenty-five (25) days
- Plus two Personal Days per year.

SICK LEAVE

After 1 year of service.....ten (10) days per year

(Local #32 B/J)

BUILDING HVAC SERVICES OPERATOR

Engineer (Refrigeration)

Effective Period: 7/1/2016 - 12/31/2016

Wage Rate per Hour: **\$38.96**

Supplemental Benefit Rate per Hour: **\$17.26**

Effective Period: 1/1/2017 - 6/30/2017

Wage Rate per Hour: **\$40.13**

Supplemental Benefit Rate per Hour: **\$17.77**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$230 PREVAILING WAGE SCHEDULE

NEW HIRE - Engineer (Refrigeration): for the first year may be paid a starting rate of 85% of the hourly wage rate published above.

Fireperson

Fireperson (Helper): Assist the Engineer

Effective Period: 7/1/2016 - 12/31/2016

Wage Rate per Hour: \$30.34

Supplemental Benefit Rate per Hour: \$16.86

Effective Period: 1/1/2017 - 6/30/2017

Wage Rate per Hour: \$31.25

Supplemental Benefit Rate per Hour: \$17.36

Please note that the NYC Comptroller's Office does not publish rates for the Stationary Engineer title.

Overtime Description

All hours worked on a holiday shall be paid at two and one half times the regular wage rate in lieu of the paid day off.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Paid Holidays

New Year's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Plus six (6) floating Holidays

Vacation

6 months three (3) days

1 year ten (10) days

5 years fifteen (15) days

15 years twenty (20) days

21 years twenty-one (21) days

22 years twenty-two (22) days

23 years twenty-three (23) days

24 years twenty-four (24) days

25 years twenty-five (25) days

(Local #94)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

CLEANER (PARKING GARAGE)

Garage Cleaner

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$11.23**

Supplemental Benefit Rate per Hour: **\$1.75**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular hourly rate after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics)

FUEL OIL

Fuel Oil, Coal, Fuel Gas, Petroleum Product Chauffeur (5th Year and above)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$32.36**

Supplemental Benefit Rate per Hour: **\$22.59**

Fuel Oil, Coal, Fuel Gas, Petroleum Product Chauffeur (4th Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$29.75**

Supplemental Benefit Rate per Hour: **\$22.59**

Fuel Oil, Coal, Fuel Gas, Petroleum Product Chauffeur (3rd Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$27.75**

Supplemental Benefit Rate per Hour: **\$22.59**

Fuel Oil, Coal, Fuel Gas, Petroleum Product Chauffeur (2nd Year)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$25.75**

Supplemental Benefit Rate per Hour: **\$22.59**

Fuel Oil, Coal, Fuel Gas, Petroleum Product Chauffeur (1st Year)

Effective Period: 7/1/2016 - 6/30/2017

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$230 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$23.75**

Supplemental Benefit Rate per Hour: **\$22.59**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

Martin Luther King Jr. Day

Lincoln's Birthday

Washington's Birthday

Memorial Day

Independence Day

Labor Day

Columbus Day

Election Day

Veteran's Day

Triple time the regular rate for work on the following holiday(s).

New Year's Day

Thanksgiving Day

Christmas Day

Paid Holidays

New Year's Day

Martin Luther King Jr. Day

Lincoln's Birthday

Washington's Birthday

Memorial Day

Independence Day

Labor Day

Columbus Day

Election Day

Veteran's Day

Thanksgiving Day

Christmas Day

Vacation

Less than 75 days worked.....no vacation.

75 days worked, but less than 110 days worked in a calendar year.....five (5) days the following year.

110 days or more worked in a calendar year.....ten (10) days the following year.

SICK LEAVE:

1 day sick leave earned for each 40 days worked in the preceding calendar year for a maximum of five (5) days per calendar year.

(Local #553)

LANDSCAPING AND GROUNDSKEEPING WORKER

Landscaper / Groundskeeper

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$18.23**

Supplemental Benefit Rate per Hour: **\$1.75**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular hourly rate after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics)

LOCKSMITH

Locksmith

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$20.39**

Supplemental Benefit Rate per Hour: **\$6.12**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular hourly rate after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics)

MAINTENANCE WORKER, MACHINERY

Mechanic

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: **\$33.00**

Supplemental Benefit Rate per Hour: **\$6.12**

Overtime

Time and one half the regular rate after an 8 hour day.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

Time and one half the regular hourly rate after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics)

MEDICAL WASTE REMOVAL

Driver

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$20.47

Supplemental Benefit Rate per Hour: \$11.32

Helper

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$16.72

Supplemental Benefit Rate per Hour: \$11.32

Tractor Trailer Driver

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$22.97

Supplemental Benefit Rate per Hour: \$11.32

Overtime Description

Time and one half the regular hourly rate after an 8 hour day or after 40 hours in any work week. The seventh day of work in a workweek is paid at double time the regular hourly rate. Time and one half the regular hourly rate for work on a holiday plus days pay for below paid holidays.

Paid Holidays

President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Vacation

1 year of service but less than five years.....ten (10) days
5 years of service but less than ten years.....fifteen (15) days
10 years of service.....sixteen (16) days
11 years.....seventeen (17) days
12 years.....eighteen (18) days
13 years.....nineteen (19) days
14 years.....twenty (20) days

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

20 years.....	twenty-one (21) days
21 years.....	twenty-two (22) days
22 years.....	twenty-three (23) days
23 years.....	twenty-four (24) days
24 years.....	twenty-five (25) days
Plus 5 Personal Days	

(Local #813)

MOVER - OFFICE FURNITURE AND EQUIPMENT

Heavy and Tractor Trailer Truck Driver

Tractor-trailer combination or a truck with a capacity of at least 26,000 pounds Gross Vehicle Weight (GVW)

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$23.52

Supplemental Benefit Rate per Hour: \$5.37

Light Truck Driver

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$18.17

Supplemental Benefit Rate per Hour: \$5.37

Laborer and Freight, Stock, and Material Mover, Hand

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$15.52

Supplemental Benefit Rate per Hour: \$5.37

Packer and Packager, Hand

Packs, wraps and labels office furniture and equipment and loads it onto dollies and into elevators.

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$11.87

Supplemental Benefit Rate per Hour: \$5.37

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular hourly rate after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$230 PREVAILING WAGE SCHEDULE

REFUSE REMOVER

Refuse Remover

Effective Period: 7/1/2016 - 6/30/2017

Wage Rate per Hour: \$28.32

Supplemental Benefit Rate per Hour: \$5.37

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular hourly rate after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics)

SECURITY GUARD (ARMED)

Security Guard (Armed)

Effective Period: 7/1/2016 - 12/31/2016

Wage Rate per Hour: \$28.75

Supplemental Benefit Rate per Hour: \$5.48

Supplemental Note: for new employee 0-30 days of employment - \$4.76; for new employee 31-120 days of employment - \$4.93; for new employee 121 days - 2 years of employment - \$5.04

Effective Period: 1/1/2017 - 6/30/2017

Wage Rate per Hour: \$29.00

Supplemental Benefit Rate per Hour: \$5.66

Supplemental Note: for new employee 0-30 days of employment - \$4.94; for new employee 31-120 days of employment - \$5.11; for new employee 121 days - 2 years of employment - \$5.22

Months of employment shall be defined as an Employee's length of service with the Employer or at the Facility, whichever is greater.

Overtime Description

If President's Day is not observed, then the employer may substitute another holiday not listed below. If an employer observes a holiday not listed they may substitute said holiday with one on the list.

A guard is eligible for Paid Holidays after one year of continuous employment.

A guard who works a holiday is paid the regular rate plus receives the paid holiday.

Supplemental Benefits shall be paid for each hour paid, up to forty (40) paid hours per week.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day
Personal Day

Vacation

Months on payroll	Vacation with Pay
6	3 days
12	1 week
24	2 weeks
60	3 weeks
180	4 weeks
300	5 weeks

Sick Leave

Employees accrue paid sick leave at the rate of one (1) sick day for every six (6) months worked, up to a maximum of six (6) days a year.

(Local #32B/J)

SECURITY GUARD (UNARMED)

Security Guard (Unarmed) 0 - 6 months

Effective Period: 7/1/2016 - 12/31/2016

Wage Rate per Hour: \$14.00

Supplemental Benefit Rate per Hour: \$5.04

Supplemental Note: for new employee 0-30 days of employment - \$4.76; for new employee 31-120 days of employment - \$4.93

Effective Period: 1/1/2017 - 6/30/2017

Wage Rate per Hour: \$14.40

Supplemental Benefit Rate per Hour: \$5.22

Supplemental Note: for new employee 0-30 days of employment - 4.94; for new employee 31-120 days of employment - \$5.11

Security Guard (Unarmed) 7 - 12 months

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: \$14.30
Supplemental Benefit Rate per Hour: \$5.04

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: \$14.40
Supplemental Benefit Rate per Hour: \$5.22

Security Guard (Unarmed) 13 - 18 months

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: \$14.80
Supplemental Benefit Rate per Hour: \$5.04

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: \$15.25
Supplemental Benefit Rate per Hour: \$5.22

Security Guard (Unarmed) 19 - 24 months

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: \$15.30
Supplemental Benefit Rate per Hour: \$5.04

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: \$15.75
Supplemental Benefit Rate per Hour: \$5.22

Security Guard (Unarmed) 25 - 30 months

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: \$15.80
Supplemental Benefit Rate per Hour: \$5.48

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: \$16.25
Supplemental Benefit Rate per Hour: \$5.66

Security Guard (Unarmed) 31 months or more

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: \$16.45
Supplemental Benefit Rate per Hour: \$5.48

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: \$16.90
Supplemental Benefit Rate per Hour: \$5.66

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

Months of employment shall be defined as an Employee's length of service with the Employer or at the Facility, whichever is greater.

Overtime Description

If President's Day is not observed, then the employer may substitute another holiday not listed below. If an employer observes a holiday not listed they may substitute said holiday with one on the list. A guard is eligible for Paid Holidays after one year of continuous employment. A guard who works a holiday is paid the regular rate plus receives the paid holiday.

Supplemental Benefits shall be paid for each hour paid, up to forty (40) paid hours per week.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day
Personal Day

Vacation

Months on payroll	Vacation with Pay
6	3 days
12	1 week
24	2 weeks
60	3 weeks
180	4 weeks
300	5 weeks

Sick Leave

Employees accrue paid sick leave at the rate of one (1) sick day for every six (6) months worked, up to a maximum of six (6) days a year.

(Local #32B/J)

WINDOW CLEANER

Window Cleaner

Effective Period: 7/1/2016 - 12/31/2016

Wage Rate per Hour: \$28.10

Supplemental Benefit Rate per Hour: \$11.00

Effective Period: 1/1/2017 - 6/30/2017

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$28.70**
Supplemental Benefit Rate per Hour: **\$11.56**

Power Operated Scaffolds, Manual Scaffolds, and Boatswain Chairs

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: **\$30.66**
Supplemental Benefit Rate per Hour: **\$11.00**

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: **\$31.33**
Supplemental Benefit Rate per Hour: **\$11.56**

Window Cleaner Apprentice (0 - 3 months)

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: **\$20.73**
Supplemental Benefit Rate per Hour: **None**

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: **\$21.24**
Supplemental Benefit Rate per Hour: **None**

Window Cleaner Apprentice (4 - 7 months)

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: **\$22.41**
Supplemental Benefit Rate per Hour: **\$11.00**

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: **\$22.96**
Supplemental Benefit Rate per Hour: **\$11.56**

Window Cleaner Apprentice (8 - 11 months)

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: **\$23.75**
Supplemental Benefit Rate per Hour: **\$11.00**

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: **\$24.34**
Supplemental Benefit Rate per Hour: **\$11.56**

Window Cleaner Apprentice (12 - 15 months)

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: **\$25.12**
Supplemental Benefit Rate per Hour: **\$11.00**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: \$25.74
Supplemental Benefit Rate per Hour: \$11.56

Window Cleaner Apprentice (16 - 17 months)

Effective Period: 7/1/2016 - 12/31/2016
Wage Rate per Hour: \$26.47
Supplemental Benefit Rate per Hour: \$11.00

Effective Period: 1/1/2017 - 6/30/2017
Wage Rate per Hour: \$27.12
Supplemental Benefit Rate per Hour: \$11.56

Months of employment shall be defined as an Employee's length of service with the Employer or at the Facility, whichever is greater.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Time and one half the regular rate for work on a holiday plus the day's pay.

Paid Holidays

New Year's Day
Martin Luther King Jr. Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day
Personal Day

Vacation

After 7 months but less than 1 year of service.....five (5) days
1 year but less than 5 years of service.....ten (10) days
5 years of service but less than 15 years of service.....fifteen (15) days
15 years of service but less than 21 years of service.....twenty (20) days
21 years.....twenty-one (21) days
22 years.....twenty-two (22) days
23 years.....twenty-three (23) days
24 years.....twenty-four (24) days
25 years or more of service.....twenty-five (25) days
Plus 1 day per year for medical visit

SICK LEAVE:

10 days after one year worked. Unused sick days to be paid in cash.

Local #32 B/J)

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Leonard A. Mancusi
SENIOR ASSISTANT COMPTROLLER

THE CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
1 CENTRE STREET ROOM 1120
NEW YORK, N.Y. 10007-2341

TELEPHONE: (212) 669-3622
FAX NUMBER: (212) 669-8495

ALAN G. HEVESI
COMPTROLLER

MEMORANDUM

November 6, 2000

To Agency Chief Contracting Officers

From: Leonard A. Mancusi 

Re: Security at Construction Sites
.....

Prior to the enactment of Administrative Code §6-109, security guards on construction sites were not subject to prevailing wages. Security guards under the New York State labor law are covered under §230 which provides that prevailing wages are to be paid for security guards in existing buildings. §6-109 of the Administrative Code which was enacted in 1996 closed this loophole by including all security guards working pursuant to a city contract as a prevailing wage trade.

Although some construction contract boilerplate language has been amended to include §6-109, sub-contractors performing security services have advised us that they were not aware of this provision and, since traditionally, security guards were not a covered trade on construction sites, and they were not advised by a prime contractor that they would have to pay prevailing wages, they have not been doing so.

To avoid the possibility of issuing stop payments against prime contractors for the failure of their security service sub-contractors to pay

prevailing wages, we suggest that you write to all your existing security guard sub-contractors and their primes and in the future, upon approval of a security guard sub-contractor, advise the contractors of their obligation to pay prevailing wages under §6-109 of the Administrative Code.

As always, your cooperation is appreciated.

LAM:er
ACCO.SECURITY AT SITES

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**Department of
Design and
Construction**

**INFRASTRUCTURE DIVISION
BUREAU OF DESIGN**

VOLUME 2 OF 3

Contractor.

Dated _____, 20____

**APPROVED AS TO FORM
CERTIFIED AS TO LEGAL AUTHORITY**

Acting Corporation Counsel

Dated _____, 20____



Department of
Design and
Construction

INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

VOLUME 2 OF 3

PROJECT ID: HWD10105

ATLANTIC AVENUE SAFETY IMPROVEMENTS

FROM GEORGIA AVENUE TO LOGAN STREET

INCLUDING SEWER, WATER MAIN, STREET LIGHTING AND
TRAFFIC SIGNAL WORK

Together With All Work Incidental Thereto

BOROUGH OF BROOKLYN
CITY OF NEW YORK

Tully Construction Co., Inc.
Contractor.

Dated May 22, 2017

APPROVED AS TO FORM
CERTIFIED AS TO LEGAL AUTHORITY

[Signature]

Acting Corporation Counsel

[Signature]
1-9-2017

Dated January 9, 2017



**Department of
Design and
Construction**

**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

30-30 THOMSON AVENUE
LONG ISLAND CITY, NEW YORK 11101-3045
TELEPHONE (718) 391-1000
WEBSITE www1.nyc.gov/site/ddc/index.page

VOLUME 3 OF 3

**SCHEDULE A
SPECIFICATIONS AND
REVISIONS TO STANDARD SPECIFICATIONS**

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND
REQUIRED FOR:

PROJECT ID: HWD10105

ATLANTIC AVENUE SAFETY IMPROVEMENTS

FROM GEORGIA AVENUE TO LOGAN STREET

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING AND
TRAFFIC SIGNAL WORK**

Together With All Work Incidental Thereto

**BOROUGH OF BROOKLYN
CITY OF NEW YORK**

FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY

HENNINGSON, DURHAM AND RICHARDSON, INC

NOVEMBER 1, 2016

NYS DOT PIN X761.15

Fed. Aid Project No. _____

Bid Opening 11:00 A.M. on

Location 1st Floor Bid Room, 30-30 Thomson Ave., Long Island City, N.Y. 11101



97-077

SPECIFICATIONS AND STANDARDS OF NEW YORK CITY

The following New York City Department of Transportation (NYCDOT) reference documents are available on-line at:

<http://www1.nyc.gov/site/ddc/resources/publications.page> or for purchase between 9:00 A.M. and 3:00 P.M. at 55 Water St., Ground Floor, NYC, N.Y. 10041. Contact: Ms. Vivian Valdez, Tel. (212) 839-9434

1. NYCDOT Standard Highway Specifications, August 1, 2015
2. NYCDOT Standard Highway Details of Construction, July 1, 2010

The following New York City Department of Transportation (NYCDOT) reference documents are available on-line at:

<http://www.nyc.gov/html/dot/html/about/dotlibrary.shtml#spec> or for purchase between 9:00 A.M. and 3:00 P.M. at 55 Water St., Ground Floor, NYC, N.Y. 10041. Contact: Ms. Vivian Valdez, Tel. (212) 839-9434

1. Specifications for furnishing all labor and material necessary and required for the installation, removal or relocation of street lighting equipment in the City of New York, 1992.
2. Standard Drawings, Division of Street Lighting
3. Specifications for Traffic Signals and Intelligent Transportation Systems Construction and Equipment
4. Standard Drawings for Traffic Signals

The following reference documents for New York City Department of Environmental Protection (NYCDEP) are available on-line at:

<http://www1.nyc.gov/site/ddc/resources/publications.page> or for pick up between 8:00 A.M. and 4:00 P.M. at 30-30 Thomson Avenue, 3rd Floor, Division of Infrastructure, Long Island City, N.Y. 11101. Contact: Mr. Nader Soliman, Tel. (718) 391-1179

1. NYCDEP Standard Sewer and Water Main Specifications, July 1, 2014
2. NYCDEP Instructions for Concrete Specifications, Jan. 92
3. NYCDEP General Specification 11-Concrete, November 1991
4. NYCDEP Sewer Design Standards, (September 2007) Revised January 2009

The following reference documents for New York City Department of Environmental Protection (NYCDEP) are available on-line at:

<http://www1.nyc.gov/site/ddc/resources/publications.page> or for pick up between 8:00 A.M. and 4:00 P.M. at 30-30 Thomson Avenue, 3rd Floor, Division of Infrastructure, Long Island City, N.Y. 11101. Contact: Mr. Robert Kuhlmann, Tel. (718) 391-2145

1. NYCDEP Water Main Standard Drawings, November 2010
2. Specifications for Trunk Main Work, July 2014
3. Standards for Green Infrastructure, latest version, available only on-line at:

http://www.nyc.gov/html/dep/html/stormwater/green_infrastructure_standards.shtml

Water main work material specifications are available at the Department of Environmental Protection, 59-17 Junction Boulevard, 3rd Floor Low-Rise Building, Flushing, N.Y. 11373-5108.

Contact: Mr. Tarlock Sahansra, P.E., Tel. (718) 595-5302
E-mail: TSAHANSRA@DEP.NYC.GOV

SPECIFICATIONS AND STANDARDS OF NEW YORK CITY

Standard Specifications and Drawings for New York City Fire Department Communications facilities are available from the FDNY Facilities Management Bureau, Plant Operations Engineering, 316 Sgt. Beers Avenue Cluster 1 Box 16, Fort Totten, N.Y. 11359.
Contact: Mr. Ed Durkin, Tel. (718) 281-3933

Tree Planting Standards of the City of New York Parks & Recreation are available at the following Department of Parks & Recreation website:
<http://www.nycgovparks.org/pagefiles/53/Tree-Planting-Standards.pdf>

SPECIFICATIONS AND STANDARDS OF PRIVATE UTILITIES

The Following reference document for Private Utility Work is available for pick up between 8:30 A.M. and 4:00 P.M. at 30-30 Thomson Avenue, First Floor Bid Procurement Room, L.I.C., N.Y. 11101.

1. CET SPECIFICATIONS AND SKETCHES dated November 2010

SPECIAL NOTICE TO BIDDERS

LONG ISLAND RAIL ROAD WORKS

The Contractor is advised that 28 of LONG ISLAND RAIL ROAD air vents and the ten (10) feet wide center median shall be raised to two (2) feet along Atlantic Avenue from Pennsylvania Avenue to Logan Street. All work shall be performed in conformance with the Contract Drawings.

- (1) The Contractor shall exercise extreme caution and take all necessary precautions in placing sheeting & shielding and excavating to prevent any damage to the existing LONG ISLAND RAIL ROAD subway structures and its appurtenances during construction work throughout the project area. The Contractor shall take full responsibility to protect the said LONG ISLAND RAIL ROAD subway structures and its appurtenances and any damage caused by the Contractor's operations shall be made good by the Contractor to the satisfaction of the Engineer at no additional cost to the City.
- (2) The Contractor shall submit shop drawings to LONG ISLAND RAIL ROAD showing all the details and methods of construction, such as, sheeting & bracing, and shielding including the Contractor's procedure and sequence of construction, supporting and/or protection of the existing LIRR's structures and its appurtenances, with necessary design calculations for approval prior to starting of the construction. The design shall be made by a New York State Licensed Professional Engineer skilled in this type of construction and as further evidenced by the imprint of Professional Engineer's seal and signature on all drawings. The cost of this work shall be deemed included in the price bid for all items of work under this contract.
- (3) Contractor shall coordinate with **NYCDOT/Bridges project HBK1201: Rehabilitation Atlantic Avenue Bridge over LIRR Atlantic Branch from Atlantic Avenue & Georgia Avenue to the West**. This project is scheduled to begin June 2017 and end 2020. Contractor shall coordinate activities at Georgia Avenue and elsewhere to avoid interferences and shall not impede access by other contractors to their work site.
- (4) All LIRR sidewalk emergency exits and personnel entrances for the LIRR tunnel shall be maintained and kept free and clear during construction. Construction phasing of sidewalk demolition should include provisions for emergency egress for LIRR passengers and LIRR personnel entrance.

(NO TEXT ON THIS PAGE)

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SCHEDULE A

GENERAL CONDITIONS TO CONSTRUCTION CONTRACT
(INCLUDING GENERAL CONDITIONS RELATED TO ARTICLE 22 – INSURANCE)

PART I. REQUIRED INFORMATION

<p><u>INFORMATION FOR BIDDERS SECTION 26</u> <u>BID SECURITY</u></p> <p>The Contractor shall obtain a bid security in the amount indicated to the right.</p>	<p>Required provided the TOTAL BID PRICE set forth on the Bid Form is \$1,000,000 or more.</p> <p>Certified Check: 5% of Bid Amount or Bond: 10% of Bid Amount</p>
<p><u>INFORMATION FOR BIDDERS SECTION 26</u> <u>PERFORMANCE AND PAYMENT BONDS</u></p> <p>The Contractor shall obtain performance and payment bonds in the amount indicated to the right.</p>	<p>Required for contracts in the amount of \$1,000,000 or more.</p> <p>Performance Security and Payment Security shall each be in an amount equal to 100% of the Contract Price.</p>
<p><u>CONTRACT ARTICLE 14.</u> <u>DATE FOR SUBSTANTIAL COMPLETION</u></p> <p>The Contractor shall substantially complete the Work in the number of calendar days indicated to the right.</p>	<p>See Page SA-4</p>
<p><u>CONTRACT ARTICLE 15.</u> <u>LIQUIDATED DAMAGES</u></p> <p>If the Contractor fails to substantially complete the Work within the time fixed for substantial completion plus authorized time extensions or if the Contractor, in the sole determination of the Commissioner, has abandoned the Work, the Contractor shall pay to the City the amount indicated to the right.</p>	<p>\$7,000.00 for each consecutive calendar day over the Completion Time as set forth for each Task Order</p>
<p><u>CONTRACT ARTICLE 17.</u> <u>SUB-CONTRACTOR</u></p> <p>The Contractor shall not make subcontracts totaling an amount more than the percentage of the total Contract price indicated to the right.</p>	<p>Not to exceed <u>49</u> % of the Contract price</p>
<p><u>CONTRACT ARTICLE 21.</u> <u>RETAINAGE</u></p> <p>The Commissioner shall deduct and retain until the substantial completion of the Work the percent value of the Work indicated to the right.</p>	<p><u>0</u> % of the value of the Work</p>

<p align="center"><u>CONTRACT ARTICLE 22.</u></p> <p align="center">(Per Directions Below)</p>	<p>See pages SA-5 through SA-13</p>
<p align="center"><u>CONTRACT ARTICLE 24.</u> <u>DEPOSIT GUARANTEE</u></p> <p>As security for the faithful performance of its obligations, the Contractor, upon filing its requisition for payment on Substantial Completion, shall deposit with the Commissioner a sum equal to the percentage of the Contract price indicated to the right.</p>	<p>1% of Contract price</p>
<p align="center"><u>CONTRACT ARTICLE 24.</u> <u>PERIOD OF GUARANTEE</u></p> <p>Periods of maintenance and guarantee other than the period set forth in Article 24.1 are indicated to the right.</p>	<p>Twenty-Four (24) Months for Tree Planting.</p>
<p align="center"><u>CONTRACT ARTICLE 74.</u> <u>STATEMENT OF WORK</u></p> <p>The Contractor shall furnish all labor and materials and perform all Work in strict accordance with the Contract Drawings, Specifications, and all Addenda thereto.</p>	<p>See Contract Article 74</p>
<p align="center"><u>CONTRACT ARTICLE 75.</u> <u>COMPENSATION TO BE PAID TO CONTRACTOR</u></p> <p>The City shall pay and the Contractor shall accept in full consideration for the performance of the Contract, subject to additions and deductions as provided in Contract Article 75, this said sum being the amount at which the Contract was awarded to the Contractor at a public letting thereof, based upon the Contractor's bid for the Contract.</p>	<p>See Contract Article 75</p>
<p align="center"><u>CONTRACT ARTICLE 78.</u> <u>PARTICIPATION BY MINORITY-OWNED AND</u> <u>WOMEN-OWNED BUSINESS ENTERPRISES IN</u> <u>CITY PROCUREMENT</u></p>	<p align="center">EXEMPT</p> <p>FHWA DBE goal of 13%, see page TF-H1, herein this book Volume 3 of 3</p>

<p align="center"><u>STANDARD HIGHWAY SPECIFICATIONS</u> <u>SECTION 6.40</u> <u>LIQUIDATED DAMAGES FOR</u> <u>ENGINEER'S FIELD OFFICE</u></p> <p>If the Contractor fails to satisfactorily provide the field office and all equipment specified in Section 6.40 - Engineer's Field Office, and/or if a cited deficiency exceed seventy two (72) hours after notice from the Engineer in writing, or is permitted to recur, liquidated damages will be assessed in the amount specified herein for each subsequent calendar day or part thereof that a cited deficiency resulting in nonpayment, as described in Section 6.40.5, is not corrected.</p>	<p>\$ <u>500.00</u> for each calendar day of deficiency</p>
<p align="center"><u>STANDARD HIGHWAY SPECIFICATIONS</u> <u>SECTION 6.70</u> <u>LIQUIDATED DAMAGES FOR</u> <u>MAINTENANCE AND PROTECTION OF TRAFFIC</u></p>	<p>\$ <u>250.00</u> for each instance of failure to comply with the Maintenance and Protection of Traffic requirements within three (3) hours after written notice from the Engineer</p> <p>\$ <u>500.00</u> for each and every hour of failing to open the entire width of roadway to traffic the morning following a night/weekend work operation</p>
<p align="center"><u>STANDARD HIGHWAY SPECIFICATIONS</u> <u>SECTION 7.13</u> <u>LIQUIDATED DAMAGES FOR</u> <u>MAINTENANCE OF SITE</u></p> <p>If the Contractor fails to comply, within three (3) consecutive hours after written notice from the Engineer, with the requirements of Section 7.13 - Maintenance of Site, the Contractor shall pay to the City of New York, until such notice has been complied with or rescinded, the sum specified above per calendar day, for each instance of such failure, as liquidated damages and not as a penalty, for such default.</p>	<p>\$ <u>1,400.00</u> for each calendar day, for each occurrence</p>

Date for Substantial Completion (Reference: Article 14)

The Contractor shall substantially complete the Work within the Final Contract Duration determined in accordance with the terms and conditions set forth herein.

The Base Contract Duration for this project is 730 consecutive calendar days (“ccds”).

The Final Contract Duration shall be the Base Contract Duration when a check mark is indicated before the word “NO”, below, and shall be the Base Contract Duration adjusted by the table set forth below when a check mark is indicated before the word “YES”, below.

YES NO

When the Final Contract Duration is indicated above to be adjusted by the table below, the table may increase the Base Contract Duration depending on the date of scheduled substantial completion to avoid a scheduled substantial completion of the Work during the winter months. The date of scheduled substantial completion shall be determined by adding the Base Contract Duration to the date specified to commence work in the written Notice to Proceed. The Final Contract Duration shall then be determined as follows:

- (a) Find the row that corresponds to the month of substantial completion based on the Base Contract Duration added to the date specified to commence work in the written Notice to Proceed.
- (b) Find the number of days to be added to the Base Contract Duration in the table below. Add that number of days to the Base Contract Duration to obtain the Final Contract Duration in consecutive calendar days.

Month of Substantial Completion based on the Base Contract Duration	Number of Days of adjustment
January	150
February	120
March	90
April	60
May	30
June	0
July	0
August	0
September	0
October	0
November –December 15	0
December 16 – December 31	180

In addition, should Item No. 9.30, “Storm Water Pollution Prevention,” exist in the Contract and the required Storm Water Pollution Prevention Plan (SWPPP) does not conform to NYSDEC’s recommended Standards, an additional 60 ccd shall be added to the above Final Contract Duration.

(GENERAL CONDITIONS RELATING TO ARTICLE 22 – INSURANCE)

PART II. TYPES OF INSURANCE, MINIMUM LIMITS AND SPECIAL CONDITIONS

Note: All certificate(s) of insurance submitted pursuant to Contract Article 22.3.3 must be accompanied by a Certification by Broker consistent with Part III below and include the following information:

- For each insurance policy, the name and NAIC number of issuing company, number of policy, and effective dates;
- Policy limits consistent with the requirements listed below;
- Additional insureds or loss payees consistent with the requirements listed below; and
- The number assigned to the Contract by the City (in the “Description of Operations” field).

Insurance indicated by a blackened box (■) or by X in a □ to left will be required under this contract

Types of Insurance (per Article 22 in its entirety, including listed paragraph)	Minimum Limits and Special Conditions
<p>■ Commercial General Liability Art. 22.1.1</p>	<p>The minimum limits shall be \$ <u>3,000,000</u> per occurrence and \$ <u>6,000,000</u> per project aggregate applicable to this Contract.</p> <p>Additional Insureds:</p> <ol style="list-style-type: none"> 1. City of New York, including its officials and employees, with coverage at least as broad as ISO Form CG 20 10 and CG 20 37, and 2. All person(s) or organization(s), if any, that Article 22.1.1(b) of the Contract requires to be named as Additional Insured(s), with coverage at least as broad as ISO Form CG 20 26. The Additional Insured endorsement shall either specify the entity’s name, if known, or the entity’s title (e.g., Project Manager), 3. All person(s) or organization(s) serving in the functions defined in Article 2, such as: Engineer, Architect, Project Manager, Resident Engineer, etc. 4. New York State, including its officials and employees, 5. Federal Highway Administration (FHWA), its officials and employees. 6. The Long Island Railroad (LIRR), Metropolitan Transportation Authority (MTA), its subsidiaries and affiliated companies. The Contractor shall furnish two (2) certificates of insurance (see pages SA-14 and SA-15) to the LIRR, Attention: MTA Risk and Insurance Management, Long Island Rail Road, 2 Broadway, New York, New York 10004. 7. National Grid

- Workers' Compensation Art. 22.1.2
- Disability Benefits Insurance Art. 22.1.2
- Employers' Liability Art. 22.1.2
- Jones Act Art. 22.1.3
- U.S. Longshoremen's and Harbor Workers Compensation Act Art. 22.1.3

Workers' Compensation, Employers' Liability, and Disability Benefits Insurance: Statutory per New York State law without regard to jurisdiction.

Note: The following forms are acceptable: (1) New York State Workers' Compensation Board Form No. C-105.2, (2) State Insurance Fund Form No. U-26.3, (3) New York State Workers' Compensation Board Form No. DB-120.1 and (4) Request for WC/DB Exemption Form No. CE-200. The City will not accept an ACORD form as proof of Workers' Compensation or Disability Insurance.

Jones Act and U.S. Longshoremen's and Harbor Workers' Compensation Act: Statutory per U.S. Law.

Additional Requirements:

- (1) NYCTA & LIRR "OUTSIDE CONTRACT" INSURANCE REQUIREMENTS: Workers' Compensation Insurance (including Employer's Liability Insurance) with limits of not less than \$2,000,000, which limit may be met by a combination of primary and excess insurance meeting the statutory limits of New York State.
- (2) Two (2) certificates of such insurance (see pages SA-14 and SA-15) shall be furnished to the LIRR, Attention: MTA Risk and Insurance Management, Long Island Rail Road, 2 Broadway, New York, New York 10004.
- (3) Two (2) certificates of such insurance shall be furnished to the Director, Risk Management, MTA Risk and Insurance Management Standards, Enforcement and Claims Unit, 2 Broadway, 21st Floor, New York, NY 10004.

<input type="checkbox"/> Builders' Risk	Art. 22.1.4	<p>100 % of total value of Work</p> <p>Contractor the Named Insured; the City both an Additional Insured and one of the loss payees as its interests may appear.</p> <p>If the Work does not involve construction of a new building or gut renovation work, the Contractor may provide an installation floater in lieu of Builders Risk insurance.</p> <p>Note: Builders Risk Insurance may terminate upon Substantial Completion of the Work in its entirety.</p>
<input checked="" type="checkbox"/> Commercial Auto Liability	Art. 22.1.5	<p>\$ <u>2,000,000</u> per accident combined single limit</p> <p>If vehicles are used for transporting hazardous materials, the Contractor shall provide pollution liability broadened coverage for covered vehicles (endorsement CA 99 48) as well as proof of MCS 90</p> <p>Additional Insureds:</p> <ol style="list-style-type: none"> (1) City of New York, including its officials and employees, and (2) The Long Island Railroad (LIRR), Metropolitan Transportation Authority (MTA), its subsidiaries and affiliated companies. (3) New York State, including its officials and employees, and, (4) FHWA, including its officials and employees.

<input type="checkbox"/> Contractors Pollution Liability Art. 22.1.6	<p>\$ <u>1,000,000</u> per occurrence \$ <u>2,000,000</u> aggregate</p> <p>Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____</p>
<input type="checkbox"/> Marine Protection and Indemnity Art. 22.1.7(a)	<p>\$ _____ each occurrence \$ _____ aggregate</p> <p>Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____</p>
<input type="checkbox"/> Hull and Machinery Insurance Art. 22.1.7(b)	<p>\$ _____ per occurrence \$ _____ aggregate</p> <p>Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____</p>
<input type="checkbox"/> Marine Pollution Liability Art. 22.1.7(c)	<p>\$ _____ per occurrence \$ _____ aggregate</p> <p>Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____</p>

[OTHER]

Art. 22.1.8

■ Railroad Protection Liability Policy

(ISO-RIMA or equivalent form) approved by Permittor covering the work to be performed at the designated site and affording protection for damages arising out of bodily injury or death, physical damage to or destruction of property, including damage to the Insured's own property and conforming to the following:

- Policy Endorsement CG 28 31 - Pollution Exclusion Amendment is required to be endorsed onto the policy when environmental-related work and/or exposures exist.
- Indicate the Name and address of the Contractor to perform the work, the Contract # and the name of the railroad property where the work is being performed and the Agency Permit.
- Evidence of Railroad Protective Liability Insurance, must be provided in the form of the Original Policy. A detailed Insurance Binder (ACORD or Manuscript Form) will be accepted pending issuance of the Original Policy, which must be provided within 30 days of the Binder Approval.

\$ 2,000,000 per occurrence

\$ 6,000,000 annual aggregate

Named Insureds:

1. The Long Island Railroad (LIRR), New York City Transit Authority (NYCTA), the Manhattan and Bronx Surface Transit Operation Authority (MaBSTOA), the Staten Island Rapid Transit Operation Authority (SIRTOA), MTA Capital Construction Co., the Metropolitan Transportation Authority (MTA) including its subsidiaries and affiliates, and the City of New York (as Owner) and all other indemnified parties.

[OTHER]

Art. 22.1.8

■ Professional Liability

- A. The Contractor's Professional Engineer shall maintain and submit evidence of Professional Liability Insurance in the minimum amount of \$1,000,000 per claim. The policy or policies shall include an endorsement to cover the liability assumed by the Contractor under this Contract arising out of the negligent performance of professional services or caused by an error, omission or negligent act of the Contractor's Professional Engineer or anyone employed by the Contractor's Professional Engineer.
- B. Claims-made policies will be accepted for Professional Liability Insurance. All such policies shall have an extended reporting period option or automatic coverage of not less than two (2) years. If available as an option, the Contractor's Professional Engineer shall purchase extended reporting period coverage effective on cancellation or termination of such insurance unless a new policy is secured with a retroactive date, including at least the last policy year.

[OTHER]

Art. 22.1.8

■ Engineer's Field Office

Section 6.40, Standard Highway Specifications

Fire insurance, extended coverage and vandalism, malicious mischief and burglary, and theft insurance coverage in the amount of \$40,000

[OTHER]

Art. 22.1.8

■ The Following Additional Insurance Must Be Provided:

Umbrella/Excess Liability Insurance - The Contractor shall provide Umbrella/Excess Liability Insurance in the minimum amount of \$10,000,000 per Occurrence and \$10,000,000 in Aggregate. The policy terms and condition should be at least as broad as the underlying policies. The underlying policies should comply with the insurance provision as outlined by the contract. Defense cost should be in addition to the limit of liability. The City of New York, including its officials and employees, should be included as additional insured as respects to the noted project.

SCHEDULE A
(GENERAL CONDITIONS TO CONSTRUCTION CONTRACT)
(GENERAL CONDITIONS RELATING TO ARTICLE 22 – INSURANCE)

PART III. CERTIFICATES OF INSURANCE

All certificates of insurance (except certificates of insurance solely evidencing Workers' Compensation Insurance, Employer's Liability Insurance, and/or Disability Benefits Insurance) must be accompanied by one of the following:

- (1) the Certification by Insurance Broker or Agent on the following page setting forth the required information and signatures;

-- OR --

- (2) copies of all policies as certified by an authorized representative of the issuing insurance carrier that are referenced in such certificate of insurance. If any policy is not available at the time of submission, certified binders may be submitted until such time as the policy is available, at which time a certified copy of the policy shall be submitted.

SCHEDULE A

(GENERAL CONDITIONS TO CONSTRUCTION CONTRACT)

PART IV. ADDRESS OF COMMISSIONER

Wherever reference is made in Article 7 or Article 22 to documents to be sent to the **Commissioner** (e.g., notices, filings, or submissions), such documents shall be sent to the address set forth below or, in the absence of such address, to the **Commissioner's** address as provided elsewhere in this **Contract**.

DDC Director, Insurance Risk Manager

30 – 30 Thomson Avenue, 4th Floor (IDCNY Building)

Long Island City, NY 11101

<input type="checkbox"/> Capital Contract <input type="checkbox"/> Operating Contract <input type="checkbox"/> Entry Permits		Long Island Rail Road CERTIFICATE OF INSURANCE				
AGREEMENT or CONTRACT #:		AGREEMENT or CONTRACT NAME/DESCRIPTION:				
INSURANCE PRODUCER:		CERTIFICATE ISSUANCE DATE:	DATE RECEIVED:			
ADDRESS:		REFERENCE #:				
PHONE #:						
INSURED:		CO LTR	COMPANIES AFFORDING COVERAGE			
ADDRESS:		A	NAIC #			
PHONE #:		B	NAIC #			
		C	NAIC #			
		D	NAIC #			
		E	NAIC #			
		F	NAIC #			
		G	NAIC #			
CERTIFICATE HOLDER: Long Island Railroad/MTA Attention: Risk & Insurance Management ADDRESS: 2 Broadway 21 st Floor New York, NY 10004 PHONE #: (646) 252-1429						
COVERAGES (See Notes 1 and 2)						
CO LTR	TYPE OF INSURANCE	POLICY NUMBER	EFFECTIVE DATE	EXPIRATION DATE	LIMITS	
	GENERAL LIABILITY <input type="checkbox"/> Commercial General Liability Form <input type="checkbox"/> Underground Expl. & Collapse Hazard <input type="checkbox"/> Products/Completed Operations <input type="checkbox"/> Contractual Liability <input type="checkbox"/> Independent Contractors <input type="checkbox"/> Fifty Foot Exclusion Removed <input type="checkbox"/> Personal & Advertising Injury <input type="checkbox"/> SIR/Deductible \$ _____				BI & PD COMBINED OCCURRENCE	\$
					GENERAL AGGREGATE	\$
					PRODUCTS/COMPLETED OPERATIONS AGGREGATE	\$
					OTHER	\$
	AUTOMOBILE LIABILITY <input type="checkbox"/> Any Auto <input type="checkbox"/> Owned Autos <input type="checkbox"/> Hired Autos <input type="checkbox"/> Non-Owned Autos				BODILY INJURY (Per Occurrence)	\$
					PROPERTY DAMAGE (Per Occurrence)	\$
					BODILY INJURY/PROPERTY DAMAGE COMBINED SINGLE LIMIT (Each Accident)	\$
	GARAGE LIABILITY <input type="checkbox"/> Any Auto				AUTO ONLY EACH ACCIDENT	\$
					OTHER THAN AUTO ONLY	EA ACC \$
				AGG \$		
	EXCESS LIABILITY <input type="checkbox"/> Umbrella Form <input type="checkbox"/> Other Than Umbrella Form <input type="checkbox"/> SIR/Deductible \$ _____				EACH OCCURRENCE	\$
					AGGREGATE	\$
	WORKER'S COMPENSATION AND EMPLOYER'S LIABILITY <input type="checkbox"/> USLH <input type="checkbox"/> Jones Act <input type="checkbox"/> "All States" Coverage				<input type="checkbox"/> STATUTORY LIMITS	
					EMPLOYER'S LIABILITY	\$
	PROFESSIONAL LIABILITY <input type="checkbox"/> Includes Pollution Liability <input type="checkbox"/> Deductible \$ _____					\$
	OTHER: _____					\$
	OTHER: _____					\$
	OTHER: _____					\$
EVIDENCE OF RAILROAD PROTECTIVE LIABILITY AND/OR BUILDER'S RISK INSURANCE, WHEN APPLICABLE, REQUIRES SUBMISSION OF THE ORIGINAL POLICY. THE ORIGINAL BINDER(S) WILL BE ACCEPTED, PENDING ISSUANCE OF THE ORIGINAL POLICY(S). <i>Revised 8/09</i>						

CERTIFICATE OF INSURANCE

LIRR

(Continued) Page 2

LIABILITY COVERAGES:

ADDITIONAL INSUREDS (See Note 3) Check all that apply
 Coverage: General Liability, Garage Liability, Excess/Umbrella Liability
 Contractor's Pollution Liability, Pollution Legal Liability, etc.

For All Long Island Rail Road Agreements:

- Long Island Rail Road (LIRR), Metropolitan Transportation Authority (MTA), and its subsidiaries and affiliates and New York & Atlantic Railway Company (when applicable).

Additional Indemnitees Required on Long Island Rail Road Agreements, depending on Location of Work:

- NJ Transit Corporation/NJ Transit Rail Operations, Inc.
- National Railroad Passenger Corp. (Amtrak)
- Consolidated Rail Corporation
- CSX Transportation Inc.
- Triborough Bridge & Tunnel Authority (B&T)
- Port Authority of NY & NJ

Other _____

- ADDITIONAL NAMED INSUREDS, when applicable**

PROPERTY COVERAGES:

(See Note 3) Check all that apply

- ADDITIONAL NAMED INSUREDS/LOSS PAYEE**
Property, Builder's Risk, etc.

- LOSS PAYEE**

Coverage: Crime Insurance, Valuable Papers

For all Long Island Railroad Agreements

- Long Island Rail Road (LIRR), Metropolitan Transportation Authority (MTA), and its subsidiaries and affiliates and New York & Atlantic Railway Company (when applicable).

Additional Indemnitees Required on Long Island Rail Road Agreements, depending on Location of Work:

- NJ Transit Corporation/NJ Transit Rail Operations, Inc.
- National Railroad Passenger Corp. (Amtrak)
- Consolidated Rail Corporation
- CSX Transportation Inc.
- Triborough Bridge & Tunnel Authority (B&T)
- Port Authority of NY & NJ

Other _____

NOTE 1: The subscribing insurance company(s), authorized to do business in the State of New York, certifies that insurance of the kinds and types and for limits of liability herein stated, covering the Agreement/Contract herein designated, has been procured by and furnished on behalf of the Insured and is in full force and effect for the period listed on the front of this Certificate of Insurance. In addition, the subscribing insurance company(s) certifies that the insurance limits for General Liability Insurance are not amended by deductible clauses of any nature except as has been disclosed to and approved by the Long Island Rail Road; and that coverage is afforded for the Insured's obligations under that provision of the contract providing for indemnification of the Indemnified Parties, including the Long Island Rail Road, named therein. When applicable, the subscribing insurance company(s) certifies that: any exclusion applying to construction or demolition operations on or within fifty (50) feet of a railroad (stations, yards, tracks, etc.) has been removed; and any employer liability exclusion which may otherwise operate to exclude claims for bodily injury asserted by an employee of an additional insured has been removed.

NOTE 2: The subscribing insurance company(s) shall endeavor that no policy referred to herein shall be changed or canceled until thirty (30) days written notice has been sent to the following address: Long Island Rail Road c/o MTA Risk and Insurance Management Department, 2 Broadway, 21st Floor, New York, NY 10004.

NOTE 3: All references to Additional Named Insureds and Additional Insureds include those entities' directors, officers, employees, partners, agents, subsidiaries and affiliates.

NOTE 4: This certificate is issued to the Certificate Holder in consideration of the Agreement/Contract entered into with the named insured. It is understood and agreed that the certificate holder relies on the certificate as basis for continuing such Agreement/Contract with the name insured.

AUTHORIZED INSURER/PRODUCER _____

BY _____

(signature of authorized Insurer/Producer)

TITLE _____

STATE OF _____)
) s.s.
 COUNTY OF _____)

On this _____ day of _____, 20____, before me personally came _____, to me known, who being duly sworn, did depose and say that he/she resides in _____, that he/she is the _____ of the corporation and described in and which executed the foregoing Certificate of Insurance, that he/she is fully authorized to execute the foregoing Certificate of Insurance.

 (Notary Public)

CERTIFICATES OF INSURANCE MUST BE COMPLETED BY AUTHORIZED INSURANCE REPRESENTATIVES ONLY.

Revised 8/09

(NO TEXT ON THIS PAGE)

REVISIONS TO STANDARD SPECIFICATIONS

NOTICE

The Specification Bulletin(s) ("SB(s)") contained in this Section (R-Pages) may consist of revisions to the following Standard Specifications:

- New York City Department of Transportation ("NYC DOT") Standard Highway Specifications, dated 8/1/2015;
- New York City Department of Environmental Protection ("NYC DEP") Standard Sewer and Water Main Specifications, dated 7/1/2014; and
- NYC DEP Specifications for Trunk Main Work, dated 7/2014.

The SB(s) modify and supersede portions of the applicable Standard Specifications. The provisions contained in this Contract's I-Pages, S-Pages and SW-Pages may further modify the applicable Standard Specifications.

The following SB(s) are included as part of this contract:

- SB 16-001 – REVISIONS TO THE NYC DOT STANDARD HIGHWAY SPECIFICATIONS.
- SB 16-002 – REVISIONS TO THE NYC DEP STANDARD SEWER AND WATER MAIN SPECIFICATIONS.
- SB 17-001 – UV CURED-IN-PLACE-PIPE (CIPP) LINING METHOD
- SB 17-002 – RODENT AND WATERBUG PEST CONTROL
- SB 17-003 – ENGINEERS FIELD OFFICE
- SB 17-004 – FIRE DEPARTMENT FACILITIES
- SB 17-005 – DIGITAL PHOTOGRAPHS
- SB 17-006 – RECORDS OF SUBSURFACE STRUCTURES

(NO TEXT ON THIS PAGE)



Department of Design and Construction

SPECIFICATION BULLETIN

SB

16-001

Title: REVISIONS TO NYC DOT STANDARD HIGHWAY SPECIFICATIONS

Prepared:

6/29/2016

Richard Jones, P.E. CWI
Date
Director, Specifications – Infrastructure Design

Approved:

6/29/2016

Mohsen Zargareh, P.E.
Date
Assistant Commissioner – Infrastructure Design

APPLICABILITY:

- This Specification Bulletin (SB) is effective for projects advertised on or after 7/11/16.

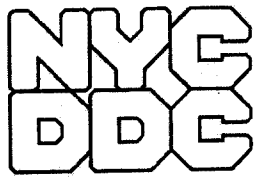
SUPERSEDEENCE:

- This SB supersedes the following SBs: **NONE**

REVISIONS TO THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION STANDARD HIGHWAY SPECIFICATIONS VOLUME 1 OF 2, DATED 8/1/15:

All references contained below are to the New York City Department of Transportation Standard Highway Specifications, Dated August 1, 2015. Said Standard Highway Specifications are hereby revised as follows:

- a) Refer to Page 3, Subsection 1.06.3;
Delete the third paragraph;
Substitute the following new paragraph:
"Any doubt as to the meaning of this contract or the specifications thereof, or any obscurity as to the wording of them, or any discrepancy between them, or any discrepancy between figures and drawings will be explained by the Engineer."
- b) Refer to Page 5, Subsection 1.06.8;
Delete the words "tentative" wherever it occurs in the last paragraph.
- c) Refer to Page 17, Subsection 1.06.23.(G), last paragraph;
Delete the word "asbestos" wherever it occurs.
- d) Refer to Page 26, Subsection 1.06.29, line number four (4);
Delete the words and punctuation mark ", and at the prices fixed herein" in its entirety.



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BULLETIN**

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16-001

Title: REVISIONS TO NYC DOT STANDARD HIGHWAY SPECIFICATIONS

- e) Refer to Page 41 Subsection 1.06.48.(C), 2nd paragraph, 1st line;
Delete from the first line starting from "have maximum grade of one (1) vertical on three (3) horizontal", in its entirety;
Substitute the following:
"have a maximum grade of one (1) vertical on twelve (12) horizontal, for pedestrian ramp and one (1) vertical on six (6) horizontal, for driveway ramp".
- f) Refer to Page 87, Subsection 2.18.3(A), 4th paragraph;
Change "." to "," after "... and Appeals";
Add the following words: "and the health standards of OSHA of the U.S. Department of Labor."
- g) Refer to Page 104, Subsection 3.01.3.(C).1.(c), 4th paragraph;
Delete the words "to a maximum of 70%"
- h) Refer to Page 120, Subsection 3.05.5.(A), 2nd Table 3.05-V;
Delete the sentence: "Concrete of Type IA, IIA and IIIA shall have an air entrainment of 4 to 7 percent when the coarse aggregate is 1 1/2" stone and 5 to 7 percent when the coarse aggregate is 3/4" stone, with 6.5 percent desired in either case."
Substitute the following:
"Concrete of classes shown in Table 3.05-II shall have an air entrainment of 4 to 7 percent for size 357 coarse aggregate and 5 to 7 percent for size 67 or 57 aggregate, with 6.5 percent desired in either case. If concrete is pumped, air entrainment shall be measured after the pump."
- i) Refer to Page 135, Subsection 3.05.9, 4th paragraph;
Add the following words to the end of the 4th paragraph: "Dosing of accelerators and retarders shall be per the manufacturer's published recommendations. Addition of an accelerator or retarder per this subsection will not require a separate mix design, unless requested by the Engineer."
- j) Refer to Page 192, Subsection 4.06.12;
Delete the Subsection 4.06.12, in its entirety and substitute the words "4.06.12. (NO TEXT)." The use of rubble aggregate will not be permitted.
- k) Refer to Page 282, Subsection 5.02.2.(C), 2nd paragraph;
Add the following words: "6 in x 12 in" after "At least four (4)"



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- l) Refer to Page 282, Subsection 5.02.2.(C), 2nd paragraph;
Delete the sentence: "Curing boxes shall be furnished in good operating condition, capable of maintaining cylinders under water at a curing temperature of 72°F. ±5°F."

Substitute the following:

"Curing boxes meeting the requirements of ASTM C31 and C511 shall be furnished in good operating condition, and shall maintain cylinders under water at a curing temperature of 73.5°F ±3.5°F. Curing boxes with rusted or corroded interior surfaces shall not be used."

**REVISIONS TO THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION
STANDARD HIGHWAY SPECIFICATIONS VOLUME 2 OF 2, DATED 8/1/15:**

No Changes.

(NO TEXT THIS PAGE)



**Department of
Design and
Construction**

**SPECIFICATION
BULLETIN**

SB

16-002

Title: REVISIONS TO THE NYC DEP STANDARD SEWER AND WATER MAIN SPECIFICATIONS

Prepared:

10/11/2016

Richard Jones, P.E. CWI
Director, Specifications – Infrastructure Design

Approved:

10/11/2016

Mohsen Zargarelahi, P.E.
Assistant Commissioner – Infrastructure Design

APPLICABILITY:

- This Specification Bulletin (SB) is effective for projects advertised on or after 11/14/16.

SUPERSEDEENCE:

- This SB supersedes the following SBs: **NONE**

ATTACHMENTS:

- **ATTACHMENT 1:** Revised Section 40.05 – SHEETING AND BRACING
Pages A1-1 through A1-7
- **ATTACHMENT 2:** Revised Section 70.91 – SHEETING
Pages A2-1 through A2-3

REVISIONS TO THE NEW YORK CITY DEPARTMENT OF ENVIROMENTAL PROTECTION STANDARD SEWER AND WATER MAIN SPECIFICATIONS, DATED 7/1/14:

All references contained below are to the New York City Department of Environmental Protection Standard Sewer and Water Main Specifications, Dated July 1, 2014. Said Standard Sewer and Water Main Specifications are hereby revised as follows:

- Refer** to Page III-6, Subsection 30.03.1;
Add the text “, C780 Annex 6” to line (2) after the words “C109”.
- Refer** to Pages IV-12 through IV-18, Section 40.05 – SHEETING AND BRACING;
Delete in its entirety the Section;
Substitute the revised Section in Attachment 1 (7 pages).
- Refer** to Page V-60, Subsection 50.72.5.(A);
Delete in its entirety the Subsection;
Substitute the revised Subsection:



**Department of
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BULLETIN**

SB
16-002

**Title: REVISIONS TO THE NYC DEP STANDARD SEWER AND WATER MAIN
SPECIFICATIONS**

- (A) Cement shall be either Type V cement meeting the requirements of ASTM C150 or blended cement containing 8% microsilica that meets the requirements of NYS Department of Transportation Standard Specification 701-03, Type IP (8)".
- d) **Refer** to Page V-65, Subsection 50.72.7.(N);
Delete the second sentence "The test cubes shall be 4"x4"x4"."
- e) **Refer** to Page V-66, Subsection 50.72.7.(N);
Delete the text:
Test cubes will be made and stored in accordance with ASTM C31 and tested in accordance with ASTM C39, except as otherwise modified by the Engineer. Each test will consist of three (3) cubes; one (1) to be tested at seven (7) days, the other two (2) at twenty-eight (28) days.
Substitute the revised text:
"Test cores will be made, cured, and tested in accordance with ASTM C42, except as otherwise modified by the Engineer. Test cores will be made from a shotcrete test board, where the shotcrete thickness matches the placed thickness. Each test will consist of three (3) cores; one (1) to be tested at seven (7) days, the other two (2) at twenty-eight (28) days."
- f) **Refer** to Pages V-65, V-66, and V-67, Subsections 50.72.7.(N), 50.72.9, and 50.72.10;
Delete the text "Test Cube" wherever it appears;
Substitute the text "Test Core".
- g) **Refer** to Page VII-25, Subsection 70.12.5.(B).(2);
Delete the text "and C492";
Substitute the replacement text "or C780 Annex 6"
- h) **Refer** to Page VII-29, Subsection 70.13.4;
Add the text " or C780 Annex 6" after the words "C109".
- i) **Refer** to Pages VII-48 through VII-51, Section 70.91 – SHEETING;
Delete in its entirety the Section;
Substitute the revised Section in Attachment 2 (3 pages).

**SECTION 40.05
SHEETING AND BRACING**

40.05.1 SHEETING AND BRACING

(A) The sides of the trenches and excavations shall be supported by adequate sheeting and properly braced. All sheeting and bracing systems the Contractor elects to use or are ordered by the Engineer or the Department shall comply with these specifications and must receive the approvals stated herein. Timber sheeting and bracing shall be vertical sheeting with rangers and braces or horizontal sheeting supported by vertical steel soldier beams and the necessary bracing.

(B) Where the material to be excavated is of such character as to render it necessary, the sheeting shall be tongued and grooved and driven to such depths below the subgrade as may be directed.

(C) Where the nature of the material encountered or the safety of the adjacent structure render it necessary, the Contractor may resort to the use of steel sheet piling with prestressed bracing or the Contractor may underpin the structure or buildings.

(D) Other sheeting systems may be permitted upon approval of the Department of Design and Construction. (Trench Boxes will not be permitted for use in trenches and excavations that exceed twelve (12) feet in depth. (See **Subsection 40.05.4(E)**.)

(E) In general, sheeting and bracing in trenches and excavations shall be designed and installed so that the sheeting shall not be braced or blocked against any part of the new structure, or manholes, or chambers. When conditions warrant, bracing against such structures may be permitted following the approval of drawings prepared and submitted by a Professional Engineer licensed in the State of New York, showing the assumed design loads and stresses, and details of such bracing.

(F) If, in the opinion of the Engineer, any of the approved temporary or permanent supporting structures are inadequate or unsuitable for the actual conditions in the field, the Engineer may direct the Contractor to strengthen the supporting structures at no additional cost to the City. The Contractor shall be responsible for the sufficiency of all temporary and permanent supporting structures whether or not directed by the Engineer to strengthen them.

(G) Unless otherwise specified in the plans or these specifications, the Contractor shall remove all sheeting and bracing throughout this project as per **Subsection 40.05.7**.

40.05.2 SHEETING LEFT IN PLACE

When sheeting is specifically shown on the plans or specifically described in the specifications or specifically ordered in writing by the Engineer to be left in place, it refers to all sheeting and bracing in trench excavations for water main pipe and sewer conduit including manholes, valves and chambers. Excavations for catch basins, basin connections, house services and other excavations not considered part of the trench excavation for water main pipe and sewer conduit shall have their sheeting and bracing removed entirely.

When sheeting is to be left in place, all elements such as rangers and braces, of the sheeting used, must be left in place, except for such temporary braces that require removal in order to make way for the structure. Where it is necessary to remove such temporary braces, the sheeting shall be rebraced in a manner approved by the Engineer; however, in no case shall the sheeting be braced against the side of the structure unless approved in writing by the Engineer. Where lagging and soldier beams are used, the soldier beams and all the rangers and braces shall also be left in place. Where steel sheeting is used, the rangers and braces shall also be left in place.

When sheeting is to be left in place, the Contractor shall cut sheeting at the elevations ordered in writing by the Engineer; however, in general such cutoffs shall not be less than four (4) feet below the final

grade. Timber sheeting shall be cut off by sawing. Steel sheeting or soldier beams shall be cut off by burning. Breaking off of sheeting will not be permitted. The Contractor shall remove from the trench and away from the site of work, to the Contractor's own place of disposal, all cut sheeting and soldier beams together with all rangers, lagging and braces above the ordered elevation of cut. Where the removal of rangers and braces above the ordered elevation of cut is determined by the Engineer to render the sheeting system unstable, rangers and braces shall be placed prior to cutting at a level below the ordered elevation of cut and left in place.

(A) FOR SHEETING OF WATER MAIN TRENCHES AND EXCAVATIONS

Additional payment will be made for sheeting and bracing that is specifically shown on the plans or specifically described in the specifications or ordered in writing by the Engineer, to be left in place in water main trenches and excavations. Payment will be made in accordance with **Section 70.91**.

(B) FOR SHEETING OF SEWER TRENCHES AND EXCAVATIONS

No separate or additional payment will be made for sheeting and bracing that is specifically shown on the plans or specifically described in the specifications to be left in place in sewer trenches and excavations, regardless of the type used nor for the removal from the trench and excavation and the disposal away from the job site of the cut sheeting, bracing and rangers. The cost thereof shall be included in the prices bid for all sewer contract items of work, except when separate payment for sheeting and bracing is provided, in this case the cost shall be included therein. When sheeting is specifically ordered by the Engineer, to be left in place in sewer trenches and excavations, the cost for all labor, materials, cutting, removal, disposal, insurance and work required to leave sheeting in place shall be determine in accordance with **Articles 25 and 26** of the Contract.

40.05.3 MATERIALS

(A) Timber sheeting and bracing shall be of new or acceptable used timber free from injurious defects.

(B) Steel soldier beams shall comply with the requirements of **Section 23.05 - Structural, Reinforcing And Miscellaneous Steel**, except that approved used material will be permitted. Steel sheet piling shall comply with the requirements of **Section 24.01 - Steel Sheeting**, except that approved used materials will be permitted. Timber and lumber for bracing, shoring, fencing, bridging, and decking shall conform to the requirements of **Section 23.06 - Timber And Lumber**. Steel used for sheeting systems or for any other purposes herein shall conform to the requirements of the ASTM A36 and all other applicable requirements of ASTM.

(C) Steel Plates for use as sheeting will be permitted provided that they are properly installed and supported. The use of steel bracing frames which partially support the steel plates will be permitted up to a depth of twelve (12) feet. The use of steel plates in conjunction with trench boxes will not be permitted (trench boxes can not be considered as steel bracing frames).

(D) Steel Sheeting shall conform to the requirements of **Section 24.01** and shall be installed with continuous interlock.

40.05.4 CONSTRUCTION METHODS

(A) GENERAL - Timber sheeting and bracing and other sheeting systems shall be of sufficient dimensions and strength, and steel sheeting shall be of sufficient type, size and weight, to support adequately the sides of the trenches and excavations and insure the safety of adjacent structures and shall be installed in accordance with the approved sheeting details. The Contractor shall be solely responsible for the adequacy and sufficiency of all sheeting and bracing used.

(B) SHEETING - Unless otherwise specified, timber sheeting and bracing shall be driven or placed ahead of the excavation in such a manner as to prevent the loss or slippage of ground in order to

safeguard adjacent surface and subsurface structures. The sheeting shall be driven to adequate depth below subgrade. As the work progresses, any voids back of the sheeting shall be filled and compacted in accordance with **Section 40.06** and as directed by the Engineer.

(C) Sheeting can be used as forms for concrete work. Whenever sheeting is used as formwork as specified or approved by the Engineer only timber sheeting will be permitted unless otherwise approved or specified in writing by the Engineer. When sheeting is used as formwork, an approved protection shall be placed between the sheeting, bracing or soldier beams and the concrete. In addition, when sheeting is used as formwork for any structure or portion thereof, the thickness of that structure or portion of such structure shall be increased by three (3) inches beyond the original neat line of such structure or portion thereof. In no case shall the sheeting, soldier beams or other bracing encroach upon the original neat line of the structure. In such instances when sheeting, soldier beams or other bracing is found to encroach upon the neat line of the structure, the Engineer shall direct the Contractor to remove such sheeting, soldier beams or other braces and redrive and/or replace the sheeting, soldier beams or other braces outside the neat line of the structure. All sheeting used as formwork shall be removed.

(D) All open cuts shall be excavated with vertical sides and properly supported with close sheeting and bracing in conformity with the requirements of **Section 40.03 - Earth Excavation** and with 23 NYCRR - "Protection of Persons Employed in Construction and Demolition Work" and 16 NYCRR Part 753 - "Protection of Underground Facilities" of the State of New York, Department of Labor, Board of Standards and Appeals.

(E) The Contractor is advised that trench boxes will be permitted for use as a sheeting system provided that the depth of trench does not exceed twelve (12) feet. The use of trench boxes to partially sheet trenches that are greater than twelve (12) feet in depth, will be strictly prohibited.

Should trench boxes meeting the above requirements be utilized, the trench will not have to be sheeted completely to subgrade. The trench box will be permitted to "hang up" to a maximum of two (2) feet above subgrade provided that the existing soil in the area of the subgrade can "stand up" on its own without sheeting. Should running ground be encountered or should the soil in the subgrade area begin to slough off, the Contractor will be required to extend the trench box to subgrade. The Engineer shall always maintain the right to order the Contractor to lower the trench box to subgrade as required.

No deductions will be made from any payment for not sheeting the bottom two (2) feet of trench if approved by the Engineer and no additional payment will be made should the Contractor be directed to sheet completely to subgrade.

All sheeting and bracing drawings submitted for approval which indicate trench boxes must be designed for the full depth of trench (to subgrade) and shall show the trench box extending to subgrade.

(F) **SLOPED SIDES OF TRENCHES OR EXCAVATIONS** - Where the Contractor requests permission not to sheet a trench or excavation, and offers to slope the sides of such trench or excavation in accordance with OSHA Regulations in lieu of such sheeting, the Contractor's request shall be reviewed by the Engineer.

If the Engineer deems such sloping to be acceptable the Engineer shall so notify the Contractor in writing.

Pavement excavation and restoration requirements shall be governed by the width of the trench measured at the bottom of the pavement foundation. Pavement excavation and restoration in excess of those required in connection with standard trench excavation, as specified, shall not be paid for.

In those cases where the Contractor does not request permission to side slope, but the Engineer determines that side sloping is in the best interests of the City, the Engineer shall order the Contractor to proceed using such side sloping. In these cases, the additional pavement excavation and restoration will be paid for at the appropriate bid unit price.

In both of the above cases it shall be presumed that side sloping a trench or excavation is done to obtain a lower cost for the work to be performed. The City shall, therefore, take an appropriate credit to cover the difference in overall costs resulting from the use of side sloping instead of timber sheeting.

(G) SHEETING METHODS

The following methods of sheeting trenches are acceptable:

- (a) Vertical Wood Sheeting
- (b) Steel Soldier Beams with Horizontal Wood Lagging
- (c) Interlocking Steel Sheeting
- (d) Trench Boxes for trench depths up to twelve (12) feet
- (e) Steel Soldier Beams with Steel Plates continually supported
- (f) Steel Frames with Steel Plates for trench depths up to twelve (12) feet
- (g) Krings and Icon Type Sheeting Frames and Plates

40.05.5 SHOP DRAWINGS

The Contractor will be required to submit Shop Drawings detailing the sheeting system whenever the depth of cut exceeds five (5) feet.

(A) Before commencing any excavating operation the Contractor shall have approved drawings from the Department of Design and Construction for all types of sheeting and bracing systems, cofferdams, shoring, underpinning, bridging, decking and all other temporary or permanent supporting structures required.

(B) The Contractor shall submit for approval five (5) copies of sheeting and bracing drawings, and other structures (i.e. decking, bridging) drawings that the Contractor proposes to use for the work.

(C) The Contractor shall have these drawings prepared by a Licensed Professional Engineer, currently registered in the State of New York. Such drawings shall be submitted together with design calculations, references, tables and charts. Both drawings and design calculations shall bear the imprint of the Licensed Professional Engineer's seal and signature.

(D) In designing the sheeting stated above, the Contractor's Engineer shall take note of the standard minimum load diagram requirements for Watertight and Non-Watertight sheeting structures. (See Sewer Design Standards.)

(E) The following notes shall be required on all sheeting detail submissions:

- (1) If the actual surcharge is in excess of three hundred thirty (330) pounds per square foot the Contractor shall adequately reinforce the sheeting and bracing as required at no additional cost to the City.
- (2) Maximum pilot cut shall be five (5) feet.

The sheeting and bracing drawings shall also include but not be limited to the following: the density of the soil, the internal angle of friction of the soil, the stress grade and type of lumber, the allowable steel stresses and the sequence of construction operation where required.

(F) Shop drawings of sheeting, bracing and other structures used by the Contractor shall be signed by and carry the seal of a Professional Engineer licensed in the State of New York. These drawings shall be submitted together with proper design computations bearing the same seal and signature. Shop drawings shall be on sheets twenty-seven (27) inches by forty (40) inches with a one-half (1/2) inch marginal space on three (3) sides and a two (2) inch marginal space for binding on the left side.

Shop drawings shall be numbered consecutively and shall accurately and distinctly present the following:

- (1) All working and erection dimensions.
- (2) Arrangement and sectional views.
- (3) Necessary details, including complete information for making connections between work under this contract and work under other contracts.
- (4) Kinds of materials.

(G) Each shop drawing shall be dated and contain:

- (1) The name of this project and this contract number.
- (2) The description name of classified contract item number or numbers under which it is or they are required.
- (3) The locations or points at which the sheeting is to be installed in the work.

(H) All sheeting submissions shall reflect the means and methods chosen by the Contractor and approved by the Engineer. Whenever steel sheeting systems (including trench boxes, frames and plates, etc.) are submitted which would render the crossing of Utilities (i.e. water mains and sewers) impossible the Contractor shall also submit, for approval, a system which can be utilized to permit such crossings (i.e. wood sheeting).

(I) The submission of multiple sheeting systems shall be kept to a minimum. Whenever the Contractor submits multiple systems they must be accompanied with a Location Plan shop drawing to indicate the exact location where these various systems are to be installed. Since the approval of multiple systems will delay the sheeting approval process the Contractor is requested to submit a schedule indicating the time frame that these systems are required. In addition the Contractor will be required to install these multiple systems at the locations indicated on the submitted Location Plan. Should the Contractor request to change the sheeting system at any particular location the Contractor will be required to resubmit the sheeting drawing, for approval, even though the revised sheeting system may have been approved at another location within the project area. The Contractor is reminded that the approval time for any given sheeting system may require up to four (4) weeks.

40.05.6 DESIGN CRITERIA

The following criteria shall be used in calculating the required sheeting, bracing and/or decking systems.

(A) All compression members (struts) shall be designed with a factor of safety of two (2.0). The factor of safety of two (2.0) shall be a value above and beyond the allowable value for compressive stresses for steel as designated in the "AISC Manual of Steel Construction", and for wood as designated in the "National Design Specification for Stress-Grade Lumber and its Fastening". All other allowable stresses (not including compression members) may be increased by thirty-three and one-third (33-1/3) percent where sheeting and bracing is deemed a temporary structure.

(B) A factor of safety shall be used to determine the minimum embedment for sheeting as follows:

- Vertical Timber - 15%
- Soldier Beams - 20%
- Steel Sheeting - 30%

(C) Embedment shall be calculated in accordance with the procedures and standard minimum load diagrams specified herein. The maximum allowable embedment for vertical timber sheeting shall not exceed three feet six inches (3'-6"). The minimum embedment shall be two (2) feet.

(D) The Contractor is advised that the maximum allowable bending stress (F_b) for all timber members shall not exceed one thousand seven hundred fifty (1,750) pounds per square inch. If the Contractor

elects to use a bending stress higher than $F_b = 1,750$ -psi, written certification of bending stress test results shall be submitted to the Engineer prior to use of such material in construction.

(E) Where it is anticipated that heavier crane or equipment loads will fall within the influence line of the trench, design loads shall be increased accordingly.

(F) The Contractor shall compute and include in the Contractor's submission of drawings and calculations the following:

- (1) Maximum bending stress
- (2) Maximum horizontal shear in wale
- (3) Compression perpendicular to grain
- (4) Maximum vertical shear stress

(G) DECKING

- (1) Unless otherwise specified in the contract documents or approved in writing by the Engineer, the minimum live load on decking shall be AASHTO HS20-44 or Contractor's equipment or heaviest truck loading (i.e. concrete trucks) whichever is greater plus an impact factor of thirty-three (33) percent.
- (2) Unless otherwise approved, timber mats shall extend a minimum of three (3) feet from sheeting line on either side of trench.
- (3) Unless otherwise approved, a minimum one thousand (1,000) pounds per square foot surcharge load shall be used for sheeting below decking.

(H) Maximum trench widths shown on sheeting details shall not exceed those allowed by the standards or specifications.

(I) The Contractor shall provide an individual cross-sectional sheeting (trench) detail for each size water main pipe and sewer conduit to be constructed unless permission to do otherwise is granted.

(J) Where the water table lies above the subgrade of trench and a well point or deep well dewatering system is not used, the Contractor shall include the effect of hydrostatic loading in calculations for both watertight and non-watertight sheeting.

(K) Sheeting details shall accurately depict actual field operations. The Contractor shall be restricted to a maximum five (5) feet deep pilot cut and all details must reflect this. Additional braces and wales may be required to install sheeting due to the five (5) feet maximum pilot cut restriction. The Contractor shall not assume that additional pilot cut depths will be allowed.

40.05.7 REMOVAL OF SHEETING

All sheeting design and requirements shall be in strict conformance with this section and all appropriate Addenda to the specifications.

Unless otherwise specified in the plans or these specifications, the Contractor shall remove all sheeting and bracing throughout this project.

(A) The sheeting shall be removed in lifts during the backfilling operation in order to permit proper placement and compaction of material against the structure and the earth bank. This work shall be accomplished in conjunction with the removal of wales and braces. In no case shall the lifts for sheeting exceed the specified or otherwise approved depth of compaction layer.

(B) The Contractor shall submit to the Engineer, for approval, the Contractor's method for installation and removal of sheeting and the method for backfilling the trench. The submission shall also specify if there are any location(s) where sheeting cannot be removed and detail the reasons why the sheeting cannot be removed. The submission shall be signed by and carry the seal of a New York State Licensed Professional Engineer. These methods must be strictly adhered to.

(C) The Contractor is advised that the Contractor will be responsible for, and shall solely at the Contractor's own expense, repair, replace and/or relocate all City owned utilities that are damaged and/or disturbed due to the Contractor's removal of sheeting operation.

(D) If the Contractor is required to leave the sheeting system in place in order to protect City owned utility crossings and structures, payment will be made in accordance with **Subsection 40.05.2(A)** and **Subsection 40.05.2(B)**.

(E) This section shall not be construed to relieve the Contractor of the Contractor's obligation under the contract to maintain, protect and support (temporarily and permanently) all City owned utilities within the influence lines of the excavated trenches. The Contractor in accordance with the standards of the agencies having jurisdiction thereof shall perform such maintenance, protection and support.

(F) The cost of maintenance, protection and support (temporarily and permanently) of City owned utilities shall be included in the prices bid for all items for which there are bid prices.

(G) If a soldier beam and lagging sheeting system is utilized then all parts of the system (i.e. soldier beams, bracing, wales and lagging) must be removed.

(H) There shall be no additional payment made for repairing, replacing and/or relocating City owned utilities that may be damaged and disturbed due to the Contractor's removal of sheeting operation, or for work performed by the Contractor as directed in **Subsection 40.05.7(E)** above.

40.05.8 COST INCLUDED

There shall be no separate payment for the sheeting and bracing of trenches and excavation of water mains larger than 20-inches in diameter and appurtenances thereto including valve chambers, regulator chambers, etc.; and for the sheeting and bracing of trenches and excavation of all sewer conduits and appurtenances thereto including manholes, chambers, catch basins, etc. The cost of all labor, material, plant, equipment and insurance necessary or required to furnish and install all timber and steel sheeting together with all necessary rangers, bracing, lagging, soldier beams, etc., excavation for the placing of sheeting, backfill and compaction behind sheeting to prevent loss of ground, cut off of sheeting as specified, together with all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer, shall be deemed included in the prices bid for the respective contract items.

40.05.9 SEPARATE PAYMENT

Separate payment will be made for the sheeting of water mains 20-inches and smaller in diameter. Payment will be made in accordance with **Section 70.91**.

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SECTION 70.91 SHEETING

70.91.1 DESCRIPTION

This section describes the use of Sheeting in water main trenches and excavations only.

70.91.2 MATERIALS

All sheeting materials shall comply with **Subsection 40.05.3**.

70.91.3 CONSTRUCTION METHODS

To prevent injury to workmen or to avoid damaging existing water pipes, structures, and pavements and their foundations through caving or sliding of the banks of a trench or other excavation, protection shall be provided for all excavation work except where a determination is made by the Contractor, the Engineer or the Engineer's inspector at the work site that the nature of the excavation does not require protection.

Excavation protection, when required, shall be provided in accordance with the requirements of:

- (1) U.S. Occupational Safety and Health Administration (OSHA) Construction Safety and Health Regulations, Part No. 1926, Subpart P;
- (2) 23 NYCRR, Subpart 23-4 – Excavation Operations;
- (3) 16 NYCRR, Part 753 – Protection of Underground Facilities;
- (4) Special requirements detailed below.

NOTE: Whenever an interpretation difference exists as to selecting the applicable requirements, that of the most stringent one shall govern.

(A) SPECIAL REQUIREMENTS

Unless specifically ordered otherwise by the Engineer or the Engineer's inspector at the work site, the following Special Requirements shall be adhered to:

(a) Trenches For Water Main Pipe 12-Inch In Diameter And Less

In general, such trenches shall not be sheeted since, with the laying depths used, the trench bottoms will be less than five (5) feet below the ground surface. However, removal of existing pipe, or connections to existing pipe may, in some instances result in trench depths of five (5) feet or greater. In such cases, at a minimum, sheeting will be required. If sheeting is required, it shall be of sufficient length so that all ingress and egress is within the sheeted area, and shall extend at least 2 feet beyond all work locations and access points. If workmen are required to transit between sheeted areas, they must exit the trench.

If, in the opinion of the Engineer or the Engineer's inspector at the work site, sheeting is required, for whatever reason, in any trench or other excavation, the Contractor shall install it.

(b) Trenches For Water Main Pipe 16-Inch and 20-Inch In Diameter

All such trenches shall be sheeted, regardless of the depth of the trench.

(c) Trenches For Water Main Pipe Larger Than 20-Inch In Diameter; And Excavations For Chambers And Manholes

All such trenches shall be sheeted, regardless of the depth of the trench.

(d) Detailed Requirements As To Type And Size Of Sheeting

Unless specifically noted otherwise on the contract drawings or in these specifications, the sheeting required in paragraphs (a), (b), and (c) above, shall be furnished and installed in full compliance with the requirements of Section 1926.652 of the OSHA Regulations.

The size and spacing of sheeting, stringers, and cross bracing required for various soil conditions shall meet the latest OSHA Regulation requirements.

(B) **SUBSTITUTION FOR TIMBER SHEETING**

Any substitution for timber sheeting and bracing such as a self-supporting movable shield of timber or metal, etc., must be designed by and stamped with the seal of a Professional Engineer, licensed to practice in the State of New York, and must be approved by the Engineer in writing prior to its being used on the job. Submittal of proposed substitutions shall be made by the Contractor at least four (4) weeks prior to their scheduled use to allow for proper review and approval of it by the Engineer.

(C) **SHEETING LEFT IN PLACE**

Where the sheeting is ordered to be left in place, the full amount of the lumber so left in place will be paid for at fifty percent (50%) of the market value thereof, without any allowance for the cost of delivery or placing in the work. Sheeting left in place shall be cut off in accordance with **Subsection 40.05.2**.

When sheeting is ordered to be left in place, the cost of all work required for the cutting, removal and disposal of the cut sheeting shall be deemed included in the fifty percent (50%) compensation paid above.

70.91.4 MEASUREMENT

The quantity of sheeting incorporated into the work, complete, as shown, specified or required shall be computed as twice the depth of trench times the length of the sheeted trench. The depth of trench or excavation to be sheeted shall be from the ground surface to the bottom of the pipe. In those cases where a special foundation, such as a broken stone bed or a concrete cradle or mat is required, the depth of trench or excavation to be sheeted shall be from the ground surface to the bottom of such special foundation.

70.91.5 PRICE TO COVER

Payment for sheeting of trenches for water main pipe 12-inch in diameter and less shall be made per square foot under bid Item No. 70.91SW12 - FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 12-INCH IN DIAMETER AND LESS contained in the bid schedule.

Payment for sheeting of trenches for water main pipe 16-Inch and 20-inch in diameter shall be made per square foot under bid Item No. 70.91SW20 - FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 20-INCH IN DIAMETER contained in the bid schedule. Where there is no bid item for such sheeting, because the quantities of such pipe to be installed are very small, or the work involves connecting smaller size pipe to 16-Inch and 20-inch mains or larger, payment for such sheeting will be made at the unit price bid for Item No. 70.91SW12 - FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 12-INCH IN DIAMETER AND LESS.

The Contractor's attention is directed to the fact that the Contractor's bid price for sheeting covers the cost of extra earth excavation and other extra costs involved in laying the pipe, such as but not limited to, lesser pipe footage being installed per day, etc.

All of the above provisions are intended to apply to those instances where sheeting is required in a trench in order to lay pipe. In such instances a wider trench is required (to accommodate the sheeting) than when pipe is laid in unsheeted trenches.

When sheeting is provided in portions of a trench (to protect men inserting taps, etc.) that was originally excavated for laying a water main, and when such trench was not sheeted at the time the water main was laid, payment shall be made only for the amount of sheeting actually placed. In all such cases the payment lines for pavement excavation, pavement restoration, and satisfactory backfill shall be those specified for unsheeted trenches.

Where the OSHA Regulations do not require sheeting, but where the Contractor, for the Contractor's own convenience, installs a more limited type of trench support (stay bracing, etc.) such limited type of trench support will not be paid for. The cost of such limited trench support shall be deemed included in the various unit prices bid.

All sheeting that is to be paid for must meet all requirements of the OSHA Regulations.

70.91.6 NO SEPARATE PAYMENT

No separate payment will be made for the sheeting of water main trenches for water mains larger than 20-inches in diameter, the costs thereof shall be deemed included in the prices bid for laying these mains. No payment shall be made for sheeting at chambers and manholes, but payment thereof will be deemed to be included in the various items bid for constructing the chambers and manholes.

Payment for Furnishing And Placing Sheeting And Bracing In Trench For Water Main Pipe will be made under the Item Number as calculated below:

The Item Numbers for Furnishing And Placing Sheeting And Bracing In Trench For Water Main Pipe have nine characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Furnishing And Placing Sheeting And Bracing In Trench For Water Main Pipe:

70.91

(2) The sixth and seventh characters shall define Furnishing And Placing Sheeting And Bracing In Trench For Water Main Pipe:

SW - Furnishing And Placing Sheeting And Bracing In Trench For Water Main Pipe

(3) The eighth and ninth characters shall define the Size of Water Main Pipe That Trench Sheeting will be provided for:

12 - 12-Inch In Diameter And Less
20 16-Inch and 20-Inch In Diameter

(4) The Item Numbers together with Description and Pay Unit as provided in the Bid Schedule are provided below:

Item No.	Description	Pay Unit
70.91SW12	FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 12-INCH IN DIAMETER AND LESS	S.F.
70.91SW20	FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 16-INCH AND 20-INCH IN DIAMETER	S.F.

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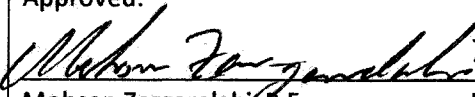


**Department of
Design and
Construction**

**SPECIFICATION
BULLETIN**

**SB
17-001**

Title: **UV CURED-IN-PLACE-PIPE (CIPP) LINING METHOD**

Prepared:		1/12/2017	Approved:		1/12/2017
Richard Jones, P.E. CWI	Date		Mohsen Zargarelahi, P.E.	Date	
Director, Specifications – Infrastructure Design			Assistant Commissioner – Infrastructure Design		

APPLICABILITY:

- This Specification Bulletin (SB) is effective for projects advertised on or after 2/20/17.

SUPERSEDEANCE:

- This SB supersedes the following SBs: **NONE**

ATTACHMENTS:

- **ATTACHMENT 1:** Revised Section 50.71 - RECONSTRUCTION OF EXISTING SEWERS USING D.E.P. APPROVED CURED-IN-PLACE-PIPE (CIPP) LINING METHOD
Pages A1-1 through A1-9

REVISIONS TO THE NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION STANDARD SEWER AND WATER MAIN SPECIFICATIONS, DATED 7/1/14:

All references contained below are to the New York City Department of Environmental Protection Standard Sewer and Water Main Specifications, Dated July 1, 2014. Said Standard Sewer and Water Main Specifications are hereby revised as follows:

- Refer** to Pages V-52 through V-59, Section 50.71 – RECONSTRUCTION OF EXISTING SEWERS USING D.E.P. APPROVED CURED-IN-PLACE-PIPE (CIPP) LINING METHOD;
Delete in its entirety the Section;
Substitute the revised Section in Attachment 1 (9 pages).

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CURED-IN-PLACE-PIPE (CIPP) LINING METHOD

50.71.1 INTENT

It is the intent of this section to provide for the reconstruction of existing sewers by the installation of a resin-impregnated flexible tube that is inflated within the existing conduit to form a hard, impermeable, corrosion resistant pipe within a pipe. When cured, the cured-in-place-pipe (CIPP) will be formed to the original conduit.

50.71.2 REQUIREMENTS

(A) DESCRIPTION OF WORK

Unless otherwise specified in the contract, the Contractor shall use a Department of Environmental Protection (DEP) approved cured-in-place-pipe lining method on all existing sewers shown, specified, or ordered to be reconstructed under this contract by use of an approved lining method. All such work shall comply with the terms of this specification and with the manufacturer's standards set forth for the lining method(s) selected by the Contractor.

Under this method the Contractor shall reconstruct existing sewers by the insertion of either a flexible polyester felt or glass fiber lining tube that has been saturated with either a thermosetting or photosetting resin. The liner shall be inserted into the existing sewer either by direct inversion (ASTM F1216) using a head of water or air, or by pulling the tube into place by winching and then inflating it by inversion of a calibration hose (ASTM F1743). The thermosetting resin shall then be cured by either circulating hot water through the tube or by circulating hot air (a mixture of steam and air), or by circulating steam to cure the resin into a hard impermeable pipe. The photo-initiated resin shall be exposed to an ultraviolet light source to cure the resin into a hard impermeable pipe.

The Contractor shall make all investigations of the existing sewers to be reconstructed and shall determine and select the most effective approved lining method(s) appropriate for installation in the existing sewers to be reconstructed. The Contractor shall be responsible for the successful completion of all work required herein; failure of the Contractor's selected lining method(s) to be satisfactorily installed in the existing sewers shall not relieve the Contractor of the Contractor's responsibility to provide satisfactorily reconstructed sewers.

Any cost associated with the removal of the unsatisfactorily installed liner and the subsequent, satisfactory reinstallation of an approved liner shall be borne solely by the Contractor, and the Contractor shall not make any claim against the City for this additional required work.

Once installed, the liner shall extend from manhole to manhole in a continuous tight fitting watertight pipe-within-a-pipe, and be chemically resistant to sewage gases and materials. During the warranty period any defects that might affect the integrity or strength of the liner shall be immediately repaired or replaced by the Contractor, at the Contractor's expense, pursuant to the manufacturer's recommendations, and to the satisfaction of the Engineer.

(B) REFERENCE SPECIFICATIONS AND STANDARDS

The American Society for Testing and Materials Standard Specifications ASTM C581, D638, D790, D2990, D5813, F1216, F1743, and F2019, and the manufacturer's standards are hereby made a part of this specification.

(C) LINER SIZE AND LENGTH

The liner shall be fabricated to a size that when installed will neatly fit the internal circumference of the sewer to be lined. The liner thickness shall be designed to adequately resist all external pressures and conditions (e.g. deflection, ring bending, buckling and minimum stiffness). The length of the liner shall be

that deemed necessary to effectively span the distance and carry out the insertion and seal of the liner at the inlet and outlet manholes. The Contractor shall verify the lengths in the field before cutting the liner to length. Prior to the start of work the Contractor will be required to submit design calculations for wall thickness to the Engineer. When UV-cured liners are used, the Contractor must also submit the manufacturer's product specific data regarding the glass fiber tube, the resin and initiator cocktail system and the necessary manufacturer installation reference material detailing the type of light source and the speed in which it will be advanced to insure proper curing.

Allowance for circumferential and longitudinal stretching of the liner during installation shall be made as per the manufacturer's standards for the approved method of lining chosen. Under no circumstances shall the finished wall thickness of liner be less than six (6) millimeters in thickness.

(D) DESIGN PARAMETERS - The following design parameters shall be used in the design of pipe liners in addition to the manufacturer's standards:

(1) Ovality of Existing Pipe	2% Minimum
(2) Existing Pipe Condition	Fully Deteriorated
(3) Modulus of Soil Reaction	700-psi Minimum
(4) Factor of Safety Against Buckling	2 Minimum
(5) Allowable Deflection	5% Maximum
(6) Ratio of Pipe to Soil Strength	10% Minimum
(7) Live Load	AASHTO HS20-44 Loading under Roadways AASHTO E-80 Loading under Railroads
(8) Soil Unit Weight	120-pcf Minimum (If no Boring Data is available in vicinity.)
(9) Creep Reduction Factor	50% Maximum

(E) LINER MATERIAL - The Contractor shall furnish, prior to use of the lining materials, satisfactory written guarantee of the Contractor's compliance with the liner manufacturer's standards for all materials (polyester felt tubing, including the polyurethane covered felt and the thermosetting resin or glass fiber tubing soaked in photosetting resin) and techniques being used in the method.

Prior to the start of work the Contractor will be required to submit to the Engineer the types of resins and the resultant cure schedules for each length and size of sewer to be lined. The finished liner shall incorporate thermosetting materials that will withstand the corrosive effects of the normal existing effluents.

(F) SAFETY - The Contractor shall carry out the Contractor's operations in strict accordance with all OSHA and manufacturer's safety requirements. Emphasis shall be placed upon safety requirements for entering confined spaces and working with hot water, steam, or resins that may cause fumes. The Contractor shall erect such signs and other devices as are necessary for the safety of the work site and shall secure the site and conform all work to the safety requirements of all pertinent regulatory agencies.

(G) AIR QUALITY - The Contractor is advised that all liner installation work shall be carried out in full compliance with all City, State, and Federal laws, rules, and regulations regarding Air Quality and Safety. The contractor shall take all necessary precautions to minimize the release of styrene or other VOC emissions and mitigate odors generated during set and the CIPP lining process. The Contractor shall also take all necessary precautions to prevent such odors from entering structures, businesses or other types of establishments, through service connections or other plumbing fixtures.

(H) FLOW BYPASSING - Prior to the start of work the Contractor will be required to submit a fluming/bypass-pumping detail in accordance with **Subsection 10.13 - (3) Existing Flow**. The Contractor shall provide for the diversion of flow of existing sewers at existing upstream manholes (if available) and pump the flow into an existing downstream manhole. The pumps and bypass lines shall

be of adequate capacity and size to handle the flow. The proposed bypassing system shall be submitted to the Engineer for approval and no work shall commence until such approval is granted.

(I) TELEVISION INSPECTION PRIOR TO INSTALLATION - All bidders are advised that a digital audio-visual inspection was made of the sewers to be reconstructed and that this recording (the "DEP recording") is available for review prior to bid opening. All prospective bidders are urged to view this recording in order to assess the suitability of the lining methods for use on this project. The City of New York does not guarantee the successful use of any particular method on this project and the Contractor shall utilize the Contractor's judgment as to the effective use of the method(s) the Contractor selects.

The Contractor will also be required to perform another television inspection and digital audio-visual recording of the sewer a maximum of seven (7) days prior to the setting up of the liner insertion equipment at the site. This inspection will be performed, utilizing a radial eye camera, to determine the latest condition of the sewer and to accurately identify the location of active service connections. Should the results of this television inspection show a condition different than that shown on the DEP recording, the Contractor shall immediately notify the Engineer.

For each section to be lined, the Contractor shall certify in writing that the DEP approved method the Contractor intends to use is suitable.

(J) CLEANING - The Contractor shall furnish all labor, materials and equipment and shall do all work necessary to remove and dispose of all debris, sediment, silt, refuse, timber, roots, and materials of all kinds which can be removed by conventional non-excavation type pipe cleaning equipment located in the existing sewers and manholes. The Contractor shall immediately notify the Engineer if such debris, etc., cannot be removed by conventional non-excavation type pipe cleaning equipment.

Protruding service connections shall be removed and paid for consistent with **Section 52.51**.

(K) SERVICE CONNECTIONS - The Contractor shall be required to determine which service connections are active and shall be responsible for controlling (or maintaining) the flow for each active service connection along the line of the sewer to be rehabilitated. Where necessary, the flow from an active service connection shall be bypassed to a manhole downstream of the proposed work by means of pumping from the trap located in the basement of the affected building. However, should such bypassing be judged unfeasible by the Engineer, the Contractor shall excavate to the service connection outside the building area (sidewalk or roadway as determined by the Engineer) and bypass the connection from this point. The pump and bypass line for each service connection shall be of adequate capacity and size to handle the flow.

Prior to the commencement of any work, the Contractor shall make all necessary investigations and prepare a plan for the controlling (or maintaining) of the flow and, where necessary, for the bypassing of active service connections. This plan shall be submitted to the Engineer for approval and no work shall commence until such approval is granted.

(L) EQUIPMENT SPECIFICATION - The Contractor shall provide suitable temperature and pressure gauges in accordance with the manufacturer's standards and specifications. High-pressure steam hoses and fittings have to be rated in accordance with the steam generator used. Thermocouples are to be marked for each fluid to be conveyed: RED-steam; BLUE-water; GREEN-air. The pulling winch shall be equipped with a tension gauge (Type-Martin Decker or Approved Equal) - smooth running and variable speed. The cutting device shall be a Gulectron type or approved equal remote monitored device when used inside the lined pipe.

The Contractor shall prepare and inspect all necessary tools and any spare parts that are required for equipment that suffer frequent breakdowns, and shall ensure that said tools and spare parts are available at the site. Supporting equipment, such as pumps and generators, shall be provided at the site in the event there is a fluid surge and pumping is required on an emergency basis. The Contractor shall also prepare and make operable all necessary communication equipment for the Contractor's field crew.

(M) **INSTALLATION OF LINER** - Prior to the installation of liner, the Contractor shall fully comply with **Subsections 50.71.2(C) through 50.71.2(L)**, inclusively, and with any additional requirements set forth in the specific provisions applicable to the respective lining methods. The Contractor shall not proceed with the installation of liner until the Engineer, in writing, certifies such compliance and directs the Contractor to proceed with the lining installation. The approved liner shall be installed pursuant to the specific provisions set forth for the selected lining method. If any problem occurs during the installation operation the Contractor shall investigate with a television camera from the remote manhole.

(N) **PRELIMINARY TELEVISION INSPECTION OF INSTALLED LINER** - After the liner is sufficiently cool (below one hundred degrees Fahrenheit (100°F)) and before opening the service connections, a preliminary television inspection and digital audio-visual recording of the newly installed liner shall be performed to determine if the liner is properly installed.

(O) **SERVICE CONNECTIONS** - After the liner has been installed, the Contractor shall re-open all existing active service connections and those inactive connections ordered by the Engineer. These service connections shall be re-opened and paid for consistent with **Section 52.61**.

(P) **FINAL TELEVISION INSPECTION AFTER INSTALLATION** - A final television inspection and digital audio-visual recording of the newly lined sewer including the restored service connections shall be performed immediately after work is completed. Should the results of this final inspection reveal any defects, as determined by the Engineer, the Contractor will be required to repair or replace these defects as ordered by the Engineer at the sole expense of the Contractor.

Payment for this final television inspection will be made under Item No. 53.11DR - **TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS**.

(Q) **WORK SCHEDULE** - The Contractor shall be permitted to occupy the lane immediately above the sewer location and the parking lane immediately adjacent to the site of work unless otherwise specified. No further roadway or traffic restrictions shall be permitted.

50.71.3 INSTALLATION

(1) **PREPARING AND INSERTING THE LINER** - The Contractor shall designate a location where the uncured resin in the original containers and the un-impregnated liner will be impregnated prior to installation. The Contractor shall allow the Engineer and/or the Engineer's representative to inspect the materials and chemical impregnation "wet out" procedure. A resin and catalyst system compatible with the requirement of this method shall be used. The quantities of the liquid thermosetting materials inserted into the lining tube shall be as per manufacturer's standards so as to fully saturate the liner material and provide the lining thickness specified. The contractor shall protect, store and handle materials during transportation and delivery, while stored on-site and during installation following Manufacturer's recommendations. Liners impregnated with thermo-initiated resins shall be stored within the proper temperature range and liners impregnated with photo-initiated resins shall not be exposed to UV-light sources, to insure no premature curing occurs.

Prior to installation of liner, the downstream sewer manhole adjacent to the sewer section to be lined shall be plugged.

The chemical impregnated liner material shall be inserted into the sewer line being reconstructed through the existing manhole by either the direct inversion method or by the pull-in-place method, as recommended by the manufacturer. The head used to extend the liner tube shall be sufficient enough to fully extend the tube both circumferentially and longitudinally. The head used will fall within the manufacturer's guidelines to insure that a proper finished thickness is achieved and that the liner fit snug to the existing pipe wall producing dimples at service connections and flared ends at the entrance and exit manholes.

Winch cable shall be equipped with a tension gauge to measure tension during pull through.

Inflation of liners and heat source method used shall be accomplished in accordance with manufacturer's standards and specifications.

Curing temperatures and pressures shall be monitored so as not to overstress the liner and cause damage or failure of the liner prior to cure.

The use of a lubricant is recommended and such lubricant shall be compatible with liner and resin.

The Contractor will be required to monitor and remove styrene to acceptable levels during the inflation and curing processes. An activated carbon filtration system shall be employed to remove styrene from both the process air flow and condensed steam, prior to release into the air or an adjacent or downstream sanitary or combined sewer manhole.

(2) **CURING OF LINER** - After inflation or inversion is completed, the Contractor shall supply a suitable heat source. The equipment shall be capable of delivering steam or hot water to the far end of the liner to uniformly raise the temperature in the entire liner above the temperature required to initiate and effect curing of the resin system. The temperature shall be determined by the resin/catalyst system employed. The heat source shall be fitted with suitable monitors to gauge the temperature and pressure of the incoming and outgoing heat exchanger circulating heating medium. Thermocouples shall be placed between the liner and the invert at each manhole so as to determine and record the temperature of the liner and time of exotherm. Initial cure shall be deemed to be completed when inspection of the exposed portions of the liner show it to be hard and sound; and when temperature reading(s) at the interface of the liner with the host pipe indicate sufficient heating has occurred. The cure period shall be of a duration recommended by the resin manufacturer; modified for the site specific conditions at the time curing is affected. During this cure time, the temperature inside the liner will be continuously maintained in the range required.

Once the cure is complete, the Contractor shall cool the hardened liner to a temperature below one hundred degrees Fahrenheit (100°F) before relieving the internal pressure. Cool down shall be accomplished as recommended by the manufacturer. Care shall be taken in the release of the internal pressure so that a vacuum will not develop that could damage the newly installed liner.

For UV-light CIPP systems, the intensity and duration of exposure to the photo-initiator's required UV-light wavelength shall be as per the manufacturer's recommendations for the proposed size and thickness of tube, to insure that the liner has been cured completely. The UV-light source shall be fitted with multiple temperature sensors to insure that reaction temperatures stay within the Manufacturer's acceptable range and do not blister the interior liner. All lamps shall be monitored to insure that they are on and functioning properly. In the event that a lamp fails or the reaction temperatures fall below the Manufacturer's acceptable range during CIPP installation, the Contractor shall reduce the speed of the light source (increasing the exposure duration) by the Manufacturer's specified amount. The Manufacturer's recommended cooling phase shall be observed after the last lamp of the light source has been turned off. The finished lining shall be continuous over the entire length and be free from visual defects such as foreign inclusions, dry spots, pinholes and delamination. The lining shall be impervious and free of any leakage from the pipe to the surrounding ground or from the ground to the inside of the lined pipe.

If due to broken or misaligned pipe at the access manhole, the lining fails to make a tight seal, the Contractor shall apply a seal of a resin mixture compatible with the liner.

After the curing has been completed, any residual water and condensation that adheres to the inner wall of the liner shall be removed. This residual water shall be collected and pumped from the channel of the downstream manhole and circulated through a separate carbon filtration unit before discharge into a downstream sanitary or combined sewer manhole. In the case of lining a storm sewer section, the collected filtered residual water and process water shall not be discharged into the downstream manhole or stream, but discharged into a nearby sanitary manhole.

50.71.4 MEASUREMENT

The quantity to be measured for payment shall be the length of reconstructed sewer, accepted by the Engineer, measured horizontally along the centerline of the sewer from inside face of manhole to inside face of manhole.

50.71.5 PRICE TO COVER

The contract price for "RECONSTRUCTION OF EXISTING SEWERS, USING D.E.P. APPROVED CIPP LINING METHOD" shall be the unit price bid per linear foot for each size sewer reconstructed by a cured-in-place-pipe DEP approved lining method and shall cover the cost of all labor, materials, plant, equipment, samples, tests and insurance required or necessary to reconstruct the sewers of the sizes shown including the cleaning of the existing sewers using conventional non-excavation type pipe cleaning equipment; television inspection prior to installation; diversion of flow of existing sewers; controlling (or maintaining) the flow for all active service connections; necessary bypassing and pumping of the existing active service connections; repair of active service connections; all necessary excavation, backfilling and compaction; complete installation of the liner; preliminary television inspection of installed liner; temporary and permanent restoration of all disturbed sidewalk and pavement areas (unless items for temporary and permanent restoration are otherwise provided in the Bid Schedule); cleaning up; and furnishing and installing all other items necessary to complete this work and do all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

50.71.6 SEPARATE PAYMENT

Payment for this final television inspection will be made under Item No. 53.11DR - TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS.

Payment for Reconstruction Of Existing Sewers Using D.E.P. Approved Cured-In-Place-Pipe (CIPP) Lining Method will be made under the Item Number as calculated below:

The Item Numbers for Reconstruction Of Existing Sewers Using D.E.P. Approved Cured-In-Place-Pipe (CIPP) Lining Method have eleven characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Reconstruction Of Existing Sewers Using D.E.P. Approved Cured-In-Place-Pipe (CIPP) Lining Method:
50.71

(2) The sixth character shall define the Type of Sewer Effluent:
S - Sanitary Sewer
M - Storm Sewer
C - Combined Sewer
I - Interceptor Sewer

(3) The seventh and eighth characters shall define either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Horizontal Elliptical Sewers, Vertical Elliptical Sewers and Egg-Shaped Sewers. (The seventh and eighth characters representing the unit of inches for either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Horizontal Elliptical Sewers, Vertical Elliptical Sewers and Egg-Shaped Sewers.) See examples below:

10 - 10"
30 - 30"

(4) The ninth character shall define the Shape of the Existing Sewer:
D - Circular (Diameter)

H - Horizontal Elliptical
 V - Vertical Elliptical
 E - Egg-Shaped
 R - Rectangular

(5) The tenth and eleventh characters shall define either Circular or the Height of the Sewer for Existing Horizontal Elliptical Sewers, Vertical Elliptical Sewers and Egg-Shaped Sewers. (The tenth and eleventh characters representing either Circular or the unit of inches for the Height of the Sewer for Existing Horizontal Elliptical Sewers, Vertical Elliptical Sewers and Egg-Shaped Sewers.) See examples below:

00 - Circular
 19 - 19"
 32 - 32"

(6) Examples of Item Numbers together with Description and Pay Unit as provided in the Bid Schedule are provided below:

Item No.	Description	Pay Unit
50.71S10D00	RECONSTRUCTION OF EXISTING 10" DIAMETER CIRCULAR SANITARY SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71S12D00	RECONSTRUCTION OF EXISTING 12" DIAMETER CIRCULAR SANITARY SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71S18D00	RECONSTRUCTION OF EXISTING 18" DIAMETER CIRCULAR SANITARY SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71S24D00	RECONSTRUCTION OF EXISTING 24" DIAMETER CIRCULAR SANITARY SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71S23H14	RECONSTRUCTION OF EXISTING 23"W X 14"H HORIZONTAL ELLIPTICAL SANITARY SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71S30H19	RECONSTRUCTION OF EXISTING 30"W X 19"H HORIZONTAL ELLIPTICAL SANITARY SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71S14V23	RECONSTRUCTION OF EXISTING 14"W X 23"H VERTICAL ELLIPTICAL SANITARY SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71S19V30	RECONSTRUCTION OF EXISTING 19"W X 30"H VERTICAL ELLIPTICAL SANITARY SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71S20E29	RECONSTRUCTION OF EXISTING 20"W X 29"H EGG-SHAPED SANITARY SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71S24E42	RECONSTRUCTION OF EXISTING 24"W X 42"H EGG-SHAPED SANITARY SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71S25E37	RECONSTRUCTION OF EXISTING 25"W X 37"H EGG-SHAPED SANITARY SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71S29E40	RECONSTRUCTION OF EXISTING 29"W X 40"H EGG-SHAPED SANITARY SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71M15D00	RECONSTRUCTION OF EXISTING 15" DIAMETER CIRCULAR STORM SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71M18D00	RECONSTRUCTION OF EXISTING 18" DIAMETER CIRCULAR STORM SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71M30D00	RECONSTRUCTION OF EXISTING 30" DIAMETER CIRCULAR STORM SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71M42D00	RECONSTRUCTION OF EXISTING 42" DIAMETER CIRCULAR STORM SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71M38H24	RECONSTRUCTION OF EXISTING 38"W X 24"H HORIZONTAL ELLIPTICAL STORM SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.

50.71M53H34	RECONSTRUCTION OF EXISTING 53"W X 34"H HORIZONTAL ELLIPTICAL STORM SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71M24V38	RECONSTRUCTION OF EXISTING 24"W X 38"H VERTICAL ELLIPTICAL STORM SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71M32V48	RECONSTRUCTION OF EXISTING 32"W X 48"H VERTICAL ELLIPTICAL STORM SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71M34V53	RECONSTRUCTION OF EXISTING 34"W X 53"H VERTICAL ELLIPTICAL STORM SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71M30E45	RECONSTRUCTION OF EXISTING 30"W X 45"H EGG-SHAPED STORM SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71M33E48	RECONSTRUCTION OF EXISTING 33"W X 48"H EGG-SHAPED STORM SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71M35E52	RECONSTRUCTION OF EXISTING 35"W X 52"H EGG-SHAPED STORM SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71M40E53	RECONSTRUCTION OF EXISTING 40"W X 53"H EGG-SHAPED STORM SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71M24R36	RECONSTRUCTION OF EXISTING 24"W X 36"H RECTANGULAR STORM SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71M32R48	RECONSTRUCTION OF EXISTING 32"W X 48"H RECTANGULAR STORM SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71C16D00	RECONSTRUCTION OF EXISTING 16" DIAMETER CIRCULAR COMBINED SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71C24D00	RECONSTRUCTION OF EXISTING 24" DIAMETER CIRCULAR COMBINED SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71C36D00	RECONSTRUCTION OF EXISTING 36" DIAMETER CIRCULAR COMBINED SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71C48D00	RECONSTRUCTION OF EXISTING 48" DIAMETER CIRCULAR COMBINED SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71C45H29	RECONSTRUCTION OF EXISTING 45"W X 29"H HORIZONTAL ELLIPTICAL COMBINED SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71C60H38	RECONSTRUCTION OF EXISTING 60"W X 38"H HORIZONTAL ELLIPTICAL COMBINED SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71C29V45	RECONSTRUCTION OF EXISTING 29"W X 45"H VERTICAL ELLIPTICAL COMBINED SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71C34V53	RECONSTRUCTION OF EXISTING 34"W X 53"H VERTICAL ELLIPTICAL COMBINED SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71C38V60	RECONSTRUCTION OF EXISTING 38"W X 60"H VERTICAL ELLIPTICAL COMBINED SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71C32E44	RECONSTRUCTION OF EXISTING 32"W X 44"H EGG-SHAPED COMBINED SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71C34E46	RECONSTRUCTION OF EXISTING 34"W X 46"H EGG-SHAPED COMBINED SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71C38E50	RECONSTRUCTION OF EXISTING 38"W X 50"H EGG-SHAPED COMBINED SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71C41E60	RECONSTRUCTION OF EXISTING 41"W X 60"H EGG-SHAPED COMBINED SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71C42E56	RECONSTRUCTION OF EXISTING 42"W X 56"H EGG-SHAPED COMBINED SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71C30R42	RECONSTRUCTION OF EXISTING 30"W X 42"H RECTANGULAR COMBINED SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71C36R48	RECONSTRUCTION OF EXISTING 36"W X 48"H RECTANGULAR COMBINED SEWER, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
50.71I36D00	RECONSTRUCTION OF EXISTING 36" DIAMETER CIRCULAR	L.F.

50.71148D00

INTERCEPTOR SEWER, USING D.E.P. APPROVED CIPP LINING METHOD

RECONSTRUCTION OF EXISTING 48" DIAMETER CIRCULAR INTERCEPTOR SEWER, USING D.E.P. APPROVED CIPP LINING METHOD

L.F.

50.71136R48

RECONSTRUCTION OF EXISTING 36"W X 48"H RECTANGULAR INTERCEPTOR SEWER, USING D.E.P. APPROVED CIPP LINING METHOD

L.F.

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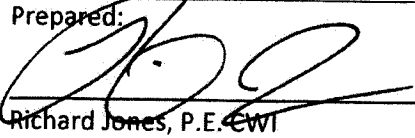

**Department of
Design and
Construction**

**SPECIFICATION
BULLETIN**

SB

17-002

Title: RODENT AND WATERBUG PEST CONTROL

Prepared:	1/12/2017	Approved:	1/12/2017
	Date		Date
Richard Jones, P.E. CWI Director, Specifications – Infrastructure Design		Mohsen Zargarelahi, P.E. Assistant Commissioner – Infrastructure Design	

APPLICABILITY:

- This Specification Bulletin (SB) is effective for projects advertised on or after 2/20/17.

SUPERSEDEENCE:

- This SB supersedes the following SBs: **NONE**

ATTACHMENTS:

- **ATTACHMENT 1:** Revised Section 7.88 – Rodent and Waterbug Pest Control
Pages A1-1 through A1-6

**REVISIONS TO THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION
STANDARD HIGHWAY SPECIFICATIONS VOLUME 1 OF 2, DATED 8/1/15:**

No Changes.

**REVISIONS TO THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION
STANDARD HIGHWAY SPECIFICATIONS VOLUME 2 OF 2, DATED 8/1/15:**

All references contained below are to the New York City Department of Transportation Standard Highway Specifications, Dated August 1, 2015. Said Standard Highway Specifications are hereby revised as follows:

- Refer** to Pages 515 through 520, Section 7.88 – Rodent and Waterbug Pest Control;
Delete in its entirety the Section;
Substitute the revised Section in Attachment 1 (6 pages).

(NO TEXT THIS PAGE)

SECTION 7.88 - Rodent and Waterbug Pest Control

7.88.1. DESCRIPTION. The Contractor shall provide all labor, materials, plant and equipment, and incidentals required to survey and monitor rodent activity and control any infestation or outbreak of rodents and waterbugs (cockroaches) within the project limit.

New York City ("NYC") Local Law 37 of 2005 requires that the Contractor, or any subcontractor that the Contractor hires, shall comply with Chapter 12 of Title 17 of the NYC Administrative Code with respect to the application of pesticides to any property owned or leased by the City of New York..

7.88.2. MATERIALS. All materials shall be Registered by the New York State Department of Environmental Conservation ("NYSDEC") and comply with the NYC Health Code for the intended usage. Materials classified as Toxicity Category I, carcinogenic to humans by the US Environmental Protection Agency ("USEPA"), or classified as a developmental toxin by the State of California's Office of Environmental Health Hazard Assessment shall not be used. The Contractor shall verify that materials are:

- "NOT PROHIBITED" by the NYC Department of Health and Mental Hygiene ("NYC-DOHMH") using the NYC-DOHMH's Pesticide Product Search, available at: < <https://a816-healthpsi.nyc.gov/1137/ProductTestPesticide.aspx> >.
- On the NYSDEC's list of Currently Registered Pesticides, available at: < <http://pims.psur.cornell.edu/> >.

Rodenticide weatherproof (wax based) bait blocks shall be multiple dose anticoagulants such as Chlorophacinone, or single feed anticoagulants such as Brodifacoum (Weatherblok XT, Final All-Weather Blox), Bromadiolone (Contrac Blox), or an approved equivalent, registered by NYSDEC and not prohibited by NYC-DOHMH. Loose rodenticide meal or rodenticide pellet bait shall not be used.

Tamper proof bait station boxes shall be designed to exclude other mammals and shall be used with poisoned bait to attract rats. Information on "tamper proof bait station boxes" is available from the NYC-DOHMH Office of Pest Control Services (646-632-6600).

Live traps shall be of proper dimensions for trapping rats and mice, and shall not be used with poisoned bait.

Insecticide bait shall be a residual type registered by NYSDEC and not prohibited by NYC-DOHMH.

(A) SUBMITTALS

Prior to commencement of construction activities the Contractor shall submit to the Engineer manufacturer's installation instructions for all materials required for rodent and waterbug pest control work and product data which shall include illustrations, catalog data, pesticide labels, product characteristics, typical use, performance and limitation criteria of all rodent and waterbug pest control materials required. All pesticides and rodenticide submittals shall be accompanied by a printout from the NYC-DOHMH Pesticide Product Search showing that the specific brand of pesticide and rodenticide is "NOT PROHIBITED."

7.88.3. PERSONNEL. The Contractor shall employ two independent licensed exterminators: one to engage in survey and monitoring work to establish the level of infestation of rodents and insects and provide recommendations for specific Integrated Pest Management ("IPM") actions, and one to execute the rodent and waterbug pest control work to deal with such infestations. All pest control personnel employed by each exterminator company shall be licensed by NYSDEC as a Commercial Pesticide Applicator, Commercial Pesticide Technician or Commercial Pesticide Apprentice and must be supervised by an exterminator licensed by NYSDEC as a Commercial Applicator in categories 7A ("Structural & Rodent Control") & 8 ("Public Health Pest Control"). It is recommended (but not required) that all personnel engaged in survey and monitoring work or rodent control work possess a certificate of

completion from the NYC-DOHMH's half-day or three-day "Rodent Academy." The Contractor shall submit the names and license credentials of the two exterminator companies to the Engineer for approval prior to the commencement of any work under this section.

7.88.4. METHODS. Application and dosage of all materials shall be done in strict compliance with the manufacturer's recommendations. All surveying, monitoring, baiting, and/or live trapping work shall be performed in the presence of the Engineer, without which no payment will be made under this Section.

(A) GENERAL

The Contractor's construction activity is expected to disturb any established rodent and/or waterbug population that may exist within the project limits, possibly causing their dispersion. The Contractor shall take all appropriate action to eliminate and/or control these populations within the construction corridor: the construction corridor shall be defined as being the full width of streets under the contract and intersecting streets up to the limits of construction, from property line to property line, excluding buildings and under sidewalk building vaults.

Under the Maintenance of Site requirements for the contract, any unsanitary conditions, such as uncollected garbage or debris, resulting from the Contractor's activities which will provide food and shelter to the resident rodent population shall be corrected by the Contractor immediately after notification of such condition by the Engineer. Non-compliance shall be subject to the application of the "Nonconformance" provisions of the Item for Maintenance of Site, and no payment will be made for any additional application of rodenticide or insecticide needed to control resultant infestations.

(B) SURVEY AND MONITORING WORK

(1) Prior to Construction - The Contractor's designated survey and monitoring exterminator shall execute a survey of the project area and estimate the level of rodent (Norway rat, House mouse) infestation and the waterbug population within the construction corridor. An appropriate sample of utility manholes (sewer, electrical, telephone, etc.) and catch basins should be opened and surveyed to the satisfaction of the Engineer. Contractor shall maintain all survey records in the manner described in 7.88.6., Records and Reports.

(2) During Construction - The Contractor shall monitor the rodent activity through trapping (snap, glue traps or live traps), fecal count methods, and inspection of the conditions of all installed baits every week during construction activity or as otherwise directed by the Engineer. Monitoring during construction shall cover Contractor's plant and temporary facilities. Contractor shall maintain all monitoring records in the manner described in Section 7.88.6. on "Records and Reports" of this specification.

(C) RODENT CONTROL WORK

(1) Wetlands, Woodlands and Areas Within Seventy-five (75') feet of a Stream. In wetlands, woodlands and areas adjacent to a stream, special precautions must be taken to protect water quality and to ensure the safety of other wildlife. To prevent poisoned bait from entering streams, no poisoned bait shall be used in areas within seventy-five (75') feet of either streambank. Live traps must be used in these seventy-five (75') feet buffer zone areas and within wetland and woodland areas.

(2) Outside Wetland Areas, Woodland Areas and Beyond Seventy-five (75') feet of a Stream. In areas outside the seventy-five foot zone of protection adjacent to streams, and areas outside wetlands and woodlands, tamper proof bait stations with poisoned bait shall be established during the period of construction and any consumed or decomposed bait shall be replenished as directed.

Rodent control shall be achieved in two stages as follows:

- Stage I. At least one month prior to initiation of the construction work, and periodically thereafter, live traps and/or rodenticide bait, as directed above, shall be placed at locations [e.g., burrows, utility manholes (sewer, electrical, phone, etc.), and catch basins] that are inaccessible to pets, human beings, children and other non-target species, particularly wildlife (e.g., birds) in the construction corridor. Locations of initial bait placement and quantities of bait shall be determined by the survey and monitoring exterminator's written report of his survey and monitoring results, or as otherwise directed by the Engineer.
- Stage II. During Construction - Infested sites as determined by the survey and monitoring exterminator's monitoring report shall be baited and/or rebaited, and live traps shall be collected and replaced, the rates and quantities of which shall be determined by the written monitoring reports submitted weekly or as otherwise directed by the Engineer in consultation with the City's Office of Pest Control.

Bait may be placed in dry manholes without a tamper-proof bait station box, if the manhole configuration does not permit the use of a bait station box. If a sanitary sewer manhole has a concrete invert platform of sufficient size, a bait box shall be used. Bait placed in a manhole outside of a tamper-proof box shall be strung on a stainless-steel wire, and secured to the manhole structure. No separate payment shall be made for the wire or securing the wire to the manhole, and shall be deemed included in the bid price for Baiting of Rodent Base Stations. Rodent control personnel entering manholes shall comply with the confined space requirements required by the Occupational Safety and Health Administration ("OSHA") 29 CFR 1929 - Subpart AA - Confined Spaces in Construction.

The use of tamper proof bait station boxes shall be used with rodenticide in all other cases.

The baiting exterminator shall be responsible for collecting and disposing of all trapped and poisoned rodents found in live traps and tamper proof bait stations. Non-target species captured in live traps shall be released by the baiting exterminator within twenty-four (24) hours after notification by the Engineer. The baiting exterminator shall also be responsible for posting and maintaining signs announcing the baiting of each particular location. The signs shall be placed at least twenty-four (24) hours prior to the application of any pesticide or rodenticide, and shall meet the requirements of Local Law 37 of 2005. NYC-DOHMH provides a sample template sign for pesticide notification purposes in compliance with the law at:

< <http://www1.nyc.gov/assets/doh/downloads/pdf/pesticide/notification-sign.pdf> >.

The Contractor, under his maintenance of site operations, shall be responsible for the immediate collection and disposal of any visible rodent remains found on streets or sidewalk within the project limits. Any visible remains shall be placed into double plastic bags. No more than five (5) carcasses shall be placed into each bag. Each bag shall be a minimum of three (3) mils thick, black plastic. The bag shall have a note taped on with the contents (e.g., "dead rat"), and disposed as required by the NYC Department of Sanitation. No additional payment will be made for this work.

It is anticipated that public complaints will be addressed to the Engineer's Field Office. The Contractor, where directed by the Engineer, shall take appropriate Integrated Pest Management ("IPM") actions, such as baiting, trapping, proofing, etc., to remedy the source of a complaint within the next six (6) hours of normal working time, which is defined herein, for the purposes of this section, as 7 A.M. to 6 P.M. on Mondays through Saturdays.

(D) WATERBUG CONTROL

Waterbugs shall include American Cockroaches, Oriental Cockroaches, Smoky Brown Cockroaches, Madeira Cockroaches, and other similar species.

Infested sites (e.g., sewers) shall be baited at least two (2) times per month with insecticides, or as directed by the Engineer in consultation with the exterminator monitoring the work and the NYC-DOHMH Office of Pest Control Services.

7.88.5. EDUCATION & TRAINING. The Contractor shall post notices in all Construction Bulletin Boards advising workers, employees, and residents to call the Engineer's Field Office to report rodent and waterbug infestations. The Contractor shall provide and distribute literature pertaining to IPM techniques of rodent control to affected businesses and superintendents of nearby residential buildings to ensure their participation in maintaining their establishments free of unsanitary conditions, harborage removal and rodent proofing.

Prior to application of any chemicals, the Contractor shall furnish copies or sample labels for each pesticide, antidote information and Material Data Safety Sheets ("MSDS") for each chemical used.

7.88.6. RECORDS AND REPORTS.

(A) GENERAL

The Contractor shall be responsible for assigning within the construction corridor an identifying number to each manhole, catch basin, and other location where bait and/or live trap placement and/or waterbug control work is proposed by the survey and monitoring exterminator. The Contractor shall then provide that list of locations and corresponding reference numbers along with a drawing showing the locations, as a reference for the exterminator(s) performing the work, to indicate locations of bait placement and waterbug control work and rodent and waterbug activity (droppings, bait consumed, dead rodents, etc.)

(B) SURVEY AND MONITORING WORK

(1) Prior to Construction - Contractor shall submit to the Engineer, for approval, a written survey report including proposed IPM procedures, including specific materials, quantities, locations, methods and time schedule for the implementation of the exterminating work. The written report shall also include a survey with a drawing (provided by the Contractor) marked with locations indicating all signs of rodent (Norway rat, House mouse) infestation and waterbug activity discovered during the execution of the survey indicating that rodent and waterbug pest control work is necessary. The report will be developed with input from the NYC-DOHMH Rat Information Portal at: < http://maps.nyc.gov/doit/nycitymap/template/?applicationName=DOH_RIP >.

(2) During Construction - Based on monitoring results, Contractor shall submit to the Engineer a weekly written monitoring report identifying all locations and conditions of installed bait and/or other rodent control work. The monitoring report shall also include any other recommended IPM techniques, such as baiting, trapping, proofing, etc., proposed for rodent and waterbug pest control.

The survey and monitoring exterminator shall keep a record of all rodent and waterbug infestation surveys s/he has conducted. The Contractor shall be required to submit a copy of all survey and monitoring reports to the Engineer each week, prior to payment.

(C) RODENT AND WATERBUG CONTROL WORK

The baiting exterminator shall maintain records using the NYC Pesticide Use Reporting System ("NYCPURS"). These records will be kept by the Engineer. A weekly report from NYCPURS shall be prepared, signed and certified by the approved licensed exterminator, and such reports shall be submitted to the Engineer each week, prior to payment.

7.88.7. NONCONFORMANCE. If the Contractor fails to perform as directed to control the rodent and/or waterbug population at any location within the project limits for a period of more than one week, the Engineer will correct the adverse conditions by any means he deems appropriate, including but not limited to, the use of "outside services" and shall deduct the cost of the corrective work from any monies due to the Contractor. The deducted cost of this work shall be in addition to the non-payment for rodent and waterbug pest control.

7.88.8. MEASUREMENT.

(A) RODENT INFESTATION SURVEY AND MONITORING

The quantity to be measured for payment under Item No. 7.88 AA, RODENT INFESTATION SURVEY AND MONITORING, shall be a Lump Sum measurement.

(B) RODENT BAIT STATIONS

The quantity to be measured for payment under Item No. 7.88 AB, RODENT BAIT STATIONS, shall be the number of tamper-proof rodent bait station boxes and/or live traps satisfactorily installed or reinstalled after inspection within the construction corridor, as approved by the Engineer. However, the initial baiting, and subsequent rebaiting as may be required, of any bait station will be paid for under Item No. 7.88 AC.

(C) BAITING OF RODENT BAIT STATIONS

The quantity to be measured for payment under Item No. 7.88 AC, BAITING OF RODENT BAIT STATIONS, shall be the number of tamper-proof rodent bait station boxes, utility manholes, catch basins, or other locations approved by the Engineer, satisfactorily baited or rebaited to replenish consumed or decomposed bait within the construction corridor, as approved by the Engineer.

(D) WATERBUG BAIT APPLICATION

The quantity to be measured for payment under Item No. 7.88 AD, WATERBUG BAIT APPLICATIONS, shall be the number of blocks satisfactorily treated with insecticide bait within the construction corridor, as approved by the Engineer. A block shall be defined as the area of street, measured between property lines, from intersection to intersection. Each rebaiting of any block shall be considered as a new block for measurement purposes.

7.88.9. PRICES TO COVER.

(A) RODENT INFESTATION SURVEY AND MONITORING

Payment will be made at the lump sum price bid for RODENT INFESTATION SURVEY AND MONITORING which shall include the cost of furnishing all the labor, materials, plant, equipment (traps, etc.), insurance, and other incidentals required, including but not limited to providing all required maintenance of traffic equipment, to perform a rodent infestation survey of the project area and then monitor the site each week for rodent activity, all in accordance with the specifications and the directions of the Engineer.

Ten (10%) percent of the lump sum price bid will be paid when the initial survey of the project area has been completed and the written survey report has been submitted to the satisfaction of the Engineer. The remainder will be paid in proportion to the percentage of contract completion.

(B) RODENT BAIT STATIONS

The Contract price bid for RODENT BAIT STATIONS shall be a unit price per each tamper proof bait station box and/ or live trap installed or reinstalled after inspection and shall cover the cost of furnishing

all labor, materials, plant, equipment (bait stations, etc.), insurance, and other incidentals, including but not limited to providing all required maintenance of traffic equipment, required to control the rodent population found within the project limits in accordance with the specifications and the directions of the Engineer.

In addition to the payment for Rodent Bait Stations installed or reinstalled under this Item No. 7.88 AB, the Contractor will also be paid for each baiting or rebaiting, when required, of each bait station, under Item No. 7.88 AC.

(C) BAITING OF RODENT BAIT STATIONS

The Contract price bid for BAITING OF RODENT BAIT STATIONS shall be a unit price per each bait station, utility manhole, catch basin or other location approved by the Engineer satisfactorily baited or rebaited, when required, and shall cover the cost of furnishing all labor, materials, plant, equipment (bait), insurance, NYCPURS recordkeeping, and other incidentals, in accordance with the specifications and directions of the Engineer. Installation or resetting of the bait station will be paid for under Item No. 7.88 AB.

(D) WATERBUG BAIT APPLICATION

The Contract price bid for WATERBUG BAIT APPLICATION shall be a unit price per block treated by the exterminator and shall include the cost of furnishing all the labor, materials, plant, equipment (bait, etc.), insurance, NYCPURS recordkeeping, and other incidentals, including but not limited to providing all required maintenance of traffic equipment, necessary to control the waterbug population found within the project limits for the duration of the contract in accordance with the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
7.88 AA	RODENT INFESTATION SURVEY AND MONITORING	L.S.
7.88 AB	RODENT BAIT STATIONS	EACH
7.88 AC	BAITING OF RODENT BAIT STATIONS	EACH
7.88 AD	WATERBUG BAIT APPLICATION	BLOCK



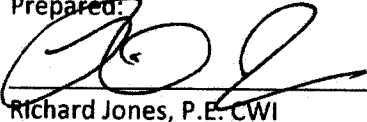
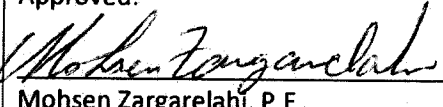
**Department of
Design and
Construction**

**SPECIFICATION
BULLETIN**

SB

17-003

Title: ENGINEER'S FIELD OFFICE

Prepared:	1/12/2017	Approved:	1/12/2017
			
Richard Jones, P.E. CWI	Date	Mohsen Zargarelahi, P.E.	Date
Director, Specifications – Infrastructure Design		Assistant Commissioner – Infrastructure Design	

APPLICABILITY:

- This Specification Bulletin (SB) is effective for projects advertised on or after 2/20/17.

SUPERSEDEENCE:

- This SB supersedes the following SBs: NONE

ATTACHMENTS:

- **ATTACHMENT 1:** Revised Section 6.40 – Engineer's Field Office
Pages A1-1 through A1-7

**REVISIONS TO THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION
STANDARD HIGHWAY SPECIFICATIONS VOLUME 1 OF 2, DATED 8/1/15:**

No Changes.

**REVISIONS TO THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION
STANDARD HIGHWAY SPECIFICATIONS VOLUME 2 OF 2, DATED 8/1/15:**

All references contained below are to the New York City Department of Transportation Standard Highway Specifications, Dated August 1, 2015. Said Standard Highway Specifications are hereby revised as follows:

- Refer** to Pages 372 through 379, Section 6.40 – Engineer's Field Office;
Delete in its entirety the Section;
Substitute the revised Section in Attachment 1 (7 pages).

(NO TEXT THIS PAGE)

SECTION 6.40 - Engineer's Field Office

6.40.1. DESCRIPTION. The Contractor shall provide, furnish and maintain a fully equipped field office (Type A, B, C, CU, D or DU, as specified) for the exclusive use of and occupancy by the Department's engineering personnel and/or Supervising Consultant (herein after called "City personnel"), and by the engineering personnel of private utilities when specified. The field office shall be at a location approved by the Engineer and shall be a commercial building, store front, or with the approval of both Office of Construction Mitigation and Coordination (OCMC) and the Community Board it may be a mobile trailer(s). If a trailer is used it shall be subject to approval by the Engineer, and all necessary permits shall be obtained by the Contractor. The Contractor may have facilities in an adjoining area separated by a lockable door, provided such facilities are in a location approved by the Engineer. The field office shall be within ½ mile of the job site. Field offices located further than ½ mile from the job site shall require approval by the Director or Assistant Commissioner for Construction. The field office structure and occupancy thereof shall conform to the requirements of all laws, rules, regulations and orders applicable to it.

The field office and all equipment, except as otherwise specified, may be new materials or may be used materials in good condition and satisfactory to the Engineer.

6.40.2. MATERIALS.

(A) **GENERAL CONSTRUCTION.** The Engineer's Field Office shall be in an approved and weatherproof building. It shall have a minimum ceiling height of seven (7') feet and be partitioned to provide the number of rooms required for the type of office specified. Floor space for Field Office Types C, CU, D, and DU shall be subdivided into work areas based on a floor plan provided by the City to the Contractor upon notification of space availability.

(B) **GENERAL FACILITIES.** The field office shall contain or have the following facilities incorporated:

(a) Lighting - Electric light, non-glare type luminaries to provide a minimum illumination level of 100 ft.- candles at desk height level.

(b) Heating and Cooling - Adequate equipment to maintain an ambient air temperature of 70° F. ±5°.

(c) Electrical Energy Outlets

(d) Toilet - A separate enclosed room, properly ventilated per code and complying with applicable sanitary codes shall contain a lavatory with a sink that provides running hot and cold water, flush-type toilet, mirror, electric hand dryer, and paper towel dispenser.

(e) Potable Water - Potable water supplied from an existing system or five (5) gallon capacity water cooler of a type to be approved by the Engineer shall be provided for use by City personnel. Replacement bottles of water shall be provided by the Contractor, when required.

(f) Signs - Store front locations shall have a window graphic sign in black and white lettering with the following inscription. Other locations shall have a wood or metal sign affixed on the outside wall of the building with the following inscription painted in black block lettering on a white background. Paints shall be approved exterior enamels.

CITY OF NEW YORK	2-1/2"
DEPARTMENT OF DESIGN AND CONSTRUCTION	3-1/2"
INFRASTRUCTURE	2-1/2"
RESIDENT ENGINEER'S FIELD OFFICE	2-1/2"

(g) Electric Refrigerator - Five (5) cubic feet minimum capacity for use by City personnel.

(h) Microwave, Toaster Oven, and Coffee Maker - Basic reheating kitchen equipment or approved appliances for use by City personnel.

(i) Windows and Doors - All windows and doors shall be weatherproof and each equipped with adequate locking devices. Each window shall be equipped with vertical blinds. Exterior doors shall be provided with two (2) separate "high security" dead bolt type cylinder locks, keyed alike, and three (3) keys shall be furnished for each lock.

- (j) Partitions - Partitions for work space enclosures shall be either permanent walls or of the modular type similar to Herman Miller's standard fabric covered line.
 - (k) Kitchen Sink - Mechanism to provide non-drinking, hot and cold, running water.
- (C) **OFFICE EQUIPMENT.**
- (a) Pencil Sharpener - One standard pencil sharpener for use by City personnel.
 - (b) Telephone Answering Machine - The telephone answering machine to be provided shall be an electronic digital voice machine with emergency call forwarding capability. It shall be operable twenty four (24) hours per day and, when unattended, shall transmit to the caller the following message:
 "You have reached the Field Office of the New York City Dept. of Design and Construction. No one is here now. We check our incoming messages frequently. We will get back to you as soon as possible. Please leave your name, message and phone number where you may be reached. In case of emergency, call the New York City Hotline at 311. Again, the emergency number is 311."
 - (c) Computer Equipment - Computers shall be provided for all contracts regardless of construction duration.

Computers furnished by the Contractor for use by City Personnel, for the duration of the contract, shall be in accordance with Table I - ADDITIONAL SPECIFIC REQUIREMENTS, contained herein, and shall meet the following minimum requirements:

- (1) **Personal Computer(s) - Workstation Configuration.**
 - (a) **Make and Model:** Dell; HP; Gateway; Acer; or, an approved equivalent. (Note: an approved equivalent requires written approval of the Assistant Commissioner of ITS.)
 - (b) **Processor:** i5 (4MB Cache, 3.0GHz) or faster computer - Dual Processor.
 - (c) **System Ram:** Minimum of 16GB (Gigabytes) Dual Channel DDR3 SDRAM at 1333MHz - 2 DIMMS
 - (d) **Hard Disk Drive(s):** 500 GB (Gigabytes) Serial ATA (7200RPM) w/DataBurst Cache, or larger.
 - (e) **CD-RW:** Internal CD-RW, 48x Speed or faster.
 - (f) **16X DVD+/-RW** DVD Burner (with double layer write capability) 16x Speed or faster
 - (g) **I/O Ports:** Must have at least one (1) Serial Port, one (1) Parallel Port and three (3) USB Ports.
 - (h) **Video Display Card:** HD Graphics (VGA, HDMI) with a minimum of 64 MB of RAM.
 - (i) **Monitor:** 22" W, 23.0 Inch VIS, Widescreen, VGA/DVI LCD Monitor.
 - (j) **Available Exp. Slots:** System as configured above shall have at least two (2) full size PCI Slots available.
 - (k) **Network Interface:** Integrated 10/100/1000 Ethernet card.
 - (l) **Other Peripherals:** Optical scroll Mouse, 101 Key Keyboard, Mouse Pad and all necessary cables.
 - (m) **Software Requirements:** Microsoft Windows 10 Professional, 32 or 64 bit; Microsoft Office Professional 365 ; Microsoft Project 365 ; Basic Adobe Acrobat Package ; Anti-Virus software package with 2 year updates

subscription; and, either Auto Cad LT or Microsoft Visio Standard Edition, as directed by the Engineer.

- (2) All field offices requiring computers shall be provided with the following:
- (a) One (1) broad-band internet service account. Wideband Internet connectivity at a minimum throughput of 15 Mbps download and 5 Mbps upload is required at each field office location with 1-5 staffers. For larger field offices see table below for minimum required upload speeds. Telephone service should be bundled together with Internet connectivity. Because of throughput requirements Verizon FIOS is the preferred connectivity provider where available.

Office Personnel #	Upload Speeds (<i>Minimum</i>)
1 – 5	10 Mbps
6 – 10	20 Mbps
11 – 15	25 Mbps
16 – 20	50 Mbps

This account will be active for the life of the project. The e-mail name for the account shall be the DDC Field Office/project Id (- preferably Gmail or Outlook – e.g. HWK666@gmail.com).

- (b) All necessary Cabling.
- (c) Storage Boxes for and Blank CDs/DVDs.
- (d) UPS/Surge Suppressor combo.
- (e) 10 USB Thumb (or Flash) Drive – 16GB each
- (3) All computers required for use in the Engineer's Field Office shall be delivered, installed, and setup in the Field Office by the Contractor.
- (4) All Computer Hardware shall come with a three (3) year warranty for on-site repair or replacement. Additionally, and notwithstanding any terms of the warranty to the contrary, the Contractor is responsible for rectifying all computer problems or equipment failures within one (1) business day.
- (5) An adequate supply of blank CDs/DVDs, and paper and toner cartridges for the printer shall be provided by the Contractor, and shall be replenished by the Contractor as required by the Engineer.
- (6) It is the Contractor's responsibility to ensure that electrical service and phone connections are also available at all times; that is, the Field Office Computer(s) is to be powered and turned on twenty-four (24) hours each day.

Broadband connectivity is preferred at each field office location. Please take into consideration that an extra phone line dedicated to the modem must be ordered as part of the contract unless Internet broadband connectivity, via Cable or FiOS, is available at the planned field office location. Any questions regarding this policy should be directed to the Assistant Commissioner of Information Technology Services at 718-391-1761.

- (d) Data Books - A copy of The AED Green Book, latest edition, published by Machinery Information Division of K-III Directory Corporation, 1735 Technology Drive, Suite 410, San Jose, California 95110-1313, shall be provided for all contracts that have a total Consecutive Calendar Days for General Construction duration as set forth in Schedule A of greater than 365 CCD's. Contracts of lesser duration shall not require any data books.

(D) Field Testing Equipment.

- (a) 2 - Air Entrainment Meters - Pressure Type, with carrying case for use by City personnel. Each meter shall be capable of producing an accurate test result in approximately five (5) minutes and shall comply with ASTM Designation C 231.

- (b) 2 - Slump Test Sets - Slump cone and test sets conforming to the requirements of ASTM Designation C 143, complete with rod and scoop for use by City personnel.
- (c) Thermometers: For use by City personnel.
 - (1) 1 - Minimum-maximum thermometer.
 - (2) 3 - Asphalt thermometers of stainless steel construction with an accuracy of 0.5% of the full scale, able to measure temperatures from 50 to 500 degrees F. in 5 degree increments.
 - (3) 3 - Surface Thermometers able to measure temperatures of flat surfaces similar to Sargent-Welsh Model S81441-D, or an approved equivalent.
- (d) Nonsparking Pinch Bar - For use in opening manholes.
- (e) Gas Meters - For use in detecting the presence of explosive gases and vapors for use by City personnel.
- (f) Straight Edge - One 10 foot long straight edge for use by City personnel in detecting pavement surface tolerance.
- (g) 48" Smart Level - For use in determining pedestrian ramp and sidewalk slopes.
- (h) Chlorine Test Kits - For testing residual chlorine levels following water main flushing.
- (i) Green Florescent Power Trace-Dye - For testing sewer connections.
- (j) One Million Candlepower Rechargeable Flashlight.
- (k) Distance Measuring Wheel - For measuring long distances.

6.40.3. SPECIFIC REQUIREMENTS FOR ENGINEER'S FIELD OFFICE (TYPE A, B, C, CU, D, OR DU). In addition to the general requirements, each type of Field Office shall have the minimum floor area indicated in Table 6.40-I calculated based on usable area only, excluding any loss factors. Loss factors are defined as those areas such as lobby, sidewalk window ledge, elevator shafts and stairways. The Contractor shall provide and maintain furnishings for each type of Field Office in the quantity specified in Table 6.40-I. The furnishings shall be new or used equipment satisfactory to the Engineer:

- (a) Each Type shall have a minimum of one outside door and four windows.
- (b) Type C shall be partitioned to provide three (3) rooms.
- (c) Type CU shall be partitioned to provide four (4) rooms, one of which shall be at least 150 s.f. in area (for use by private utilities).
- (d) Type D shall be partitioned to provide four (4) rooms.
- (e) Type DU shall be partitioned to provide five (5) rooms, one of which shall be at least 150 s.f. in area (for use by private utilities).

**TABLE 6.40-I
ADDITIONAL SPECIFIC REQUIREMENTS**

SPECIFIC REQUIREMENTS	FIELD OFFICE TYPE					
	A	B	C	CU	D	DU
Minimum useable floor space (Square Feet)	400	800	1200	1200	1,800	1,800
Office desks, at least 4'-8" x 2'-8", with drawers, locks, and keys.	2	2	4	8*	8	12*
Swivel chairs, with arms, for the above.	2	2	4	8*	8	12*
Office folding chairs, metal, with padded seats and backs.	2	3	6	14**	8	16**
Steel supply cabinets (approximate size 72" high by 36" wide by 18" deep), with four adjustable shelves, tumbler lock and 3 keys.	1	1	1	1	1	1
Fire resistant cabinet, 4-drawer, legal size with lock and three (3) keys, meeting the requirements for "Filing devices, Insulated (36 E 9)" Class D Label, of the Underwriters' Laboratories, Inc. Specifications.	1	1	1	3***	4	6***
Individual lockers (17" wide x 18" deep x 72" high) with flat key locks and two (2) keys each.	1	1	4	4	4	4
Calculating machines, tape type with digital display registering at least ten (10) digits.	1	1	2	2	3	3

Waste paper baskets (metal, approximately 12" square by 16" high).	1	2	2	6*	4	8*
Fire extinguishers, non-toxic, dry chemical type meeting Underwriters Laboratories, Inc., approval for Class A, Class B and Class C fires with a minimum rating of 2A:10B:10C.	1	1	2	3****	4	5****
First Aid Kit kept properly stocked with appropriate first aid supplies at all times.	1	1	1	1	2	2
Drafting tables (3'-0" x 5'-0") with storage drawers and stool.	1	2	2	3****	4	5****
Photocopying Machine – Stand-alone, heavy duty, electric, dry-process color photocopying type with color scan and send capability via e-mail, a minimum production rate of 70 pages per minute and an adequate supply of copy paper, toner, etc. The machine shall be capable of duplex copying paper sizes of 8-1/2 x 11 inches, 8-1/2 x 14 inches and 11 x 17 inches, and have separate trays for each paper size. It shall have a document feeder, collator, stapler, and the capability to reduce/enlarge copies between each paper size. The supply of each size copy paper, toner, etc. shall be replenished and the machines shall be maintained for the duration of the contract by the Contractor as required by the Engineer. Make and model can be Minolta, Canon, IBM, Epson, or an approved equivalent, and shall be networked to the office computers for printing capability.	1	1	1	1	1	1
Standalone networked color laser printer. (Not required if photocopying machine prints in color)	XX	XX	XX	XX	XX	XX
Vertical filing plan racks for six sets of 22"x36" plans each rack.	1	1	2	3****	4	5****
Telephone lines for calls, where one shall be dedicated for the Fax Machine, one for each computer fax/modem and the others for telephone instruments.	4	6	6	7‡	8	9‡
Telephone instruments.	2	2	3	5‡	4	6‡
Telephone answering machine.	1	1	1	1	1	1
Fax Machine - With an adequate supply of copy paper, toner, etc. The supply of copy paper, toner, etc. shall be replenished and the machines shall be maintained for the duration of the contract by the Contractor as required by the Engineer.	1	1	1	1	1	1
Personal Computer - Workstation Configuration	1	3	3	3	4	4
Bottled water with refrigerator unit-hot/cold water. (For private utilities room.)				1		1
Heavy duty commercial grade diamond cut shredder with automatic start. The shredder shall be able to receive 8-1/2 inch wide paper and shred a minimum of 15 sheets simultaneously along with CDs and staples.	1	1	1	1	1	1
Projector – 1080p LCD with a min. of 2200 ANSI Lumens, 1920 x 1080, 16:9, 40,000:1 contrast ratio, HDMI, VGA, USB, and a 10 feet diagonal, 16:9 Projection Screen.	-	-	1	1	1	1

- ‡ Provide one (1) telephone line and two (2) telephone instruments for the exclusive use by private utilities personnel. The line shall interconnect the two telephone instruments by push button control.
- * Provide four (4) each of Office Desks, Swivel Chairs and Waste Paper Baskets in private utilities room.
- ** Provide eight (8) Folding Chairs in private utilities room.
- *** Provide two (2) Fire Resistant 4- Drawer Legal Size Cabinets in private utilities room.
- **** Provide one (1) each of Fire Extinguisher, Drafting Table and Vertical File Rack in private utilities room.

6.40.4. CONSTRUCTION METHODS. The building shall be fully equipped and made available for use and occupancy by the Department's personnel and/or Supervision Consultant not less than thirty (30) days prior to the start of any contract work.

The building interior (including access foyers, stairwells, etc.) shall be maintained in good, clean, and sanitary working condition by the Contractor for the duration of the contract. The Contractor shall provide and pay all costs for electrical service, telephone service for calls within New York City limits, hot and cold water, heat and fuel, and daily janitor service. Staples, such as paper towels, hand soap, toilet paper, and similar supplies, shall always be available.

Where necessary, the site for a mobile trailer(s) shall be graded and shoulder stone placed and maintained as directed by the Engineer to provide a parking area for City personnel and, if necessary, an approach road shall be provided. Plumbing work shall include all water supply, drainage and piping required for the operation of a complete installation. Temporary water service shall be provided from an existing main and extended into the trailer and all fixtures requiring water supply shall be properly connected up. All necessary soil, waste, vent and drainage piping shall be provided and connected to the existing sewer or as otherwise directed.

The office, incorporated facilities, equipment, and personal property of the Department's employees shall be protected by the Contractor against loss or damage from fire, theft, or other causes, at all hours of the day and night. The Contractor shall provide fire insurance, extended coverage and vandalism, malicious mischief and burglary, and theft insurance coverage in the amount of forty thousand dollars (\$40,000.00) for office equipment of the City of New York in the Engineer's field office and for property of City personnel that is used in the contract work and stored in the office. All insurance coverage shall be written by a company approved by the Commissioner and payable in case of loss to the City of New York. The office shall be maintained by the Contractor in first class condition until final acceptance of the work. At the direction of the Engineer, any equipment on the above lists may be deleted. He may direct that other equipment of equivalent value be supplied by the Contractor or an appropriate credit be taken for the value of equipment not provided.

When directed by the Engineer, the Contractor shall disconnect all services and remove and dispose of all temporary installations from the site, including fencing, surfacing and utilities, the area shall then be cleaned, loamed and seeded if required and left in a neat and acceptable condition. On and after the date of the Engineer's Final Acceptance, the temporary structure and all installed equipment shall become the property of the Contractor, and shall be disposed of, by him, away from the site of the work. Engineer's Final Acceptance shall be when the Contractor has completed all punch list work and Official Completion Date has been set.

6.40.5. NONCONFORMANCE. No payment will be made under Engineer's Field Office for each calendar day during which there are deficiencies in compliance with the requirements of any subsection of this specification. The first calendar day shall commence twenty-four (24) hours after notice to the Contractor of such a deficiency. This non-payment shall be deducted from the Contractor's next estimate as a charge to the Contractor on the item. The amount of such calendar day non-payment will be determined by dividing the unit price bid per month by 30.

In addition, the Contractor may be subject to liquidated damages in accordance with Schedule A.

6.40.6. MEASUREMENT. The quantity to be measured for payment under this item shall be the number of months that the Field Office is available for occupancy by the Field Engineers during the period of the contract. Payment will begin the first month that the office is fully equipped, serviced as specified, and made available for occupancy. The Field Office is to be continuously made available and Monthly payments will continue for the duration of the contract through a period not to exceed 6 months past the substantial completion date. When directed in writing by the Commissioner, the Field Office will be provided and paid for a period of time beyond 6 months past the substantial completion date. Payment for each month's occupancy after the date of substantial completion acceptance will be made as part of the final estimate. Monthly payments may be terminated on a specified date prior to acceptance of the contract by written notification by the Engineer that such office will no longer be required on the contract.

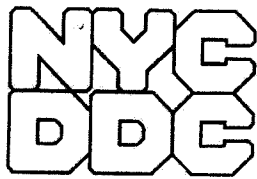
6.40.7. PRICE TO COVER. The unit price bid per month for the item Engineer's Field Office shall include the cost of furnishing all labor, materials, equipment, ground rental, fire and theft insurance, and utility charges necessary to complete the work of providing or constructing the field office; making all necessary electrical, water, sewer, and other connections required to make the above facilities operative; payment of all rental costs; furnishing and paying for heating fuel, as required; all electrical energy;

private telephone services; staples, as specified; and all necessary incidentals to complete the work - all in accordance with the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
6.40 A	ENGINEER'S FIELD OFFICE (Type A)	MONTH
6.40 B	ENGINEER'S FIELD OFFICE (Type B)	MONTH
6.40 C	ENGINEER'S FIELD OFFICE (Type C)	MONTH
6.40 CU	ENGINEER'S FIELD OFFICE (Joint Use) (Type CU)	MONTH
6.40 D	ENGINEER'S FIELD OFFICE (Type D)	MONTH
6.40 DU	ENGINEER'S FIELD OFFICE (Joint Use) (Type DU)	MONTH

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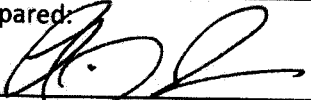
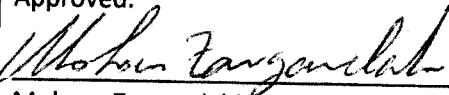


**Department of
Design and
Construction**

**SPECIFICATION
BULLETIN**

**SB
17-004**

Title: **FIRE DEPARTMENT FACILITIES**

Prepared:		1/12/2017	Approved:		1/12/2017
Richard Jones, P.E. CWI Director, Specifications – Infrastructure Design	Date		Mohsen Zargarelahi, P.E. Assistant Commissioner – Infrastructure Design	Date	

APPLICABILITY:

- This Specification Bulletin (SB) is effective for projects advertised on or after 2/20/17.

SUPERSEDEENCE:

- This SB supersedes the following SBs: **NONE**

ATTACHMENTS:

NONE

**REVISIONS TO THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION
STANDARD HIGHWAY SPECIFICATIONS VOLUME 1 OF 2, DATED 8/1/15:**

No Changes.

**REVISIONS TO THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION
STANDARD HIGHWAY SPECIFICATIONS VOLUME 2 OF 2, DATED 8/1/15:**

All references contained below are to the New York City Department of Transportation Standard Highway Specifications, Dated August 1, 2015. Said Standard Highway Specifications are hereby revised as follows:

- Refer** to Page 332, Section 6.23 – Fire Department Facilities, Subsection 6.23.4.(A), 3rd paragraph;
Delete the words “Bureau of Fire Communications”;
Substitute the words “Bureau of Facilities Management”.
- Refer** to Page 332, Section 6.23 – Fire Department Facilities, Subsection 6.23.4.(A), 9th paragraph;
Delete the words “Bureau of Fire Communications”;
Substitute the words “Bureau of Facilities Management”.



**Department of
Design and
Construction**

**SPECIFICATION
BULLETIN**

SB

17-004

Title: FIRE DEPARTMENT FACILITIES

- c) **Refer** to Page 332, Section 6.23 – Fire Department Facilities, Subsection 6.23.4.(A), 9th paragraph;
Delete the words “(718) 624-4194”;
Substitute the words “(718) 281-3846”.
- d) **Refer** to Page 333, Section 6.23 – Fire Department Facilities, Subsection 6.23.4.(E), 1st paragraph;
Delete the words “Bureau of Fire Communications”;
Substitute the words “Bureau of Facilities Management”.
- e) **Refer** to Page 339, Section 6.23 – Fire Department Facilities, Subsection 6.23.6, 1st paragraph;
Delete the words “Bureau of Communications”;
Substitute the words “Bureau of Facilities Management”.
- f) **Refer** to Page 343, Section 6.23 – Fire Department Facilities, Subsection 6.23.6.(I);
Delete the words “steel bar reinforcement and”.
- g) **Refer** to Page 440, Section 6.70 – Maintenance and Protection of Traffic, Subsection 6.70.9.(D);
Delete the words “Bureau of Fire Communications”;
Substitute the words “Bureau of Facilities Management”.

(NO FURTHER TEXT)



Department of Design and Construction

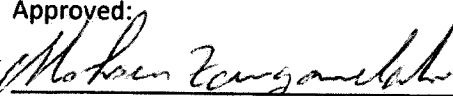
SPECIFICATION BULLETIN

SB

17-005

Title: **DIGITAL PHOTOGRAPHS**

Prepared:  1/12/2017

Approved:  1/12/2017

Richard Jones, P.E. CWI
Date
Director, Specifications – Infrastructure Design

Mohsen Zargarelahi, P.E.
Date
Assistant Commissioner – Infrastructure Design

APPLICABILITY:

- This Specification Bulletin (SB) is effective for projects advertised on or after 2/20/17.

SUPERSEDEENCE:

- This SB supersedes the following SBs: **NONE**

ATTACHMENTS:

- **ATTACHMENT 1:** Revised Section 6.43 – PHOTOGRAPHS
Pages A1-1 through A1-4

REVISIONS TO THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION STANDARD HIGHWAY SPECIFICATIONS VOLUME 1 OF 2, DATED 8/1/15:

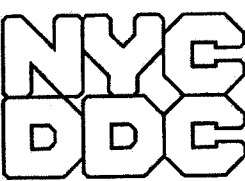
All references contained below are to the New York City Department of Transportation Standard Highway Specifications, Dated August 1, 2015. Said Standard Highway Specifications are hereby revised as follows:

- a) **Refer** to Page 37, Section 1.06.45 – Progress Photographs;
Delete in its entirety the Section;
Substitute the following: "NO TEXT."

REVISIONS TO THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION STANDARD HIGHWAY SPECIFICATIONS VOLUME 2 OF 2, DATED 8/1/15:

All references contained below are to the New York City Department of Transportation Standard Highway Specifications, Dated August 1, 2015. Said Standard Highway Specifications are hereby revised as follows:

- b) **Refer** to Page 385, Section 6.43 - Photographs;
Delete in its entirety the Section;
Substitute the revised Section in Attachment 1 (4 pages).

	Department of Design and Construction	SPECIFICATION BULLETIN	SB 17-005
Title: DIGITAL PHOTOGRAPHS			

REVISIONS TO THE NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION STANDARD SEWER AND WATER MAIN SPECIFICATIONS, DATED 7/1/14:

All references contained below are to the New York City Department of Environmental Protection Standard Sewer and Water Main Specifications, Dated July 1, 2014. Said Standard Sewer and Water Main Specifications are hereby revised as follows:

- a) **Refer** to Page I-16, Section 10.32 – PHOTOGRAPHS;
Delete in its entirety the Section;
Substitute the revised Section:

“The Contractor shall be required to provide “PHOTOGRAPHS” in accordance with **New York City Department of Transportation (NYCDOT) Standard Highway Specifications Section 6.43 – Photographs.**”

SECTION 6.43 – Photographs

6.43.1. INTENT. This section describes the work of providing a photographic record of contract work.

6.43.2. DESCRIPTION. The work shall consist of the furnishing of all required photographic equipment and materials; the taking of digital photographs; making prints from digital files; and submitting prints and digital files to the Engineer.

6.43.3. MATERIALS.

(A) PRINTS

Prints shall be 7-1/2" x 9-1/2" image area on 8" x 10" single-weight, gloss paper, and shall be in color. Prints shall be inserted in standard weight Archival Quality clear poly sheet protectors and submitted in a hard cover three (3) ring binder. The following information shall be imprinted, or indelibly printed, on a white border measuring no more than one and one half (1-1/2") inch at the bottom of the front of each photograph:

- (a) Contract Number and Job Location
- (b) Photograph Number
- (c) View and Description - (Indicating a general description of what the photograph represents)
- (d) Photograph Type: Preconstruction Photograph or Construction Progress Photograph
- (e) Date - (The date the photograph was taken.)
- (f) Address – street address where photograph was taken
- (g) Borough
- (h) Street Segment ID
- (i) Name of Photographer
- (j) Department Witness

The Contractor shall furnish to the Commissioner one (1) set for each view taken, each set consisting of two (2) 8" x 10" prints and one (1) digital file.

All prints and digital files shall become the property of the Commissioner. All completed prints and digital files shall be delivered to the Engineer within two (2) weeks after the photographs have been taken. Approved binders for the clear poly sheet protectors containing all materials shall be furnished by the Contractor and delivered to the designated construction office at the time of the initial submission of prints and DVDs at such other times as may be required thereafter.

(B) DIGITAL FILES

Digital files shall be captured as 7.2 megapixel files or greater, with a minimum pixel array of 2,400 pixels by 3,000 pixels. The camera used to capture the digital files shall be a Digital SLR (Single Lens Reflex) camera or approved equal; "point and shoot" cameras or cameraphones are not acceptable. Digital cameras shall produce images using true optical resolution; "digital zoom" is not acceptable. Images shall not be resized or interpolated. The file format for digital files shall be Joint Photographic Experts Group format ("JPG"). The digital files shall not be modified or processed in any way to alter the JPG file's metadata, including the photograph's original capture date.

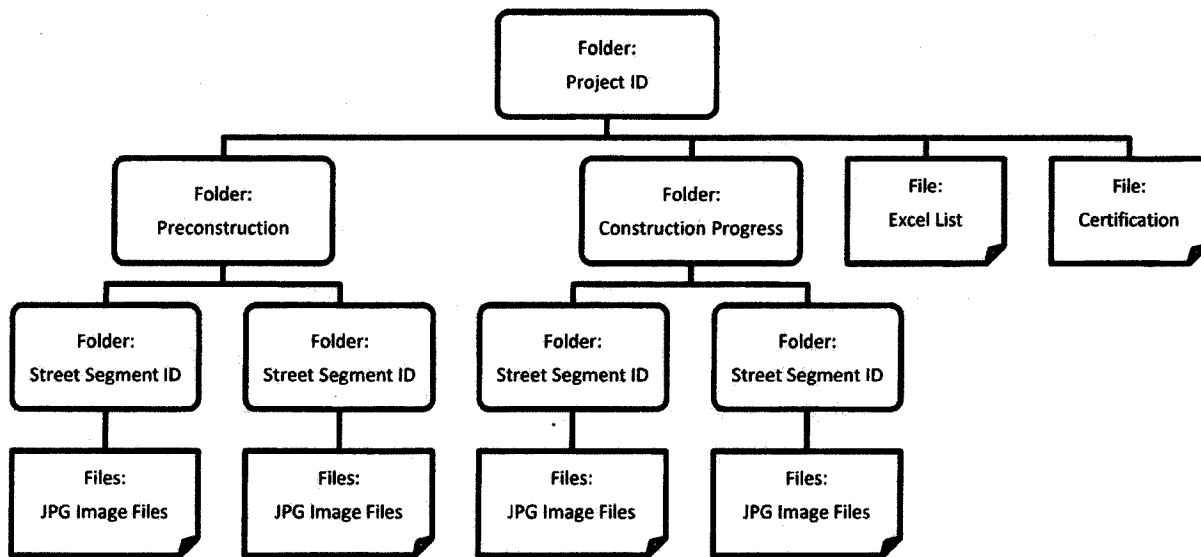
Digital files shall be submitted on Digital Versatile Disk ("DVD"). DVDs shall be inserted in standard weight Archival Quality clear poly sheet protectors, and submitted in a hard cover three (3) ring binder. The information imprinted on each print shall be provided on an Excel file included on the DVD. The DVD shall be labeled with the Project ID and the geographical area and streets depicted in the photographs. Labeling using adhesive labels is not acceptable.

Digital files shall have file names in the following format: a^b^c^d^e^f.JPG, where "a" through "f" are as follows:

- (a) Contract Number
- (b) Photograph Number
- (c) Date, in YYYY-MM-DD format (The date the photograph was taken.)
- (d) Address – street address where photograph was taken
- (e) Borough
- (f) Street Segment ID

A sample file name would be "HBX123^0021^2016-04-19^123 Main St^Queens^55555.JPG"

The files on the DVD shall be organized in folders by Photograph Type and Street Segment ID as follows:



(C) CERTIFICATION

The Photographer shall provide a signed certification that the files on the DVD are unaltered and are an accurate representation of the subject photographed. The original certification, in a clear poly sheet protector, shall be submitted with the prints and digital files, and a scanned copy shall be included on the DVD.

6.43.4. METHODS. The Contractor shall employ and pay for the services of a competent Professional Photographer who, at the direction of the Commissioner or his authorized representative, shall take Preconstruction Photographs and Construction Progress Photographs and such other photographs which may be required during the period of the contract.

The Photographer shall be available for taking the required photographs within forty-eight (48) hours after receiving notification from the Commissioner or his authorized representative.

Photographs shall be taken under the supervision and direction of the Engineer. The Engineer reserves the right to reject any and all views that are not reasonably clear and definitive. No separate or additional payment will be made for any additional photographs that are required as a result of the rejection of views.

6.43.5. PRECONSTRUCTION PHOTOGRAPHS. Preconstruction Photographs shall show the conditions existing on the work site prior to the commencement of the contract work. The Preconstruction Photographs will generally represent views of:

- The original surface conditions of streets, curbs and walks, and buildings;
- Evidence of damage, disrepair, or emergency situations;
- All encumbrances and/or encroachments which may be affected by the construction of the proposed work.

When there is no pay item listed in the Bid Schedule, the number of Preconstruction Photographs shall be as follows:

- (A) Highway Street Reconstruction projects: 150 sets per million dollars of street reconstruction work;
- (B) Highway Resurfacing projects: 4 sets per 250 linear feet of roadway for resurfacing work;
- (C) Sewer and Water Main projects: 2 sets (1 set each side of street) per 25 linear foot of sewer and water main.

When there is an item listed in the Bid Schedule, the quantity to be measured for payment shall be the number of sets, each set consisting of a digital file and the two (2) prints made from the digital file, of Preconstruction Photographs including photographs showing the original condition of all encumbrances and/or encroachments which may be affected by construction of the proposed work, and which are delivered as directed by the Engineer.

6.43.6. CONSTRUCTION PROGRESS PHOTOGRAPHS. Construction Progress Photographs shall show the conditions existing during the progress of, and at the completion of the contract work. The photographs will generally represent views of the work under construction and completed work. Construction Progress Photographs shall be taken monthly and upon completion of the work.

The approximate number of Construction Progress Photographs is as follows:

- (A) Highway reconstruction and resurfacing projects: Minimum 2 sets per 250 linear feet of roadway under construction or completed in the last month.
- (B) Pedestrian ramps on all projects: Minimum of 1 set for every pedestrian ramp under construction or completed in the last month, in addition to other progress photographs.
- (C) Sewer and Water Main projects: Minimum of 4 sets for every 100 feet of sewer or water main under construction.

No separate payment will be made for Construction Progress Photographs. The cost of taking and providing sets of Construction Progress Photographs shall be included in the prices bid for all other items of work.

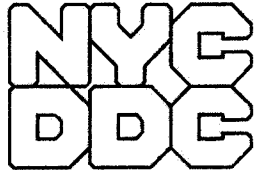
6.43.8. PRICE TO COVER (PRECONSTRUCTION PHOTOGRAPHS ONLY). When there is an item listed in the Bid Schedule, the contract price bid per set shall cover the cost of furnishing all labor, materials, plant, equipment, insurance, and necessary incidentals required, including the cost of the photographer, and the cost of furnishing the required prints, digital files, DVDs, and ring binders, and completing the work in accordance with the specifications and the directions of the Engineer.

When there is no item listed in the Bid Schedule, no separate payment will be made. The cost of furnishing all labor, materials, plant, equipment, insurance, and necessary incidentals required, including the cost of the photographer, and the cost of furnishing the required prints, digital files, DVDs, and ring

binders, and completing the work in accordance with the specifications and the directions of the Engineer shall be included in the prices bid for all other items of work.

Payment will be made under:

Item No.	Item	Pay Unit
6.43 D	DIGITAL PHOTOGRAPHS	SETS



**Department of
Design and
Construction**

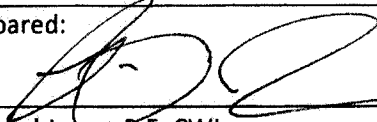
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BULLETIN**

SB

17-006

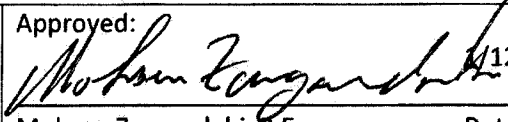
Title: RECORDS OF SUBSURFACE STRUCTURES

Prepared:

 1/12/2017

Richard Jones, P.E. CWI
Director, Specifications – Infrastructure Design

Approved:

 1/12/2017

Mohsen Zargarelahi, P.E.
Assistant Commissioner – Infrastructure Design

APPLICABILITY:

- This Specification Bulletin (SB) is effective for projects advertised on or after 2/20/17.

SUPERSEDEENCE:

- This SB supersedes the following SBs: **NONE**

ATTACHMENTS:

NONE

**REVISIONS TO THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION
STANDARD HIGHWAY SPECIFICATIONS VOLUME 1 OF 2, DATED 8/1/15:**

All references contained below are to the New York City Department of Transportation Standard Highway Specifications, Dated August 1, 2015. Said Standard Highway Specifications are hereby revised as follows:

- a) **Refer** to Page 9, Section 1.06.18 – Records of Subsurface Structures, Etc.;

Delete the first two paragraphs;

Add the following paragraph to the beginning of the Section:

“The Contractor stipulates that it has the obligation to examine and review any and all available documents and other sources of information concerning the condition of the sub-soil materials, subsurface conditions and existing subsurface structures of bridges, pipes, tunnels, conduits, sewers, foundations, bulkhead walls and other subsurface structures and stipulates that it has made such investigation and research as it deems necessary. To the extent the Contractor incurs delays or damages based on sub-soil materials, subsurface conditions and existing subsurface structures that were known or reasonably could have been known to the Contractor through such available documents or other sources of information, the Contractor will make no claim for such delays or damages.”

(NO TEXT THIS PAGE)

I - PAGES

NEW SECTIONS

NOTICE

UNLESS OTHERWISE NOTED, ALL SECTIONS, SUBSECTIONS, ARTICLES, OR SUBARTICLES AS REFERRED TO HEREIN WITHIN THESE NEW SECTION SPECIFICATIONS SHALL BE THOSE OF THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION'S (NYCDOT'S) CURRENT STANDARD HIGHWAY SPECIFICATIONS WITH CURRENT ADDITIONS, MODIFICATIONS AND REVISIONS TO THE STANDARD HIGHWAY SPECIFICATIONS (R-PAGES).

THE STANDARD HIGHWAY SPECIFICATIONS ARE NOT INCLUDED IN THESE I-PAGES. SEE THE NYCDOT STANDARD HIGHWAY SPECIFICATIONS BOOKS FOR STANDARD SPECIFICATIONS TEXTS.

(NO TEXT ON THIS PAGE)

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(NO TEXT ON THIS PAGE)

**SECTION 4.06CS
EXISTING STRUCTURE – CONDITION SURVEY**

4.06CS.1. INTENT. This section describes the minimum standards and extent by which to conduct and report a condition survey to quantify crack and spalled concrete as indicated in pay items 4.06SR – Concrete Restoration – Spall Repair and 4.06 SCR – Structural Crack Repair.

4.06CS.2. DESCRIPTION.

- a. Furnish all labor, materials, tools, insurance and administration to perform and report a condition survey and inspection of the existing structure within the limits noted in the contract drawings. Work to be performed by the Contractor shall include, but not be limited to:
 - 1. Condition survey of existing concrete within the Contract limits defined as within 12” of proposed anchorage to new work.
 - 2. Notification and coordination with LIRR to allow inspection of areas within the vent shaft and outside the contract limits for repair.

4.06CS.3. METHODOLOGY.

4.06CS.3.1 Applicable Codes, Standards and Specifications.

a. American Concrete Institute (ACI)

<u>DESIGNATION</u>	<u>DESCRIPTION</u>
201.1R	Guide for Conducting a Visual Inspection of Concrete in Service.
224.1R	Causes, Evaluation, and Repair of Cracks in Concrete Structures.
318	Building Code Requirements for Structural Concrete & Commentary.
364.1R	Guide for Evaluation of Concrete Structures Before Rehabilitation.
503.1	Standard Specification for Bonding Hardened Concrete, Steel, Wood, Brick and other Materials to Hardened Concrete with a Multi-Component Epoxy Adhesive.
546.1R	Guide for Repair of Concrete Bridge Superstructures.

b. American Concrete Institute (ACI)

<u>DESIGNATION</u>	<u>DESCRIPTION</u>
No.310.1R-2008	Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion
No.320.1R-2009	Guide for Selecting Application Methods for the Repair of Concrete Surfaces

4.06CS.3.2 Condition Survey

- a. Prior to making any concrete repairs, the Contractor shall make a condition survey of concrete areas to be repaired/rehabilitated as indicated on the contract drawings and within the Contract limits to establish the extent of cracking, spalling or otherwise unsound concrete considered detrimental to the integrity of the proposed structure. The survey shall also indicate locations of seepage into the structure and deposits and staining as a result of seepage. Guidance in conducting and reporting the condition survey can be found in the referenced applicable codes in 4.06CS.3.1. Where dirt, debris, or surface film obscures cracking, the Contractor shall clean concrete surfaces with water so that cracking can be readily observed and mapped.

- b. Where indicated on the Contract Drawings or as directed by the Engineer, the Contractor shall sample concrete in accordance with ASTM C823 to determine the concrete quality. Sampling shall be by drilled cores obtained in accordance with ASTM C42. Size of the core hole shall be 4 inches in diameter unless otherwise approved. Core samples shall be tested by a testing laboratory for unit weight, specific gravity, compressive strength, and chloride content and carbonation level (pH value) throughout the sample. The sample number and location of sampling shall be shown on the condition survey drawings. All sample testing results shall be provided to the Engineer.
- c. The Contractor shall submit to the Engineer detailed drawings of the concrete condition survey. A minimum drawing scale of 1 inch = 8 feet shall be used. Drawings shall have a legend of standard symbols used to describe various observed conditions and shall use terminology as defined in ACI 201.1R. Areas of distress, spall and cracking shall be mapped on the drawings to the approximate scale. Where sampling of in-place hardened concrete is required, the location and sample identification number shall be indicated on the drawings.

4.06CS.4 QUALITY ASSURANCE.

a. Contractor:

- 1. The Contractor performing the condition survey of existing concrete shall have a minimum of five years experience in this type of work under similar conditions.
- 2. A Contractor not meeting the requirements of paragraph 1 above shall hire a Consultant. The Consultant shall have a minimum of five years related experience under similar conditions and shall be present on a full time basis to monitor and supervise the restoration work.

4.06CS.5 SUBMITTALS.

The contractor shall submit:

- a. Condition survey drawings coordinated by Vent and defect type specified in 4.06SR – Concrete Restoration – Spall Repair and 4.06 SCR – Structural Crack Repair mapped against the position of proposed post installed anchors as specified in the contract drawings and specification number 7.19 AA in I-Pages herein.
- b. Updated “LIRR VENT LOCATION, TYPE AND REPAIR SCHEDULE” with repair type recommendations as specified in Contract Drawings

4.06CS.6 MEASUREMENT.

The quantity to be measured for payment shall be the total number of vent shafts surveyed within the project limits for crack and spall repair.

4.06CS.7 PRICES TO COVER.

Payment for conducting the condition survey shall include the cost of all materials, equipment, labor and insurance necessary to conduct the condition survey and produce all applicable submittals is deemed to be included in the bid price for item 4.06CS as a Lump Sum.

4.06CS.8 PAYMENT.

No work shall begin until Existing Structure Condition Survey has accepted by Engineer. No payment will be made for Existing Structure Condition Survey until after Engineer has accepted Existing Structure Condition Survey.

Payment will be made under:

Item No.	Item	Pay Unit
4.06 CS	EXISTING STRUCTURE – CONDITION SURVEY	LS

**SECTION 4.06 SCR
Structural Crack Repair**

4.06SCR.1. INTENT.

This section describes the furnishing, application and institution of restorative concrete crack repair within the concrete repair limits defined in the contract drawings.

4.06SCR.2. DESCRIPTION.

- a. Furnish all labor, materials and tools and perform all operations necessary for restoration of concrete and related work as indicated on the Contract Drawings and as specified herein.
- b. Work to be performed by the Contractor shall include, but not be limited to:
 - 1. Obtaining the Final approved condition survey documents from the Engineer (as described in Section 4.06 CS of I-Pages herein).
 - 2. Addressing all findings of the Approved Condition survey of existing concrete within the Contract limits. See Section 4.06 CS at the I-Pages herein.
 - 3. Removal and disposal of deteriorated and unsound concrete.
 - 4. Surface preparation and cleanup.
 - 5. Sealing of cracks and construction joints.
 - 6. Application of protective coatings or sealers.

4.06SCR.3. MATERIALS.

4.06SCR.3.1 Crack Repair

a. Pressure Injection Repair:

1. Epoxy Surface Seal for Pressure Injection;

- i. Epoxy resin for the surface sealing of cracks and joints shall be 100% solids, moisture insensitive, low viscosity epoxy resin system and shall conform to ASTM C881, Type IV, Grade 3.
- ii. The following epoxy resin shall be used:

Product	Manufacturer
1 "Sikadur 31 Hi-Mod Gel"	by Sika Corporation, Lyndhurst, NJ
2 Euco 452 Series	by Euclid Chemical Co., Cleveland, OH.
3 "Planibond AE"	by MAPEI Corp., Deerfield Beach, FL
4 or approved equal	

2. Epoxy Resin for Pressure Injection;

- i. Epoxy resin for pressure injection of cracks and joints shall be 100% solids, moisture insensitive, low viscosity epoxy resin system and shall conform to ASTM C881, Type IV, Grade 1.
- ii. The following epoxy resin shall be used:

Product	Manufacturer
1 "Sikadur 35 Hi-Mod LV"	by Sika Corporation, Lyndhurst, NJ
2 "Euco #452 LV or Duralcrete LV"	by Euclid Chemical Co., Cleveland, OH.
3 "Planibond CR 50"	by MAPEI Corp., Deerfield Beach, FL
4 or approved equal	

Gravity Feed Repair:

1. Epoxy resin for gravity feed repair of cracks and joints shall be 100% solids, moisture insensitive, super low viscosity (approximately 125 cps) epoxy resin system and shall conform to ASTM C881, Type IV, Grade 1.
2. The following epoxy resins shall be used:

Product	Manufacturer
1 "Sikadur 52 SLV"	by Sika Corporation, Lyndhurst, NJ.
2 "Dural 50 or Dural 335"	by Euclid Chemical Co., Cleveland, OH.
3 "Planibond CR 50"	by MAPEI Corp., Deerfield Beach, FL
4 or approved equal	

4.06SCR.3.2 Cementitious Water Plug

a. The cementitious water plug shall have an initial set time less than 3 minutes (ASTM C266, ASTM C191 or ASTM C807), and be capable of stopping pressure water leakage and seepage and shall conform to the following requirement:

1. Compressive strength (ASTM C109) shall be a minimum of 3000 psi at 1 day and 6800 psi at 7 days.
 2. Tensile strength (ASTM C496) shall be a minimum of 700 psi at 28 days.
- b. Cementitious water plug shall be as follows:

Product	Manufacturer
1 "Sikaset Plug"	by Sika Corporation, Lyndhurst, NJ.
2 "Speed Plug"	by Euclid Chemical Co., Cleveland, OH.
3 "Planiseal PLUG"	By MAPEI Corp., Deerfield Beach, FL
4 or approved equal	

4.06SCR.4. CONSTRUCTION METHODS.

4.06SCR.4.1 Temporary Supports.

- a. Furnish and install temporary structural supports where required to prevent damage to the structure from concrete removal.

4.06SCR.4.2 Crack Repair

a. Surface Preparation:

1. Where cracks are to be filled by epoxy injection, the surface of the concrete for a distance of 1 1/2 inches on each side of the crack shall be thoroughly cleaned by mechanical means to provide a suitable bonding surface for the epoxy surface sealer.
2. Where cracks are to be filled by the gravity feed epoxy method, the cracks shall be grooved to a minimum depth of 3/4 inch and a width of not less than 3/8 inch by means of a rotary-type random crack saw. The crack shall be cleaned free of dust, debris and all other contaminants by compressed air or vacuuming methods prior to filling. Water shall not be used to clean the crack.
3. Where vertical cracks have active water seepage, the base of the crack shall be drilled, and a drainage pipe shall be installed. The drainage pipe shall be a minimum of 1/2 inch inside diameter and shall be placed at a sufficient depth into the concrete to intercept seepage and relieve water pressure along the exposed surface of the concrete. The pipe shall be recessed at least 1 inch from the surface and shall be tightly capped after completion of the sealing work. The hole shall then be filled with water plug and finished flush with the concrete surface.

b. Epoxy Injection:

1. Prior to injecting epoxy adhesive, entry ports shall be installed and cracks and joints shall be epoxy surface sealed. Entry ports shall be installed at intervals along the crack no greater than the thickness of concrete being injected but not to exceed 6 inches for vertical surfaces or 12 inches for horizontal surfaces. After the injected adhesive has cured, the surface seal and entry ports shall be completely removed by grinding or other appropriate methods.
2. The equipment used to meter and mix the two injection adhesive components and injecting the mixed adhesive into the crack shall be of a nozzlehead mixing and positive displacement type. The injection equipment shall have the capability of discharging the mixed adhesive at pressure up to 200 psi and maintaining that pressure during the entire injection operation. The tolerance on mix ratio shall be plus or minus 5% by volume, of the prescribed mix ratio at any discharge pressure up to 200 psi. The Contractor shall furnish a pressure check device with pressure gauges and valves for checking the pressure on supply lines at the nozzlehead. The mix ratio shall be checked at the beginning and end of each day that injection work is performed.
3. The injection of the adhesive into each crack or joint shall begin at the entry port at the lowest elevation. Injection shall continue at the first port until the injected adhesive begins to flow out of the port at the next highest elevation. The first port shall be plugged and injection started at the second port until the adhesive flows from the next port. The entire crack or joint shall be injected with the same sequence. For overhead cracks, the injection shall start at one end and proceed to the other end. If it appears that the epoxy resin is not being contained within the crack as indicated by high epoxy consumption at low pressure, the Engineer may require a change to an epoxy system with a higher viscosity and/or shorter gel time to assure the crack is effectively sealed.

c. Gravity Feed:

1. The epoxy material shall be poured into the open groove starting at the highest elevation along the length of the crack, taking care to avoid spills. Preparation, installation and curing of the material shall be in accordance with the manufacturer's recommendations.

d. Water Plug:

Water plug shall be mixed and applied in accordance with the manufacturer's instructions. The groove shall be completely filled with plastic material that shall be compacted by applying firm pressure during placement. The filling shall form a continuous seal over the length of the crack.

4.06SCR.5 QUALITY ASSURANCE. The contractor shall be responsible for all coordination of components in order to build the vent extension structure.

4.06SCR.5.1 Submittals. The contractor shall submit:

- a. Condition survey drawings
- b. Manufacturer's product data for approval.
- c. Composite shop drawings, showing sizes, dimensions, finishes, installation and coordination details to minimize field preparation such as cutting and ensure proper drainage will be achieved.

4.06SCR.5.2 Material Handling

- a. Materials shall be stored in accordance with the manufacturer's instructions and shall be protected from damage until used.
- b. Materials with a specific shelf life shall be used within the prescribed time period.
- c. Materials from broken, damaged, or unmarked bags or containers shall not be used.

- d. Manufacturer's instructions shall be strictly adhered to.

4.06SCR5.3 Condition Survey.

Coordinate with the findings of the condition survey required in 4.06CS.

4.06SCR.5.4 Mock-Up

- a. The Engineer will make an evaluation of the surface preparation techniques and the application of workmanship and determine acceptability.
- b. Prepare one mockup for each repair procedure.
- c. Locate mockup surfaces as directed by Engineer or as indicated in Drawings.
- d. Incorporate accepted mockup as part of Work.
- e. Remove mockup when directed by Engineer.

4.06SCR.6 MEASUREMENT.

Treated Cracks shall be measured for payment by the lineal foot (LF) measured along the surface of the crack in 6-inch chords between the extreme ends of the crack rounded up or down to the nearest lineal foot, plus an additional two feet per crack to account for treatment extending beyond the extreme ends of the crack measured. Any treated crack shorter than two feet in length will be measured as three lineal feet in length.

4.06SCR.7 PRICES TO COVER.

Payment for preparing and sealing cracks shall include the cost of all materials, equipment, labor and insurance necessary to repair cracks according to the contract drawings and as specified in the condition survey, and as directed by Engineer including all other work necessary therefore and incidental thereto.

Payment will be made under:

Item No.	Item	Pay Unit
4.06 SCR	STRUCTURAL CRACK REPAIR	L.F.

SECTION 4.06 SR

Concrete Restoration – Spall Repair**4.06SR.1. INTENT.**

This section describes the furnishing, application and institution of restorative concrete spall repair within 12 inches of all new structure. Including but not limited to Concrete spall repair, addressing exposed rebar, surface preparation at new connected structure and sealing finished surfaces.

4.06SR.2. DESCRIPTION.

- a. Furnish all labor, materials tools and perform all operations necessary for restoration of concrete and related work as indicated on the Contract Drawings and as specified herein.
- b. Work to be performed by the Contractor shall include, but not be limited to:
 1. Obtaining the Final approved condition survey documents from the Engineer (as described in Section 4.06 CS of I-Pages herein).
 2. Review Condition survey and updated LIRR repair schedule.
 3. Removal and disposal of deteriorated and unsound concrete.
 4. Surface preparation and cleanup.
 5. Replacement of damaged and excavated concrete and steel reinforcement.
 6. Application of corrosion inhibitors.
 7. Application of protective coatings or sealers.

4.06SR.3. MATERIALS.**4.06SR.3.1 Steel Reinforcement Primer.**

- a. The steel reinforcement primer shall be a cementitious, epoxy modified compound and shall not be a bond inhibitor if applied on a concrete surface. The steel reinforcement primer shall contain a penetrating corrosion inhibitor and shall conform to the following requirements:
 1. Open time for the steel reinforcement primer shall be up to 16 hours.
 2. Bond strength between plastic and hard concrete (ASTM C882) shall be 2800 psi.
 3. The steel reinforcement primer shall be a non-vapor barrier.
- b. The following steel reinforcement primer shall be used:

Product	Manufacturer
1 “Sika Armatec 110 EpoCem”	by Sika Corporation, Lyndhurst, NJ.
2 “Duralprep AC”	by Euclid Chemical Co., Cleveland, OH.
3 “MasterProtect P 8100AP”	by BASF Building Systems, Shakopee, MN
4 or approved equal	

4.06SR.3.2 Concrete Bonding Agent (Cementitious-Epoxy Modified).

- a. The repair mortar to concrete bonding agent shall be a cementitious, epoxy modified compound. The bonding agent shall conform to the following requirements:
 1. Open time for the bonding agent shall be up to 16 hours.
 2. Bond strength between plastic and hard concrete (ASTM C882) shall be 2800 psi.
 3. The bonding agent shall be a non-vapor barrier.
 4. The bonding agent shall be a non-rewettable.

b. The following concrete bonding shall be used:

Product	Manufacturer
1 "Sika Armatec 110 EpoCem"	by Sika Corporation, Lyndhurst, NJ.
2 "Duralprep AC"	by Euclid Chemical Co., Cleveland, OH.
3 "Emaco P24"	by BASF Building Systems, Shakopee, MN
4 or approved equal	

4.06SR.3.3 Epoxy Resin Bonding Adhesive.

a. The epoxy resin bonding adhesive for bonding repair mortar to structural steel shapes shall conform to ASTM C881, Type I, II and V. The grade and resin system shall be as recommended by the manufacturer based on conditions of use.

b. The following bonding adhesive shall be used:

Product	Manufacturer
1 "Sikadur 32 Hi-Mod"	by Sika Corporation, Lyndhurst, NJ.
2 "Euco #452 Epoxy Series or Duralcrete Series"	by Euclid Chemical, Cleveland, OH.
3 "Concresive 1090"	by BASF Building Systems, Shakopee, MN
4 or approved equal	

4.06SR.3.4 Polymer Modified Cementitious Mortar.

a. Hand Applied Repair Mortar:

1. The repair mortar shall be either single or 2 component; polymer modified, and contains a penetrating corrosion inhibitor. The mortar shall have the following minimum physical properties:
 - i. Bond strength (ASTM C882) shall be a minimum of 2100 psi at 28 days.
 - ii. Compressive strength (ASTM C109) shall be a minimum of 2500 psi at 1 day and 7000 psi at 28 days.
 - iii. Flexural strength (ASTM C293) shall be a minimum of 1000 psi at 7 days and 1500 psi at 28 days.
 - iv. Chloride Permeability (ASTM C1202) at 28 days; less than 600 coulombs.
 - v. Splitting tensile strength (ASTM C496) shall be a minimum of 600 psi in 28 days.
2. Horizontal Spall Repairs (Hand Applied):
 - i. The following polymer modified cementitious mortar shall be used:

Product	Manufacturer
1 "Sika Top 122 Plus"	by Sika Corporation, Lyndhurst, NJ
2 "Duraltop Flowable Mortar"	by Euclid Chemical Co., Cleveland, OH.
3 "Emaco R310"	by BASF Building Systems, Shakopee, MN.
4 or approved equal	

3. Vertical and Overhead Spall Repairs (Hand Applied):

i. The following polymer modified cementitious mortar or approved equal shall be used:

	Product	Manufacturer
1	“Sika Top 123 Plus”	by Sika Corporation, Lyndhurst, NJ.
2	“Duraltop Gel”	by Euclid Chemical Co., Cleveland, OH.
3	“Planitop XS”	By MAPEI Corp., Deerfield Beach, FL
4	or approved equal	

b. Form and Pour (or Pump) Spall Repairs:

1. The repair mortar shall be either single or 2 component; polymer modified, and contains a penetrating corrosion inhibitor. The mortar shall have the following minimum physical properties:

- i. Bond strength (ASTM C882) shall be a minimum of 2100 psi at 28 days.
- ii. Compressive strength (ASTM C109) shall be a minimum of 2500 psi at 1 day and 7000 psi at 28 days.
- iii. Flexural strength (ASTM C293 or ASTM C348) shall be a minimum of 500 psi at 1 day and 1500 psi at 28 days.
- iv. Chloride Permeability (ASTM 1202) at 28 days; shall be less than 600 Coulombs.

2. The following polymers modified cementitious mortar shall be used:

	Product	Manufacturer
1	“Sika Top 111 Plus”	by Sika Corporation, Lyndhurst, NJ.
2	“Eucocrete Supreme”	by Euclid Chemical Co., Cleveland, OH.
3	“Planitop 11”	By MAPEI Corp., Deerfield Beach, FL
4	or approved equal	

3. At locations where repair depths exceed manufacturers recommendations for neat mortar, polymer modified concrete shall be utilized through the addition of 3/8” coarse aggregate. Aggregate quantity shall be as recommended by the mortar manufacturer.

4.06SR.3.5 Cementitious Water Plug

a. The cementitious water plug shall have an initial set time less than 3 minutes (ASTM C266, ASTM C191 or ASTM C807), and be capable of stopping pressure water leakage and seepage and shall conform to the following requirement:

- 1. Compressive strength (ASTM C109) shall be a minimum of 3000 psi at 1 day and 6800 psi at 7 days.
- 2. Tensile strength (ASTM C496) shall be a minimum of 700 psi at 28 days.

b. Cementitious water plug shall be as follows:

	Product	Manufacturer
1	“Sikaset Plug”	by Sika Corporation, Lyndhurst, NJ.
2	“Speed Plug”	by Euclid Chemical Co., Cleveland, OH.
3	“Planiseal PLUG”	By MAPEI Corp., Deerfield Beach, FL
4	or approved equal	

4.06SR.3.6 Surface Applied Corrosion Inhibitor

- a. Surface applied corrosion inhibitor capable of displacing chloride ions from steel surface shall conform to the following requirements:
 - 1. Penetrate a minimum of 3” in 28 days; penetrate independently of orientation (horizontal, vertical, and overhead).
 - 2. Corrosion rate reduction (ASTM G109): 65% minimum.
- b. The following surface applied corrosion inhibitors shall be used:

Product	Manufacturer
1 “Sika FerroGard 903”	by Sika Corporation, Lyndhurst, NJ.
2 “Duralprep 3020”	by Euclid Chemical Co., Cleveland, OH.
3 “Mapeshield CI 100”	By Mapei Corp., Deerfield Beach, FL.
4 or approved equal	

4.06SR.4. CONSTRUCTION METHODS

4.06SR.4.1 Temporary Supports.

- a. Furnish and install temporary structural supports where required to prevent damage to the structure from concrete removal.

4.06SR.4.2 Surface Preparation

- a. Limits of Concrete Removal:

- 1. Remove to Sound concrete areas within 12” of new work, defined by the extent and limits of concrete removal based on the condition survey drawings.

- b. Saw Cutting:

- 1. After the areas for removal are marked out, the perimeter shall then be saw cut to a maximum depth of 1/2 inch using a portable concrete masonry saw with a diamond or carborundum blade. Care shall be taken to avoid cutting any reinforcing or other embedded materials. Cuts shall be as straight as practicable and changes in direction shall be maintained at a minimum. Each saw cut shall be made at a slight angle of between 5 and 10 degrees from normal to the concrete surface and in an upward direction away from the area to be removed. The concrete then shall be removed within the saw cut area to a minimum depth of 1/2 inch and as otherwise required to reach sound concrete.

- c. Concrete Removal:

- 1. Concrete removal within the area defined by the saw cut and corners and edges of the structure shall be carefully performed in sections by hand-held air or electric chipping hammers, power scarifiers, hand tools or high pressure water jet until all loose, cracked, porous, soft and disintegrated concrete has been removed and a sound parent concrete surface is reached over the entire section. Additional concrete shall be removed around exposed reinforcing bars and tie rods to provide adequate clearance for cleaning, coating, and re-embedment.
- 2. Care shall be taken during concrete removal so as not to damage the remaining portions of the structural elements. After removing concrete in each section and chipping of concrete behind reinforcement, the reinforcing bars shall be anchored to remaining concrete to prevent movement or displacement of the bars until reembedded.

d. Surface Cleaning:

1. Concrete surfaces to which repairs will be bonded shall be cleaned of all loose, semi-detached and unsound fragments, oil, grease, or other contaminants by methods specified in ACI 546.1R. Immediately prior to placement of new material, final cleaning shall be done with an air-water mixture to remove accumulated surface contamination. If an air-water mixture does not completely remove surface contaminants, the surface shall be water blasted and washed with clean water. Unless specified otherwise by the manufacturer of the repair material, the surface of parent concrete shall be damp, but not wet, when covered with repair material.
2. Surface cleanliness shall be tested by the use of a dark damp cloth. The cloth shall be wiped over prepared concrete surface. No concrete dust or contaminants shall be visible on the cloth.

e. Cleaning of Reinforcement:

1. Steel reinforcement and tie rods, which are exposed by concrete removal, shall be cleaned of all corrosion products, scale, and mortar by water blasting or other appropriate methods.

f. Disposal of Concrete Rubble and Cleanup Debris:

1. Portland cement fragments disintegrated concrete, sand from sandblasting and other cleanup debris shall be removed from the site and disposed of in an appropriate manner. The cleanup of all rubble and debris shall be done on a daily basis during the shift it was created. If bagged, the bags shall be removed from the site within the shift it was created. No debris or bags will be allowed to create an unsightly or a hazardous condition to the public or railroad operations.

4.06SR.4.3 Restoration of Concrete

a. Reinforcement:

1. After the existing reinforcing steel has been fully exposed and cleaned, a measurement for loss of steel cross-sectional area from corrosion shall be made.

b. Coating of Reinforcement with Steel Reinforcement Primer:

1. After the existing reinforcing steel, ties and stirrups has been fully exposed and cleaned, they shall be completely coated with a steel reinforcement primer. The application shall be in accordance with the manufacturer's recommendations.

c. Application of Bonding Agent:

1. In locations where the repairs are to be effectuated by hand application of repair mortar, a bonding agent shall first be applied to the prepared concrete surface. The bonding agent shall be applied in accordance with the manufacturer's recommendations.

d. Water Plug

1. In locations where repairs are found to require a water plug before applying concrete mortar to close spalled area install cementitious water plug.
2. Water plug shall be mixed and applied in accordance with the manufacturer's instructions. The groove shall be completely filled with plastic material that shall be compacted by applying firm pressure during placement. The filling shall form a continuous seal over the length of the crack.

e. Installation of Forms:

1. In locations where the repairs are to be effectuated by form and pour (or pump), install wood or metal forms of sufficient thickness and appropriately braced to support the

imposed loads. Forms shall be designed and constructed in accordance with the requirements of ACI 347R.

f. **Polymer Modified Cementitious Mortar (Pre-Proportioned and Bagged):**

1. Polymer modified cementitious mortar shall be mixed, applied, and finished in accordance with the manufacturer's instructions.
2. Existing expansion, contraction, and control joints and moving cracks in parent concrete shall be maintained through the replacement material. When flexible joint sealant is required, an appropriate joint groove shall be installed in the replacement material.
3. Polymer modified cementitious mortar shall be cured in accordance with manufacturer's instructions and per ACI recommendations.

4.06SR.5 QUALITY ASSURANCE

The contractor shall be responsible for all coordination of components in order to build the vent extension structure.

4.06SR.5.1 Submittals

The contractor shall submit:

- a. Manufacturer's product data for approval.
- b. Composite shop drawings, showing sizes, dimensions, finishes, installation and coordination details to minimize field preparation such as cutting and ensure proper drainage will be achieved.

4.06SR.5.2 Material Handling

- a. Materials shall be stored in accordance with the manufacturer's instructions and shall be protected from damage until used.
- b. Materials with a specific shelf life shall be used within the prescribed time period.
- c. Materials from broken, damaged, or unmarked bags or containers shall not be used.
- d. Manufacturer's instructions shall be strictly adhered to.

4.06SR.5.3 Condition Survey

- a. Coordinate with the findings of the condition survey described in Section 4.06CS of I-Pages herein.

4.06SR.5.4 Mock-Up

- a. The Engineer will make an evaluation of the surface preparation techniques and the application of workmanship and determine acceptability.
- b. Prepare one mockup for each repair procedure.
- c. Locate mockup surfaces as directed by Engineer or as indicated in Drawings.
- d. Incorporate accepted mockup as part of Work.
- e. Remove mockup when directed by Engineer.

4.06SR.6 MEASUREMENT

Measurement for spall repairs will be based on the square foot (SF) surface area of the repair. The area shall be considered as the longest dimension of the area after the unsound surface has been removed times the greatest dimension at right angles to the longest dimension.

4.06SR.7 PRICES TO COVER

Payment for preparing and repairing concrete spalls shall include the cost of all materials, equipment, labor and insurance necessary to repair spalls according to the contract drawings and as specified in the condition survey, and as directed by Engineer including all other work necessary therefore and incidental thereto.

Payment will be made under:

Item No.	Item	Pay Unit
4.06 SR	CONCRETE RESTORATION – SPALL REPAIR	S.F.

SECTION 4.06WS

WATER STOP STRIP AT CONSTRUCTION JOINTS**4.06WS.1. INTENT.**

This section describes the furnishing, application and institution of hydrophilic water stops along concrete joints formed as a result of new construction. .

4.06WS.2. DESCRIPTION.

- a. The Hydrophilic Waterstop shall be a non Bentonite type. The product shall be 3/4 "x 3/8" flexible hydrophilic rubber strip composed of nonvulcanized rubber and urethane polymer as the hydrophilic agent of 3/4" x 3/8" flexible hydrophilic rubber strip composed of rubber and hydrophilic polymer. The waterstop shall have a delay coating to inhibit initial expansion due to moisture present in fresh concrete.
- b. Hydrophilic strip applied waterstop shall be continuously adhered to initial substrate (i.e.: 1st pour concrete) using manufacturer approved adhesive, sealant, or epoxy. Follow manufacturer's recommendations.
- c. The product shall develop no less than 400 psi expansion pressure. The product shall be Certified for potable water use and shall meet the minimum performance requirements as shown in the following table:

PROPERTY	METHOD	MC-2010MN
Hardness HS	ASTM D 2240	* Not less than 30 ± 6
Tensile Strength psi	ASTM D 412	* Not less than 100 psi
Elongation (%)	ASTM D 412	* Not less than 500 %
Specific Gravity	ASTM D 792	1.18 ± 0.15
Expansion Coefficient by volume		* Not less than 1.9
Mass Change %		Not greater than 5.0%

4.06WS.3. CONSTRUCTION METHODS.

- a. Waterstops to be provided at all joints in concrete except where expressly noted otherwise on contract drawings.
- b. Hydrophilic waterstop shall be secured in construction joints and shall be placed in strict adherence to manufacturer's recommendation and as shown on contract document.
- c. Waterstops shall be placed prior to concreting and shall be coordinated with the placing of the reinforcing steel. All embedded items shall be adequately secured in place to avoid shifting during concrete placement.

4.06WS.4. MANUFACTURERS

The following waterstop strip products and manufacturer shall be used:

Product	Manufacturer
1 WATERSTOP-RX	by CETCO, Hoffman Estates, IL
2 HYDROTITE	by SIKA, Lyndhurst, NJ
3 KBA 1510 FP	by ADEKA, Chicago, IL
4 or approved equal	

4.06WS.5. QUALITY ASSURANCE.

The contractor shall be responsible for all coordination of components in order to build the vent extension structure.

4.06WS.5.1 Submittals. The contractor shall submit:

- a. Manufacturer's product data for approval.
- b. Composite shop drawings, showing sizes, dimensions, finishes, installation and coordination details to minimize field preparation such as cutting and ensure proper drainage will be achieved.

4.06WS.5.2 Material Handling.

- a. Materials shall be stored in accordance with the manufacturer's instructions and shall be protected from damage until used.
- b. Materials with a specific shelf life shall be used within the prescribed time period.
- c. Materials from broken, damaged, or unmarked bags or containers shall not be used.
- d. Manufacturer's instructions shall be strictly adhered to.

4.06WS.6 MEASUREMENT.

The quantity to be measured for payment shall be the length (LF) of water stop strip installed, measured in place, in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

4.06WS.7 PRICES TO COVER.

Payment shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to install water stop strip, including but not limited to manufacturer recommended materials and procedures necessary to provide a water tight joint along the roughened surface formed along the existing structure.

Payment will be made under:

Item No.	Item	Pay Unit
4.06 WS	WATER STOP STRIP AT CONSTRUCTION JOINTS	L.F.

SECTION 4.14 E

Epoxy Coated Steel Reinforcement Bars

4.14E.1. DESCRIPTION. The Contractor shall furnish and install epoxy coated steel reinforcement bars for concrete at the locations shown on the plans and where directed by the Engineer. All work shall be done in accordance with the requirement of **Section 4.14** in the NYCDOT Standard Highway Specifications, with the following modifications and additions:

Steel reinforcement bars shall be epoxy coated and shall conform to the requirements of Article 709.04 - Epoxy Coated Bar Reinforcement, Grade 60, of the current Standard Specifications, Construction and Materials, New York State Department of Transportation, Office of Engineering.

Chairs, tie wires, and other devices used to support, position, or fasten the reinforcement shall be made of or coated with a dielectric material. The specific hardware that the Contractor proposes to use shall be approved by the Engineer.

No field bending of bars shall be permitted. Reinforcement shall be carefully formed to the dimensions indicated on the Contract Drawings. Cold bends shall be made around a pin having a minimum diameter of four (4) or more times the least dimension of the reinforcing bars. Reinforcing bars shall not be bent or straightened in a manner that will injure the material. Bars with kinks or bends not shown on the plans shall not be used.

The Contractor shall be required to field repair damaged areas of the bar coating and to replace bars exhibiting severely damaged coatings. The material used for field repair shall be that supplied by the coating applicator. Field repair shall be required wherever the area of coating is broken, unless otherwise specified or directed. Field repair shall not be allowed on bars which have a total damage area greater than five (5) percent of the surface area of the reinforcing bar. The Engineer shall be the sole judge of the severity of the damaged areas for the purpose of repair or replacement. A reinforcing bar having a coating determined by the Engineer to be severely damaged and not field repairable shall not be incorporated in the work and it shall be removed from the work site. All such bars shall be replaced in kind by the Contractor at no additional cost to the City.

No concrete shall be deposited until the Engineer has inspected the placing of the reinforcing steel and has given permission to place the concrete. All concrete placed in violation of this provision will be rejected and removed at the Contractor's own expense.

Payment will be made under:

Item No.	Description	Pay Unit
4.14 E	EPOXY COATED STEEL REINFORCEMENT BARS	LBS

SECTION 4.18 DC
DECOMPACT TREE OVER 6" TO 12" DBH

4.18 DC.1. DESCRIPTION. Under this section, the Contractor shall Decompact Tree Over 6" To 12" DBH, in accordance with the plans, the specifications, and as directed by the Engineer, in consultation with the Contractor's Tree Consultant (Item No. 4.21).

Note: **DBH is defined as Diameter at Breast Height, which is 4'-6" above mean grade.**

4.18 DC.2. GENERAL REQUIREMENTS NOTIFICATION: Before any decompaction work can begin under this item, the Contractor must notify a minimum of 48 hours prior to beginning work both the NYCDPR, Borough Forester, at Central Forestry (718) 760-6794 and the Engineer. All of the following information and instructions are subject to the approval and direction of the Engineer, in consultation with the Tree Consultant (Item 4.21).

4.18 DC.2. QUALIFICATIONS REQUIRED. Qualifications of the Contractor/ Subcontractor who will be performing the work under this Section shall comply with the requirements of those specified for the tree pruning Contractor/Subcontractor under Subsections 4.18.3 (A) and 4.18.3 (E) in the Standard Highway Specifications.

4.18 DC.3. MATERIALS.

Compost: shall contain organic matter, or material of generally humus nature capable of sustaining the growth of vegetation, with no admixture of refuse or material toxic to plant growth. The Compost shall be free of pathogens and stones, lumps, or similar objects larger than two inches (2") in greatest diameter, as well as roots, brush, and weeds.

Composts that have been derived from organic wastes such as food and agriculture residues, animal manures, and sewage sludge that meet the above requirements, and are approved by the New York State DEC, are acceptable compost sources. Compost shall have an approximate N-P-K analysis of at least 1-1-0 as delivered, with a pH between 5.5 and 8.0 and a solids content of at least fifty percent (50%). Compost shall have a minimum of twenty five (25%) to a maximum of fifty percent (50%) organic material.

Compost shall be from Long Island Compost, Islip, NY or "Nature's Choice Compost" by Nature's Choice Corp., Union, NJ, or Agresoil compost by Agresource, Inc. Amesbury, MA or approved equal.

Organic biosolids are not acceptable. Compost available from NYC Department of Sanitation may be acceptable for purposes of this specification. See www.nyc.gov/sanitation or www.nyccompost.org for pick-up sites.

4.18 DC.4. METHODS.

Where specified, existing trees to remain shall be decompacted during construction operations before paving. Decompaction shall be performed utilizing one of the methods listed below as determined by the Engineer, in consultation with the Tree Consultant (Item No. 4.21). All tree root protection shall be removed prior to starting decompaction, and decompaction shall not be performed in frozen ground conditions.

(A) **EXCAVATION:** The line of hand excavation shall be routed to minimize damage to roots within the drip line of existing trees. To prevent damage to tree trunks, branches, and the compacting of soil, no material or equipment should be stored or operated over areas within the drip line of trees. Roots over 1" in diameter may only be cut as directed by the Tree

Consultant (Item No. 4.21) and with written permission of the Engineer. Roots under 1" must be cleanly cut and removed. If directed, the root zone of a tree shall be covered with mulch to a depth of at least six (6) inches or with plywood in order to protect roots from damage caused by heavy equipment during construction.

- (B) **AIR-TILLING OF THE CRITICAL ROOT ZONE METHOD:** Using a pneumatic device, The area within a 3 to 5 foot radius of the tree stem, as determined by the Tree Consultant (**Item No.4.21**), is to be tilled to a depth of 6 to 8-inches using a compressed air gun. Compost backfill shall be applied to the area at a depth of 1-inch and tilled into the soil using a compressed air gun. The area shall be top dressed with four-inches (4") of shredded bark mulch and thoroughly watered.
- (C) **VERTICAL MULCHING METHOD:** Three inch (3") diameter holes, 12" deep, shall be spaced 30" on center, throughout the root zone of the tree. Compost backfill shall be used to fill the holes. The area shall be thoroughly watered after completion.

<u>Tree DBH</u>	<u>Number of 3" Dia. Holes</u>
0-6"	40
6-12"	60
12-18"	80
18-24"	100
24-30"	120
30-36"	160
36-42"	180
42-48"	200
Over 48"	220

Where a pneumatic device is required, work shall be performed through the use of a pneumatic excavation tool with the following requirements:

1. The high air velocity excavation tool shall be specifically designed to fracture, pulverize, and displace porous and semi-porous soils without harming or causing damage to tree roots, existing subsurface utilities or other non-porous objects.
2. The Contractor shall submit catalog cuts from the manufacturer verifying that the Pneumatic excavation tool meets the following criteria:
 Rated Operating Pressure: 6.2 – 7.0 bar
 Air Stream Velocity at Cutting Head: 1,400 – 1600 m/hr
 Air Displacement: 1,100 – 1,300 gal/min

Different nozzles may be used to expedite the work or minimize the amount of airborne material. Where a pneumatic device is used, care shall be taken to avoid rocks being scattered and inadvertently damaging private or public property. In addition, operators must be equipped with adequate protective clothing and gear, in accordance with manufacturer's recommendations. All tree roots exposed by the pneumatic or hand excavation operation must be kept constantly moist with burlap covered with white plastic and checked a minimum of two (2) times a day, once in the morning and once in the afternoon, for a maximum of forty-eight (48) hours, until backfill is complete or as directed by the Tree Consultant (Item No. 4.21).

- (D) **WATERING:** Where excavations are performed within the "drip line" of trees the excavated area shall be backfilled immediately and/or roots shall be kept constantly moist with burlap covered with white plastic until backfill is complete as directed by the Engineer, in consultation with the Tree Consultant (Item No. 4.21).

Watering shall take place at one-week intervals for a period of three weeks following decompaction at a rate of 750 gallons of water per 1000 square feet of decompacted area. The Engineer may order less watering based on weather conditions, resulting soil water content or other factors. If drought conditions warrant, the Engineer may order more frequent watering than scheduled or during non-scheduled periods. A watering schedule shall be submitted to the Engineer each week.

Watering for trees shall be conducted by dispersing water to plants individually. Water shall be delivered to each plant under low pressure through the end of an appropriate sized hose or watering wand, or soaker hose anchored by pins where appropriate. The rate of watering should allow maximum penetration of water into the soil and at a rate that does not displace mulch or soil, cause uprooting or exposure of plant root to the air or break saucers around plants that were created to hold water.

Water shall not be applied in a manner which damages plants, stakes or adjacent areas. Watering shall not cause uprooting or exposure of plant's roots to the air. Damages resulting from these operations shall be immediately repaired at the Contractor's expense.

- (E) **BACKFILLING:** Prior to backfilling, some roots shall be once again pruned back to sound tissue with clean cuts as directed by the Engineer, in consultation with the Tree Consultant (Item 4.21). When excavated material is considered suitable for backfill as determined by the Engineer, in consultation with the Tree Consultant (Item 4.21), it shall be cleaned of large rocks, over three inches (3") diameter, and general debris over three (3") inch in diameter and used for backfill unless specific requirements for backfill have been provided in the respective items of work affected; i.e. retaining walls, curbs, etc. Backfill shall be placed, hand tamped and watered in six (6") inch lifts, immediately after completion, until finished grade is achieved.
- (F) **FERTILIZATION:** If fertilization is considered necessary based on soil test results, it shall be applied according to the levels determined by the Chart below, and as directed by the tree consultant (Item 4.21). Fertilizer shall be applied directly into the holes or trenches and filled with compost as outlined above.

<u>Tree DBH</u>	<u>Ounces per Tree</u>
0-6	120
6-12"	180
12-18"	240
18-24"	300
24-30"	360
30-36"	480
36-42"	540
42-48"	600
over 48"	660

4.18 DC.5. SUBMITTALS.

All submittals shall be as specified in Subsection 4.18.3 (E) of the NYCDOT Standard Highway Specifications. The Contractor shall submit the following for review and approval prior to performing work.

4.18 DC.6. PAYMENT SCHEDULE.

The Contractor will be paid at the following rates for the different size groups of trees decompact based on the bid price for decompacting a tree over six to twelve inch (6"-12") DBH (base unit).

<u>TREE DBH</u>	<u>TREE UNITS</u>	<u>PAYMENT PER TREE</u>
Over 0" to 6"	0.75	75% of unit price bid
Over 6" to 12"	1.00 (base unit)	100% of unit price bid
Over 12" to 18"	1.25	125% of unit price bid
Over 18" to 24"	1.5	150% of unit price bid
Over 24" to 30"	2.0	200% of unit price bid
Over 30" to 36"	2.5	250% of unit price bid
Over 36" to 42"	3.0	300% of unit price bid
Over 42" to 48"	3.5	350% of unit price bid
Over 48"	4.0	400% of unit price bid

For example, decompacting of one thirty-one (31") inch DBH tree would receive payment for 2.5 tree units, decompacting of one twenty-two (22") inch DBH tree would receive payment for 1.5 tree units, and decompacting of one seven (7") inch DBH tree would receive payment for one tree unit, for a total payment of 5.0 tree units.

4.18 DC.7. MEASUREMENT AND PAYMENT. The quantity of DECOMPACT TREE OVER 6" TO 12" DBH to be measured for payment shall be the number of tree units decompact, calculated in accordance with the payment schedule above, to the satisfaction of the Engineer. The price bid shall be a unit price for EACH tree decompact in the OVER 6" to 12" DBH size group, and shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary for decompacting trees, by either air tilling or vertical mulching, watering, applying fertilizer if so directed, and all other incidentals necessary to complete the work, in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

No separate payment shall be made for protecting existing tree roots with woodchips 6" deep and/ or protecting existing tree roots with plywood as directed by the Engineer. The cost shall be deemed to be included in the unit price bid for this item.

Payment will be made under:

Item No.	Description	Pay Unit
4.18 DC	DECOMPACT TREE OVER 6" TO 12" DBH	EACH

SECTION 4.18 DM
GEOTEXTILE/COMPOSITE DRAINAGE MAT & WATERPROOFING

4.18DM.1. DESCRIPTION. This work shall consist of furnishing and installation of subsurface drain system in subsurface and movable planters, including geocomposite drain, filter fabric, fluid applied waterproofing, and related work in accordance with Contract Drawings, specifications and directions of the Engineer. Installer shall be experienced in the installation of drainage mats as specified in this section.

4.18DM.2. MATERIALS.

(A) Geocomposite drainage mat shall be a sheet product manufactured for combined drainage and waterproofing protection, composed of recycled polypropylene filaments fused in a waffle-pattern drainage core bonded to nonwoven geotextile fabric on one side. Thickness to be 0.375" minimum, 0.5" maximum. Total weight to be minimum 22 oz/cubic yard. Compressive Strength to be 30,000 psf or greater without impediment of flow per ASTM D 1621 and ASTM D 4716. Deliver materials to job site in manufacturer's undamaged packaging and complete with installation instructions. Store off ground, under cover, protected from ultra-violet radiation, weather and construction activities.

1. Geocomposite drainage mat shall be one of the following products.

- a. Hydroduct 220 manufactured by Grace Construction
- b. J-DRain 400 manufactured by J-DRain.
- c. MiraDRAIN 9800 manufactured by Carlise.

(B) Filter Geotextile shall produce an equilibrium geotextile-to-soil system that allows for adequate liquid flow with limited soil loss through the geotextile. The Filter Geotextile shall be a minimum 8-ounce per square yard nonwoven-needle-punched synthetic fabric consisting of staple or continuous filament polyester or polypropylene. The Filter Geotextile shall be inert and unaffected by long-term exposure to chemicals or liquids with a pH range from 3 to 10. The Filter Geotextile shall have a minimum threshold water head of 0.25 inches in the "as received" condition.

1. Filter Geotextile shall be one of the following products or "as equal" per the requirements of the New York State DOT Specification Section 207-2.

- a. Mirafi S800 manufactured by Mirafi Corporation Products
- b. SKAPS GE-171 manufactured by Engineered Synthetic Products, Inc.
- c. Propex 4508 manufactured by Amoco Fabrics and Fibers, Inc.

(C) Fluid Applied Waterproofing: cold-applied, solvent-free, non-shrink, liquid waterproofing membrane.

1. Waterproofing membrane shall meet the following properties as determined by laboratory testing:

- a. Solids content: By weight, ASTM D1644: 98%; By volume, ASTM D2697: 98%.
- b. Tensile Strength, ASTM D2370: 70 psi.
- c. Elongation, ASTM D2370: 440%.
- d. Water Vapor Transmission, ASTM E96 (Method B): 0.07 perms.
- e. Shore 00 Hardness, ASTM C661: 55.
- f. Low Temperature Flexibility, ASTM D816: -20° F (-28.9° C) pass ¼ (6.4mm) mandrel.

2. Fluid Applied Waterproofing Membrane shall be one of the following products:
 - a. Procor by Grace Construction Products
 - b. CCW-703 by Carlisle Coatings
 - c. Hydrolastic 836 by W.R Meadows

Provide accessories for joint taping, transitions and reinforcing per manufacturer requirements.

- (D) Submittals. Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications. Submit manufacturer's product data sheets for drainage system specified and product samples.

4.18DM.3. METHODS. The Contractor shall comply with all manufacturer recommendations per installation instructions, data sheets and packaging. Before beginning installation, the Engineer shall inspect and approve the subsurface upon which the mat shall be installed. Prior to installation, ensure waterproofing has been properly installed and flood tested.

(A) Fluid Applied Waterproofing Membrane

1. Protect adjacent surfaces not designated to receive waterproofing.
2. Clean and prepare surfaces to receive waterproofing in accordance with manufacturer's instructions.
3. Do not apply waterproofing to surfaces unacceptable to manufacturer.
4. Clean concrete surfaces so they are free of all coatings, dirt, oil, paints and any other contaminants.
5. Patch all holes and voids and smooth out any surface misalignments.
6. Remove and patch all concrete form ties.
7. Treatment of Existing Cracks and All Non-Structural Joints
 - a. Identify and install detailing membrane in all cracks and all non-structural joints.
 - b. Apply a 30 wet mil coat of the fluid applied membrane ensuring that there is a minimum of 3" (75 mm) of membrane extending onto the wall in all directions.
 - c. Embed the non-woven reinforcing fabric over the entire area of this membrane and work in using trowel.
 - d. Completely cover the glass mesh with a second coat of the fluid applied membrane at 30 wet mils while the first coat is still wet, again extending 3" onto the wall in all directions.
8. Treatment of Inside & Outside Corners
 - a. Install detailing membrane to create a minimum $\frac{3}{4}$ " fillet in all inside corners.
 - b. Apply a 30 wet mil coat of the fluid applied membrane ensuring that there is a minimum of 3" (75 mm) of membrane extending onto the wall in all directions.
 - c. Embed the non-woven reinforcing fabric over the entire area of this membrane and work in using trowel.
 - d. Completely cover the glass mesh with a second coat of fluid applied membrane at 30 wet mils while the first coat is still wet, again extending 3" onto the wall in all directions.
 - e. On outside corners subject to backfilling, install reinforced joint tape in lieu of fabric joint tape following the same procedure.
9. Apply waterproofing membrane system in accordance with manufacturer's instructions.
10. Gently mix membrane prior to application.
11. Apply membrane by trowel, flat-blade squeegee, or roller, at a minimum coverage rate of 25 ft.²/U.S. gal (2.3 m²/3.78 L), providing a thickness of 60 wet mils.

12. If a two-coat application is required, apply second coat as soon as possible with no more than eight hours between coats providing a minimum total thickness of 60 wet mils.
13. Frequently inspect surface area to ensure proper adhesion and consistent thickness is achieved.
14. Work material into any fluted rib forming indentations.
15. Provide minimum cured membrane thickness of 60 mils dry.
16. Protect membrane with application of waterproofing protection course, drainage board, or other approved material.
17. Backfill immediately using care to avoid damaging waterproofing membrane system.

(B) Geocomposite Drainage Mat:

1. Geocomposite drainage mat and the Filter Geotextile shall be placed to the lines and grades shown on the Contract Drawings. At the time of installation, the Geocomposite drainage mat and Geotextile Fabrics may be rejected by the Engineer if it has defects, rips, holes, flaws, evidence of deterioration, or other damage.
2. The Filter Geotextile shall be place smooth and free of wrinkles.
3. Geocomposite drainage mat and the Filter Geotextile shall be temporarily secured in a manner acceptable to the Engineer prior to placement of overlaying materials. The Contractor shall be responsible for repair or replacement of any Geotextile damaged due to the effects of wind, water or sediment during construction.
4. -the Filter Geotextile fouled by sediment during construction shall be removed and replaced by the Contractor if, in the opinion of the Engineer, filter of separation function of the Geotextile is compromised.
5. Geocomposite drainage mat and Geotextile Fabrics shall be off limits to vehicle and/or construction traffic. Any damage due to vehicle traffic shall be repaired by the Contractor at no cost to the City.
6. Any Geocomposite drainage mat and the Filter Geotextile that is torn or punctured shall be repaired or replaced as directed by the Engineer at no additional cost to the City.
7. The Contractor shall not cause damage to Geocomposite drainage mat and the Filter Geotextile during placement or compaction of overlaying materials.

(C) When requested by the Engineer, provide a manufacturer representative to review work performed.

4.18DM.4. MEASUREMENT. The quantity to be measured for payment shall be the number of square feet of Geotextile/Polyethylene Drainage Mat installed to the satisfaction of the Engineer.

4.18DM.5. PRICE TO COVER. The unit price bid per square foot of the Geocomposite Drainage Mat and Filter Geotextile shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work as required; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
4.18 DM	GEOTEXTILE/COMPOSITE DRAINAGE MAT	S.F.

SECTION 4.18 RP
Root Pruning

4.18RP.1. INTENT. Under this section, this work shall consist of cleanly pruning, existing tree roots severed during construction operations, typically related to linear excavation, as shown in the contract documents and as directed by the Engineer.

4.18RP.2. DESCRIPTION. The Contractor shall root prune designated trees in accordance with the specifications and as directed by the Engineer, under permit issued by the New York City Department of Parks and Recreation (D.P.R.) which may be obtained from the Borough's Forestry Office.

4.18RP.3. MATERIALS AND METHODS.

(A) GENERAL

Procedures must be performed in the presence of the Tree Consultant (Item 4.21). The work shall be performed where shown on the plans and as directed by the Engineer. Prior to any tree root pruning work, the Tree Consultant (Item 4.21) shall visually inspect each tree. Prior to pruning tree roots greater than 2 inches in diameter or tree roots within the tree critical root zone, Contractor shall contact the Borough Forester for approval. Pruning shall be performed in such a manner so as to avoid damage to other parts of the tree or other vegetation within proximity of the tree being pruned. The Contractor shall carefully protect from damage all existing vegetation, site features, and all other property which is to remain.

Existing tree roots greater than 1 inch in diameter, measured at the edge of excavation, shall be pruned within 24 hours of the time they have been damaged by construction activity. The severed root shall be pruned at the edge of excavation, or 1 inch beyond the entire damaged portion of the tree root if damaged root extends beyond the edge of excavation into undisturbed soil.

The excavated area around the existing tree roots shall be backfilled as soon as construction activities permit with the specified or approved materials. If the excavated area around the existing tree roots is not backfilled within 24 hours, all roots shall be kept moist, with burlap covered with white plastic to prevent dessication. Burlap shall be checked a minimum of two times a day, once in the morning and once in the afternoon, for a minimum of 48 hours until backfill is complete as directed by the Agency. If directed, soaker hoses shall be installed to facilitate properly moist conditions of excavated areas.

(B) EQUIPMENT

Pruning shall be in accordance with ANSI A300 Part 1 *Standard Practices Pruning* and ANSI Z133.1 *Arboricultural Operations Safety*. All cuts shall be cleanly made with sharp tools. All tools used and methods employed shall be as approved by the Engineer prior to the start of work. The cutting surfaces of all tools, ladders, ropes, soles of

workers shoes and other objects coming into contact with the tree roots shall be washed with a disinfectant at the start of any work on a tree to prevent the spread of plant diseases.

(C) ROOT PRUNING

Certain trees should not be root pruned, such as trees in poor condition or trees that are leaning. In addition, some species do not respond well to root pruning, such as tulip tree (*Liriodendron tulipifera*), Chinese evergreen elm (*Ulmus parvifolia*), and callery pear (*Pyrus calleryana*). To minimize root pruning impacts, a tree assessment shall be conducted by the Tree Consultant (Item 4.21) and the root pruning contractor or subcontractor, prior to pruning. Both tree and site conditions need to be evaluated to determine the potential for injury and structural stability loss. The tree assessment shall list the species

Proposed for root pruning, the size in caliper of each tree and their locations, and shall be provided to the Engineer for his approval.

Root pruning of the tree shall be performed where directed by the Engineer, in consultation with the Tree Consultant (Item 4.21). At the conclusion of root pruning, the Contractor shall fertilize the tree with a fertilizer recommended by the Tree Consultant (Item 4.21) (Arborist) to stimulate root growth, and thoroughly water the tree. The Contractor shall further water the tree weekly for three months following the root pruning operations, then twice a month for the next three months, and finally, on a monthly bases for the next three months. The Contractor's responsibilities for watering the tree shall end after nine (9) months.

The Contractor shall be liable for any and all damage caused by root pruning operations to adjacent or nearby trees, plants and other growth, features and other real property. All damaged trees, plants, other growth features and other real property, and vehicles shall be replaced or restored or provided for to their original condition to the satisfaction of the Engineer.

(D) CLEANING AND DISPOSAL

All pruned materials and all other debris shall be removed from the site within 24 hours, and disposed of as directed by the Engineer.

4.18RP.4. MEASUREMENT. The quantity to be measured for payment shall be the number of trees actually root pruned to the satisfaction of the Engineer.

4.18RP.5. PRICE TO COVER. The contract price for Root Pruning shall be a unit price per each tree root pruned and shall cover the cost of all labor, materials, plant equipment, inspection, insurance and incidentals required to complete the work including, but not limited to, watering and fertilizing the tree, all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Maintenance Tree Pruning and the Transplanting of Trees shall be paid under separate items.

Payment will be made under:

Item No.	Item	Pay Unit
4.18 R	TREE ROOT PRUNING (UNDER 12" Caliper)	EACH
4.18 RP	ROOT PRUNING (12" Caliper and Larger)	EACH

SECTION 6.04 DG
Decorative Gravel

6.04DG.1. DESCRIPTION. This section describes the furnishing and placing of Decorative Gravel for use as maintenance paths in medians, in accordance with the plans and the directions of the Engineer.

6.04DG.2. MATERIALS.

(A) DECORATIVE GRAVEL: Unless otherwise specified, decorative gravel shall be grey color equal to "Plymouth Brown" as supplied by Geo. Schofield Co., Inc. P.O. Box 110 Bound Brook, NJ 08805, Telephone No. (800) 827-6257; New York Sand and Stone, Brooklyn Navy Yard, PIER "J", Brooklyn, NY 11205, Telephone No. (718) 596-2897; Bedford Gravel and Landscape Supply, Inc. 27 Norm Avenue Mount Kisco, NY 10549, Telephone No. (914) 241-3851; or, an approved equivalent.

(B) Material shall be 3/8" (AASHTO #8) at a depth of five (5") inches, free from clay lump, organic or other deleterious material. Fines shall be evenly mixed throughout the aggregate. Screenings shall be graded within the following limits:

Passing Sieve (Dry Analysis)	Percent by Weight
No. 16	2.7%
No. 8	6%
No. 4	24%
3/8"	95%
1/2"	100%
Specific Gravity:	2.83
Absorption:	0.65

The Engineer reserves the right to reject on or after delivery any material, which does not, in his opinion, meet these specifications.

(C) STEEL EDGING STRIP: The forms for this work shall be steel edging strips and shall meet the requirements of **Section 6.74 B**. All forms shall be straight, free from bends and warps at all times, and shall be cleaned thoroughly before gravel is placed against them.

6.04DG.3. METHODS:

(A) PREPARATION: After the tree has been planted and backfilled, under the appropriately scheduled tree planting item, the Contractor shall install the steel edging strip.

(B) STEEL EDGING STRIP: The steel edging strips shall be furnished and installed, under Item No. 6.74 B, as shown on the plans. The Contractor shall finish installation of stakes and steel edging strips prior to placement of gravel.

(C) FINISHING: The Decorative Gravel shall be carefully placed and spread to a thickness of five (5") inches around the new tree. Finish grade of the decorative gravel shall be flush with top of the adjacent 4" x 4" Granite Setts on Sand Base (Item No. 6.06 GS44SB) as shown on the plans.

With fog nozzle water lightly but thoroughly, pressure should not disturb leveled surface.

Any significant irregularities shall be smoothed out prior to final acceptance of work.

6.04DG.4. SUBMITTALS. A three (3) pound bag of Decorative Gravel shall be submitted to the Engineer for approval, along with a sieve analysis and the name of the supplier.

6.04DG.5. MEASUREMENT. The quantity of to be paid for under this item shall be the actual number of Square Yards of Decorative Gravel placed at the site to the satisfaction of the Engineer.

6.04DG.6. PRICE TO COVER. The unit price bid per square yard of Decorative Gravel shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work, all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Excavation shall be paid separately under the "Unclassified Excavation" item 6.02 AAN. Steel Edging Strip shall be paid separately under Item 6.74 B.

Payment will be made under:

Item No.	Item	Pay Unit
6.04 DG	DECORATIVE GRAVEL	S.Y.

SECTION 6.29 TTM
Temporary Tubular Markers

6.29TTM.1. INTENT. This section describes the work of furnishing, installing, maintaining, and removing Temporary Tubular Markers.

6.29TTM.2. DESCRIPTION. Under this section, the Contractor shall furnish, install, maintain, relocate, and remove, when directed, Temporary Tubular Markers as indicated on the contract drawings and as directed by the Engineer. Tubular markers shall be defined by the National Cooperative Highway Research Program (NCHRP) Report 350 as a Category I device.

6.29TTM.3. MATERIALS. Tubular Markers shall conform to the specifications set forth in the National Manual on Uniform Traffic Control Devices for Streets and Highways (National MUTCD) plus the New York State Supplemental (NYS Supplement) and shall be NCHRP 350 approved. Tubular markers shall be orange, with a minimum height of 36" (900-mm) and a minimum outside diameter of 2" (50-mm). Tubular Markers shall be circular or elliptical in cross section and shall have a maximum weight of 13-lb (6-kg), not including a mounting base.

Tubular Markers shall have two horizontal circumferential stripes of white reflective sheeting a minimum of 3" (75-mm) wide. The top edge of the upper band shall be a maximum of 2" (50-mm) from the top of the marker. The space stripes between shall not exceed 6" (150-mm).

Reflective sheeting shall conform to NYSDOT Standard Highway Specification Section 730-05 *Reflective Sheeting* ASTM D4956 Type I or Type III. The sheeting shall be bonded to the post with a pre-coated, pressure-sensitive adhesive or a tack-free, heat activated adhesive. Mechanical fasteners to bond reflective sheeting to the post will not be allowed.

For free-standing tubular Temporary Tubular Markers, the base and/or any nonflexible portion of the marker shall not be more than 2" (50-mm) in height.

For tubular Temporary Tubular Markers fastened to pavement, the bonding system used shall be a fast-setting chemical compound, mastic-type material, or mechanical fastener capable of fixing the tubular marker to either concrete or asphalt pavement. The bonding system shall not present a hazard to traffic if the tubular marker or base unit becomes unfixed from the pavement.

Acceptance of materials will be based on the manufacturer's name and type of tubular marker appearing on the most current New York State Department of Transportation's Approved List titled "Tubular Markers."

6.29TTM.4. METHODS. The Contractor shall install Temporary Tubular Markers in accordance with the contract documents or as directed by the Engineer. The Contractor shall attach the tubular markers to the pavement in a manner that prevents them from being moved or dislodged by traffic. Tubular markers shall be installed on pavement that has been cleaned to remove pavement markings, oil, dirt, or other debris or substances that may interfere with a proper bond. Attachment to the pavement shall be by mechanical fastener or by adhesive, in accordance with the manufacturer's recommendations. Bonding agents shall be of sufficient amount or size to ensure proper bonding of the base to the pavement.

All temporary tubular markers shall be maintained upright, at proper spacing, in proper alignment and orientation, kept clean, and replaced as required during the various stages of construction.

Temporary tubular markers removed or damaged by the Contractor's operations or by traffic shall be replaced immediately, so that positive separation is maintained between opposing lanes of traffic at all times. Damaged reflective sheeting on interim tubular markers shall be replaced before nightfall as necessary to maintain adequate visibility of the markers. In cases where only isolated individual markers are lost or damaged, and adequate visibility is maintained by the remaining markers,

replacement will not be required until more than one (1) consecutive markers have been damaged or lost.

At the completion of the work or when directed by the Engineer, the temporary tubular markers shall be removed and disposed of away from the work site.

6.29TTM.5. MEASUREMENT. The quantity to be measured for payment shall be the actual number of Temporary Tubular Markers placed in the work, to the satisfaction of the Engineer.

Payment will be made only for the initial installation at any location. Whenever Temporary Tubular Markers are moved to a new location, as required by the contract drawings or directed by the Engineer, payment will be made in the same manner as if it were an initial installation. However, only tubular markers that are in satisfactory conditions may be relocated to a new location. Minor movement of the Temporary Tubular Markers from one side of the roadway to the other side, or rearrangement within a work area will not be considered as a movement to a new location and will not entitle the Contractor to additional payment.

No payment will be made for movements of Temporary Tubular Markers made for the Contractor's convenience; for movement of Temporary Tubular Markers at a given location at the end of a work period and subsequent replacement at the same location at the beginning of the next work period; for movement of Temporary Tubular Markers at a given location during a work period and subsequent replacement at the same location during the same work period; or for the interchanging of Temporary Tubular Markers between initial installations.

6.29TTM.6. PRICE TO COVER. The contract price bid per each for Item No. 6.29 TTM - TEMPORARY TUBULAR MARKERS, shall cover the cost of furnishing all labor, materials, equipment, insurance, and necessary incidentals required to complete the work of furnishing, installing, maintaining, relocating, and removing tubular markers, all in accordance with the contract drawings, the specifications and the directions of the Engineer. No additional payment will be made for replacing damaged markers.

Payment will be made under:

Item No.	Item	Pay Unit
6.29 TTM	TEMPORARY TUBULAR MARKERS	EACH

SECTION 6.52 FED
Uniformed Flagperson

6.52FED.1. INTENT. This section describes the employment of uniformed flagpersons to direct and detour traffic.

6.52FED.2. DESCRIPTION. The Contractor shall furnish an adequate number of flagpersons to control vehicular and pedestrian traffic when it is necessary to maintain alternating one-way traffic in one lane of a two-way roadway, and at all other locations where construction operations, construction vehicles and equipment, and temporary traffic patterns related to the construction operations require positive temporary traffic control for safe, efficient traffic operations.

6.52FED.3. METHODS. All flagpersons shall be proficient in speaking, writing and reading English, and adequately trained in flagging operations by a recognized training program such as that provided by the American Traffic Safety Services Association, the National Safety Council, unions or construction industry associations, or by an individual who holds a current certification as a flagger training instructor from such a program.

All flagpersons, their apparel, hand-signaling devices, active two-way radios, and procedures to be used by them shall be in compliance with the requirements of Chapter 6E. FLAGGER CONTROL, in the Federal "Manual on Uniform Traffic Control Devices for Streets and Highways" 2009 Edition, or later edition.

Prior to the start of flagging operations, the Contractor shall provide to the Engineer a list of certified flagpersons to be used in the contract, identifying the source of flagger training for each individual. When requested by the Engineer, flagpersons shall demonstrate their competency in flagging procedures. Flagpersons not competent in flagging procedures to the satisfaction of the Engineer shall be retrained or replaced at once.

Flagpersons are to be paid not less than the most recent prevailing wages rates established for Laborers as set by the NYC Comptroller or the US Department of Labor, whichever is higher at the time the work is being performed.

The Contractor will be given a minimum of 12 hours advanced notice by the Engineer as to when to furnish a flagperson.

6.52FED.4. METHOD OF MEASUREMENT. The fixed price lump sum shown in the bid proposal for this item shall be considered the price bid, although actual payment will be based on the authorized work performed by the Uniformed Flagpersons. The fixed sum is not to be altered in any manner by the bidder.

It is agreed that the quantity to be measured for payment shall be the number of person-hours of uniformed flagperson service actually performed, as authorized by the Engineer.

Laborers who are not uniformed flagperson will not be measured for payment as flagperson under this item.

6.52FED.5. BASIS OF PAYMENT. The Contract price for this item shall be a lump sum price for the work performed under this item and shall be equal to the total sum of the amount of wages paid for all authorized Uniformed Flagpersons performing vehicular and pedestrian traffic management, with a twelve (12%) percent markup for Overhead, except that no percentage for overhead will be allowed on Payroll Taxes or on the premium portion of overtime pay or on sales and personal property taxes; plus ten (10%) as compensation for Profit, except that no percentage for profit will be allowed on Payroll Taxes or on the premium portion of overtime pay or on sales and personal property taxes; as described in Article 26 of the Standard Construction Contract.

Overhead shall include without limitation, all costs and expenses in connection with administration, management superintendence, and all material costs for their apparel, hand-signaling devices, active two-

way radios, and any other equipment required, and insurance required by Schedule A of the General Conditions other than Workers' Compensation Insurance.

The hourly rate per person-hour shall be the prevailing wage rate for Laborers in effect at the time of the work to control and detour traffic, as shown on the Contract Drawings or as directed by the Engineer.

The Contactor shall be required to submit to the Engineer satisfactory evidence of payment on a New York State certified payroll report forms. No retainage will be withheld by the Department on such payments made under this section.

The total estimated cost of this item is the "fixed sum" amount shown for this item in the Bid Schedule. No guarantee is given that the actual total cost for this item will in fact be the "fixed sum" amount. The "fixed sum" amount is included in the total bid solely to insure that sufficient monies will be available to pay the Contractor for these services.

The "fixed sum" is for bidding purposes only and shall not be varied in the bid. The Contractor will be paid for the actual amount regardless of the fixed sum, which may be more or less than the fixed sum amount.

The Contractor shall maintain separate books of accounts and shall not charge any portion of the cost of wages for Uniformed Flagpersons to another part of the work. Payment and partial payments under this item shall be treated separately from the rest of the contract items.

The New York State certified payroll report forms shall be submitted to the Engineer on a monthly basis and shall include the signed copies of the daily report.

Payment will be made under:

Item No.	Item	Pay Unit
6.52 FED	UNIFORMED FLAGPERSON	FIXED SUM

ITEM 637.95 20
FIELD INFORMATION MANAGEMENT SYSTEM

DESCRIPTION:

This work shall consist of providing a fully operational field information collection and management system and support services.

MATERIALS:

The field information management system shall include all the components, and adhere to, the specifications in Attachment A attached to this specification.

The Contractor is required to have the vendor of the field information management system on call for support services for the duration of the contract.

CONSTRUCTION DETAILS:

The Contractor shall provide and maintain a field information management system with access made available to parties as designated by the Engineer. The Contractor shall make the system fully operational, including training, prior to the project first working day.

The system shall be maintained and remain in service until either: (a) the Engineer requests its removal in writing, (b) the NYCDOT relinquishes the Engineer's field office and the field information management system is relinquished as part of the Engineer's field office, or (c) the later of either thirty (30) days after the final contract acceptance date or thirty (30) days after the date the Contractor provided the last documentation necessary for processing the final contract acceptance.

Ownership of the software supplied by the Contractor shall remain the property of New York City Department of Transportation (NYCDOT). All data is the property of NYCDOT and shall be provided in a useable format at the completion of the contract.

The Contractor shall maintain the information management system vendor account in good standing to prevent service interruptions for the duration of the project.

METHOD OF MEASUREMENT:

The field information management system will be measured on a fixed price Dollar Cents pay unit basis.

BASIS OF PAYMENT:

The pay item is a 'draw down' item. As materials are supplied, the receipts for the materials shall be submitted to the Engineer (Note: 'materials' includes all software, software customizations, labor, services, and service contracts provided to furnish and maintain all of the components of the system). The Contractor will be reimbursed for receipted costs of materials plus five percent (5%) for profit and overhead.

The total cost shown in the itemized proposal for this pay item will be considered the price bid even though payment will be made only for actual materials supplied, with profit and overhead. The unit price amount is not to be altered in any manner by the bidder. Should the bidder alter the amount shown, the altered figure will be disregarded, and the original price will be used to determine the total amount bid for the contract.

ITEM 637.95 20 – FIELD INFORMATION MANAGEMENT SYSTEM

ATTACHMENT A

This pay item shall include supplying a cloud based field information management system with the following capabilities.

ACCESS

- Accessible from any internet connected desktop and laptop through a vendor supported browser
- Accessible from vendor supported mobile tablets (ex. Apple iPad)

SYSTEM FUNCTIONALITY

The system will provide the following functionality in real time to all authorized users:

- **Field Recording**
 - Work Report (Inspector Reports) progress tracking quantity, labor, equipment, field sketches, forms, etc.
 - Engineer Reports (EIC Journals) with automatically integrated Work Reports
 - Punch List Issue tracking with Ball In Court, Priority and Due Date assignment
- **Cost Control**
 - Generate Payment Estimate (Progress Payment) with thresholds to warn Engineer of the following payment scenarios: Quantity Over Authorized Quantity, Quantity Over Material Acceptance Restriction, Charge to Contractor Recorded, Force Account Estimate limit, Field Change Payment Recorded, Major Item Over Run, Minor Item Over Run and Material Partial Payment Recorded
 - Material Acceptance Tracking Module
 - Material Partial Payment (MOH/Stockpile) Module
 - Contract Change Order Module
 - Field Change Payment Tracking
 - DBE Tracking
 - Retainage Tracking
 - Provide electronic data input into NYSDOT CEES system
 - Project Close Out Milestone tracking and CEES based Close Out Reports
 - CEES based Reporting Module
- **Document Control (all with Ball in Court, Priority, Due Date and electronic notifications for electronic communication between project participants)**
 - Request For Information (RFI) Module
 - Submittal Module
 - Submittal Package Module
 - Transmittal Module
 - Meeting Minutes Module
 - Messages Module
 - File Cabinet for storage of (Photos, Videos, Forms, Contract Documents, Specifications and all project files)
- **Ability to electronically load files into File Cabinet via upload and/or email into from web based email systems**
 - Plan Module. (Ability to view, organize and submit/approve original & marked up plans)
- **Scheduling**
 - Display current approved CMP schedule

ITEM 637.95 20 – FIELD INFORMATION MANAGEMENT SYSTEM

- Ability to record activities against CPM schedule
- Ability to export actual activities used information into Scheduling Software
- Archive. Provide automated conversion of Project records into text selectable PDF files organized into standard folder structure for storage and/or printing
- Provide continual (when and wherever wireless service is reasonably available) two-way synchronization between all components of the system
 - Provide offline option for vendor approved mobile device
- Integrated Search Module
- Support/Help Module

DATA REQUIREMENTS

The following information is required for Project Set Up

- Searchable Contract Plans and Proposal
- Searchable Standard Specifications
- Searchable common Data Resources (MURK Manuals, Standard Sheets, Engineering Instructions, etc.)
- Initial CPM Schedule
- Field User Forms

DATA STORAGE /TRANSFER

- Data shall be stored and maintained on a cloud based server with regular secondary location backups
- Continual access to system shall be available from the office and field office shall be provided (via internet)
- Raw data will be made available to NYCDOT through provided API
- All data shall be transferred to NYCDOT in a useable electronic format at the end of the contract

MAINTENANCE /SERVICE

- Any as-needed maintenance/service/upgrades shall be provided in a timely manner
- Software is able to be customized for NYCDOT direction

TRAINING

- In-person training on the use of the systems shall be provided
- Continuous help call support also shall be available for the duration of the contract
- Training and support services shall be performed by a qualified representative from the field information management system vendor

SECTION 6.74 B
Steel Edging Strip

6.74B.1. DESCRIPTION. Under this section, the Contractor shall furnish and install steel edging strip as shown on the plans, and in accordance with specifications and the directions of the Engineer.

6.74B.2. Material. Steel edge shall consist of lengths of hot rolled steel sections, one quarter (1/4") inch thick by five (5") inches in depth by twenty (20') feet in length. Tapered steel stakes, eighteen (18") inches long, shall be spaced thirty (30") inches on center along the length of the edging. Joints between edging strips shall be overlapped as indicated on the plans. All edging and stakes shall be shop painted with weather resistant paint. Color of paint is to be green as approved by the Engineer. Steel edging shall be "Ryerson Steel Edge" as manufactured by Ryerson-Thypin Steel Co., Eastern, PA.; "Steel Landscape Edging" by Border Concepts, Charlotte, NC; "Landscape and Driveway Edging" by Fisher Bros. Steel Corp., Englewood, NJ; or approval equivalent.

6.74B.3. Construction Methods. The steel edging shall be installed true to line and grade in accordance with the designs indicated on the plans. All bends and curves shall be smooth and uniform. Where bends or curves are of such radius as to make field bending impracticable, they shall be made in the shop. All joints shall be welded as shown on the plans.

6.74B.4. Measurement. The quantities to be measured for payment shall be the total number of linear feet of steel edging strip actually installed to the satisfaction of the Engineer. No additional measurement will be made for laps.

6.75B.5. Price to Cover. The contract price bid per linear foot for Steel Edging Strip shall cover the cost of all labor, material, plant, equipment, insurance, and incidentals required to furnish and install steel edging strip including, but not limited to, stakes as required, all in accordance with the plans, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
6.74 B	STEEL EDGING STRIP	L.F.

SECTION 7.01 RG
LIRR Raised Subway Collar Frame and Gratings

7.01RG.1 INTENT. This section describes the replacement and/or resetting of existing median gratings onto a raised concrete vent shaft as indicated on the Contract Drawings.

7.01RG.2 DESCRIPTION. Under this section, the Contractor shall reset and/or replace existing worn or damaged subway median sidewalk frames and gratings where directed; all in accordance with the Contract Drawings, Specifications, and the directions of the Engineer.

7.01RG.3 MATERIALS. All materials shall be fabricated in accordance with the applicable requirements of Section 7.01.3, except that the raised grating shall comply with the following requirements:

- A. Designed to support a minimum of 1250 PSF Live Load.
- B. New gratings shall be Hot dipped galvanized and of a welded grating design, similar to 11-W-4 by Grating Pacific Products or an approved equivalent with 2" x 3/16" main bearing bars spaced at 11/16 inches center to center spanning parallel to the direction of traffic.
- C. Installed with a removable grating panel, (1) panel wide, located at either side of the maintenance path and coordinated with landscaping. The removable grating panel is to be constructed with a locking device in accordance with the Contract Drawings and details.
- D. Have overall dimensions, details, and number of panels in accordance with the Contract Drawings and the requirements of the Metropolitan Transit Authority – Long Island Rail Road.
- E. Angles 3" x 2-1/2" x 1/2" SLV to be hot dipped galvanized and serve as support framing to be constructed integral with the raised vent wall by way of 1/2"x6" welded studs located in accordance with the Contract Drawings and details.

7.01RG.4 CONSTRUCTION METHODS. All construction methods shall be followed in accordance with the applicable requirement of Section 7.01.4, except that the raised grating shall comply with the following requirements:

A. GENERAL

- i. Contractor shall provide 10 day notification to LIRR prior to the removal of the existing vent gratings to coordinate cleanout of the existing drip pan.
- ii. Existing subway construction designated to remain shall be maintained and protected. Damage caused by the Contractor's operations shall be repaired or replaced at the Contractor's own expense, to the satisfaction of the Engineer.
- iii. See typical plan drawings for location of removable grating panels relative to the proposed maintenance path.

B. FURNISHING AND INSTALLING EXISTING GRATING ON NEW RAISED VENT FRAMES

- i. The Contractor shall, where indicated on the Contract Drawings, carefully remove existing sidewalk gratings and support framing.
- ii. Contractor shall dispose of existing support framing and safely store existing grating to be reset on new angle support framing.
- iii. Where damage to existing grating and/or galvanized coating on existing grating to be reset is found unsuitable by the Engineer, the Contractor shall dispose of and provide new galvanized grating in accordance with the Contract Documents.
- iv. Contractor shall coordinate with applicable Contract Drawing details and Specifications to prepare existing structure upon removal of existing framing.
- v. New angle support framing shall be sized and built integrally with the raised vent walls for grating to be set flush with the top of proposed wall.

C. FURNISHING AND INSTALLING NEW GRATING ON NEW RAISED VENT FRAMES

- i. The Contractor shall, where indicated on the Contract Drawings, carefully remove existing median sidewalk gratings and support framing.
- ii. Contractor shall dispose of existing grating and support framing.
- iii. The Contractor shall, where indicated on the Contract Drawings, provide 3" x 2-1/2" x 1/2" SLV hot dipped galvanized angle support framing, constructed integral with the raised vent wall.
- iv. New frames shall be set flush to the top of the proposed wall, and cast in a concrete collar as indicated on the Contract Drawings or as directed by the Engineer.

7.01RG.5 **MEASUREMENTS.** The quantities to be measured for payment under this item shall be the number of square feet of sidewalk subway gratings satisfactorily installed, measured within the frame perimeter.

7.01RG.6 **PRICES TO COVER.** The contract bid price shall be a unit price per square foot of proposed grating and shall include the cost of all labor, material, plant, equipment, and incidentals necessary to :

- a) Remove exiting gratings and framing. Contractor to take care not to damage the existing structure beyond the limits of repair noted in the contract drawings. All existing framing and gratings shall be the property of the contractor.

- b) Furnish new frames and gratings as specified in the contract drawings, founded on the proposed raised vent modified structure, complete with shop drawings, all in accordance with the Contract drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Description	Pay Unit
7.01RG	LIRR RAISED SUBWAY COLLAR FRAME AND GRATINGS	S.F.

SECTION 7.01 BTS
BRACING AND TUNNEL SHIELDING

7.01 BTS.1. INTENT.

This section describes the temporary bracing, shoring and shielding to be constructed and maintained within the LIRR existing concrete vent shaft to maintain the integrity of the existing structure and limit interruption to LIRR train service during all facets of the work to be completed in and around the LIRR concrete vent shafts under this contract. The contractors' attention is directed to public safety and the continuous operation of the LIRR during all facets of work involving LIRR structure under this contract.

7.01 BTS.2. DESCRIPTION.

- a. The Work under this item includes the preparation of shop drawings Signed and Sealed by a New York State Liscenced Engineer, design calculations, and furnishing of all necessary labor, materials, plant, equipment, insurance, and incidentals required in addition to all necessary timber, lumber, plywood, shielding, anchoring, and fastening materials; drilling and cutting, as required; constructing, placing, maintaining and disposing of temporary braces and shielding; all in accordance with the plans, specifications and the direction of the Engineer.
- b. The Contractor shall retain the service of a Professional Engineer to design bracing and shielding for typical and/or individual case specific locations/conditions and obtain LIRR and Engineers approval.
- c. Contractor shall furnish and install temporary shielding below the limit of work and above the track clearance envelope to prevent debris from falling onto the track level and interrupting LIRR train service during all construction operations except installation and removal of said shielding. The number of vents that can be shielded above the tunnel clearance envelope and within the project limits to ensure the LIRR tunnel ventilation maintains an acceptable level of service during construction, is dependent on the type of shielding, impervious or permeable as described in 7.01 BTS 3.2 herein.
- d. Unless otherwise specified, the Long Island Railroad will be in continuous operation during the performance of the work under this contract. It is contemplated that the work hereunder will be done without interruption of, or change in, the regular scheduled operation of trains on the Railroad.
- e. The Contractor shall coordinate with the NYCDOT Office of Construction Mitigation and Coordination (OCMC) Stipulations and LIRR to confirm the number of vent shafts that can be under construction simultaneously.
- f. The plans and methods, Work Plan, for protecting and securing the Railroad shall be prepared before any work affecting the Railroad is commenced. Such methods shall be changed during construction if conditions so require. However, the methods of doing work, or the failure to change the methods required will not relieve the contractor of its responsibility for the performance of this contract as herein elsewhere provided.
- g. All materials and operations under this item to meet the requirements of Title 29, Code of Regulations, Part 1926, Safety and Health Regulations for Construction (OSHA), and AASHTO Standard material, earth and live load requirements. Documentation of compliance shall be included with the Work Plan submitted.

7.01 BTS.3. CONSTRUCTION METHOD AND LIMITATIONS.

7.01 BTS.3.1 Temporary Bracing

Temporary bracing and shoring for plenum walls and ceilings between 12” Intermediate walls, required as follows: For LIRR Concrete Vent type Y, comprising of 12” structural sections for walls and ceilings, with minor structural defects, bracing is not required. For LIRR Concrete Vent types W, X & Z , comprising of 8” structural sections at walls and roof, the contractor shall provide adequate temporary lateral and vertical bracing to maintain safety, stability and to disperse all loads to which the structure shall be subjected during the Work.

a. Design & Staging:

Contractor shall retain the services of a Professional Engineer Licensed in the state of New York to demonstrate the capacity of the existing structure

1. Bracing is to be designed and constructed in such a manner within the existing structure as to distribute all lateral and vertical loads during excavation, construction and backfilling operations to the surrounding structure without damage or additional loading to said structure.
2. For all bracing, the contractor shall submit a work plan with staging plan and calculations signed and sealed by a Professional Engineer Licensed in the State of New York for review by the Engineer.

b. Installation:

1. Contractor is to coordinate with LIRR for removal of existing gratings and installation of temporary bracing and shoring Monday through Friday between the hours of 10 am and 2pm or between 12am and 4am.
2. Plenum walls and ceilings noted shall be braced vertically and horizontally off of drip pan and/or 12” intermediate and/or end walls.
3. Lateral and vertical bracing is to be constructed in such a manner within the existing structure as to distribute all loads the Work to the surrounding structure without damage to said structure.
4. Construct supports in a manner that will ensure that supported faces, and loads exerted thereon, will be stabilized; give particular attention to lateral bracing supports.

c. Removal and Reuse:

1. Upon completion of all work including back fill outside the structure and prior to removal of tunnel shielding, the contractor shall remove all internal bracing to the existing structure.
2. At the Engineers discretion and visual approval, the contractor may reuse tunnel bracing and/or components in another vent.
3. On the completion of the work, all temporary bracing shall be removed, and any damage to the structure caused by the construction and/or maintenance of said bracing shall be repaired and the surfaces restored to a condition equally as good as that existing prior to the commencement of the Work.

7.01 BTS.3.2 Temporary Shielding

a. Design:

1. Shielding is to be secured to the surrounding structure and capable of withstanding a gravity load of 30 psf. When utilizing an impervious surface for shielding, all components are also to be capable of withstanding the internal wind pressure of 30 psf caused by the piston effect of the train traveling through the tunnel.
2. A maximum gravity deflection of 1/144 th of span sustained outside the track clearance envelope is permissible.
3. For all shielding and connections required, the contractor shall submit a work plan with plans and calculations signed and sealed by a Professional Engineer Licensed in the State of New York for review by the Engineer.

b. Installation:

1. Contractor is to coordinate with LIRR for removal of existing gratings and installation of temporary shielding Monday through Friday between the hours of 10 am and 2pm or between 12am and 4am.

c. Material limitations: The contractor may utilize an impervious or permeable surface as shielding over the track subject to the following limitations:

1. For impervious surfaces used for shielding that will restrict more than 40% of the opening area of a vent, no more than 2 vent shafts may be shielded at a time without approval by LIRR.
2. For permeable surfaces used as shielding and/or edges of impervious surfaces, an aggregate size no greater than 1/4" x 1/4" is permissible to pass.
3. For permeable surfaces such as mesh screening or lightweight grating, no more than 6 total vent shafts may be shielded at a time.

d. Removal and Reuse:

1. Upon completion of all work, including back fill outside the structure, and with the exception of setting new grating, the contractor shall notify the Engineer and LIRR and under flagging, between the hours of 10am and 2 pm, remove all shielding and connections to the existing structure.
2. On the completion of the work, all temporary shielding shall be removed, and any damage to the structure caused by the construction and/or maintenance of said shielding shall be repaired and the surfaces restored to a condition equally as good as that existing prior to the commencement of the Work.
3. At the Engineers discretion and visual approval, the contractor may reuse tunnel shielding and/or components in another vent.
4. The contractor is responsible to verify the fit-up of all shielding, new or reused.

7.01 BTS.4.QUALITY ASSURANCE

a. Submittals: The Submittals required for the Engineers and LIRRs approval include:

1. Plans and sections of bracing and shielding
2. Signed and sealed calculations of temporary supports, bracing and shielding as described with backup documentation of strength and capacity of all materials specified with Structural load limitations of all components of the existing structure to be impacted by the Work.

7.01BTS.5. METHOD OF PAYMENT

The fixed price lump sum shown in the Bid Schedule for this item shall be included in the total bid price. The Contractor shall provide Engineer with LS cost breakdown prior to start of work.

All work shall be based on the actual number of vent bays designed for with signed and sealed shop drawings and calculations, braced and shielded.

The Lump Sum Cost breakdown shall include the following items by vent:

- Design Calculations
- Shop Drawings
- Bracing – Installation & removal
- Sheilding - Installation & removal

The actual payment to the Contractor will be based on the actual invoices submitted by the Contractor by **LS cost break down**.

Upon approval of the design and shop drawings the contractor shall be entitled to 85% of the portion associated with design and shop drawings and 15% upon approved removal of all bracing and shielding.

Upon the Engineers acceptance of the bracing and shielding for each vent the contractor shall be entitled to 40% of the portion associated with bracing and shielding of said vent and 60% upon approved removal of bracing and shielding and repair of contact surfaces as required and/or directed by the Engineer.

7.01BTS.6. PRICES TO COVER

Payment shall include the cost of all materials, equipment, insurance, and labor necessary to design, install, remove and or reuse temporary bracing and shielding utilized within the LIRR Concrete Vent Sub-structure.

Payment will be made under:

Item No.	Item	Pay Unit
7.01 BTS	BRACING AND TUNNEL SHIELDING	L.S.

SECTION 7.07 MB2
Martello Bollard, Version 2.0

7.07 MB2.1. DESCRIPTION.

Under these items, the Contractor shall furnish and install the Martello Bollard, in accordance with the Contract Drawings, the specifications, and directions of the Engineer.

7.07 MB2.2. MATERIALS.

(A) Bollard shall be manufactured by:

Reliance Foundry Co. Ltd.
6450 148 Street #207
Surrey, BC V3S 7G7
Phone: 1-888-735-5680
Fax (604) 590-8875
Website: www.reliance-foundry.com
E-mail info@reliance-foundry.com

(B) Description:

1. Model: Reliance Foundry; R-7651-EM, consisting of:
 - a. Bollard base, to be embedded in and filled with concrete;
 - b. Bollard cap with reflective striping, ready for permanent installation on top of base once concrete has been poured into body;
2. Drawing: 0215-3-0, Rev. C;
3. Size:
 - a. 22-1/2 inches high above grade;
 - b. 25-1/2 inch base diameter;
 - c. 35" high overall;
4. Design: Low profile, sloped-sided oval;
5. Material: Steel meeting ASTM A36;
6. Coating shall be black textured semi-gloss polyester powder coat over epoxy primer.

(C) Concrete used for embedding bollards shall comply with the requirements of Section 4.13.3.(B) in the NYC Department of Transportation (NYCDOT), Standard Highway Specifications.

7.07 MB2.3. INSTALLATION AND SITE STORAGE.

- (A) **DELIVERY, STORAGE, AND HANDLING:** Bollard shall be protected from the elements with a waterproof and ventilated covering to avoid condensation. Protect steel from corrosion, deformation, and other damage during delivery, storage, and handling. Store bollards on platforms or pallets sloped to provide drainage. Box and plastic wrapping of bollard shall not be removed until just prior to installation.
- (B) **BOLLARD PLACEMENT:** Bollards to be placed where shown on Contract Drawings and directed by Engineer.
- (C) **INSTALLATION:** Installation shall be performed as described here and as shown on the Contract Drawings.

1. Excavate to required depth and width needed to form for concrete foundation to the size as shown on the Reliance Foundry Drawing Number 0215-3-0 (see Annexure 1). Concrete shall be placed a minimum of 3" below and a minimum of 6" around the perimeter of the embedded bollard.
2. Place bollard in correct location using rebar and tie downs such that the bollard is plumb and true to the satisfaction of the Engineer.
3. Pour concrete to level just below embedding hole in bollard embedding steel; ensure that the bollard does not move laterally, upward, downward due to buoyancy of concrete.
4. Proceed to open bollard cap and pour concrete into bollard embedment and bollard itself. Be sure to fill bollard and bollard embedment entirely, checking for voids, to the satisfaction of the Engineer.
5. When the bollard is entirely filled and concrete extrudes from embedding hole, fill the rest of the form up to grade. Replace bollard cap.

7.07 MB2.4. FIELD QUALITY CONTROL.

- (A) Engineer shall verify model and color of product and also verify that the product is built to dimensions specified in Subsection 7.07 MB2.2, above.

7.07 MB2.5. SUBMITTALS.

All submittals shall be as per Section 1.06.13 of the NYC Department of Transportation's Standard Highway Specifications and in accordance with the following requirements:

- (A) CATALOG CUTS: Bollard manufacturers' catalogue and supporting literature shall be submitted for approval along with color sample.
- (B) SHOP DRAWINGS: All Shop Drawing submittals shall be as per section 1.06.13 of the NYC Department of Transportation's Standard Highway Specifications. Before the work is started, the Contractor shall submit shop drawings for approval.

7.07 MB2.6. MEASUREMENT.

The quantity of Martello Bollards to be paid for under this item shall be the number of bollards actually installed to the satisfaction of the Engineer.

7.07 MB2.7. PRICE TO COVER.

The price bid shall be unit price for each Martello Bollard and shall include the cost for all labor, materials, hardware, equipment, insurance, and incidentals necessary to complete the work including, but not limited to, excavation, furnishing and installing the bollard, cap, concrete foundation and fill, reflective tape, and any rebar or other necessary items required to set and install the Martello Bollard; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

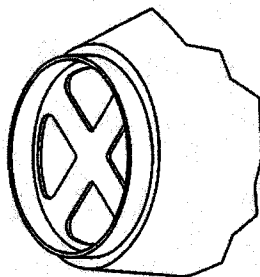
Payment will be made under:

Item No.	Item	Pay Unit
7.07 MB2	MARTELLO BOLLARD, VERSION 2.0	EACH

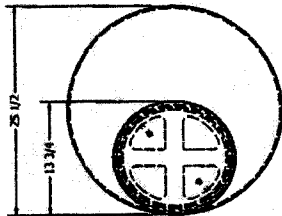
ANNEXURE 1

R-7651-EM Embedded Mount Martello Bollard

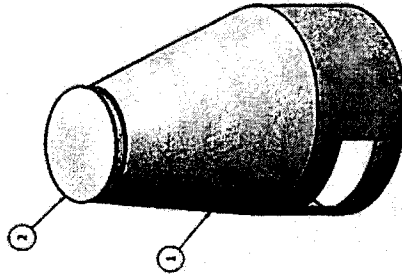
The R-7651-EM Martello Bollard offers a unique blend of functionality and aesthetics—designed to draw vehicle attention and protect pedestrian areas. Conceptualized by Billings Jackson Design, its oblate shape is modelled after historic Martello towers once prized as defensive outposts due to their solid form and construction. R-7651-EM bollards are embedded in ground to ensure a high level of impact protection. Steel construction comes powder coated in 1 of 6 standard colors. Copyright Billings Jackson Design.



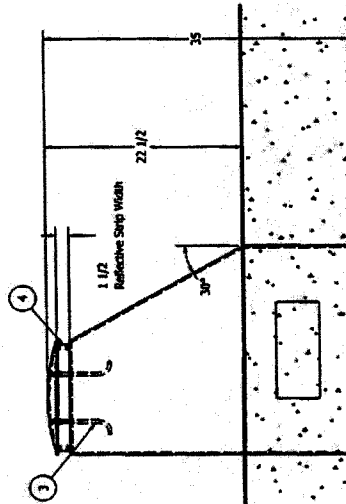
Exploded Top View Without Cover



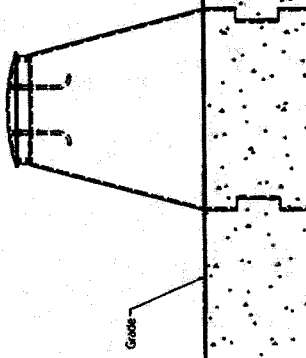
Top View



Isometric View



Side View



Front View

- How to install:
- 1) Attach concrete anchor to bollard cover
 - 2) Fill bollard with concrete
 - 3) Fit bollard cover onto bollard body and set anchor in wet concrete
 - 4) Install reflective strip

RELIANCE FOUNDRY

Unit 207, 6150-148 Street, Surrey, BC V3S 7K7, Canada
1-800-775-5289 info@reliance-foundry.com
http://www.reliance-foundry.com

Martello Bollard R-7651-EM

SHEET 1 OF 1

ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	WEIGHT (lb)
1	1	0215-3-1	Bollard Body	Steel A36	160
2	1	0215-3-2	Bollard Cover	Steel A36	20
3	2	0215-3-3	Concrete Anchor	Steel A36	
4	1		Reflective Strip		

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SECTION 7.18 LM
Light Weight Fill Material
(60 PCF Compacted Density)

7.18LM.1. DESCRIPTION. Furnish and place lightweight material as shown on the plans and to the satisfaction of the Engineer.

7.18LM.2. MATERIALS. Furnish Lightweight Aggregate or approved rotary kiln structural grade Lightweight density Aggregate substitute meeting all the requirements of ASTM C-330 certification. No by-product slag or cinders are permitted. Lightweight aggregate shall have a proven record of durability and non-corrosive (less than 100 ppm chloride when measured by FHWA-RD-77-85) with the following physical properties:

- A. Gradation. The lightweight aggregate shall be a free draining coarse aggregate meeting the gradation requirements of Table 1 of ASTM C-330.
- B. Density. The lightweight aggregate producer shall submit verification of a compacted moist density of less than 60 PCF when measured by a one-point test conducted in accordance with ASTM D-698 "The Standard Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using a 5.5 lb. Hammer and 12 in Drop" (AASHTO T-99).
- C. Toughness. The maximum Los Angeles Abrasion loss when tested in accordance with ASTM C-131 (B-grading) shall be 50%.
- D. Free Draining. To assure free draining characteristics, the lightweight aggregate manufacturer shall submit verification from an independent testing laboratory that the coefficient of permeability shall be greater than 0.5 in/sec.

7.18LM.3. METHODS. Place the fill in lifts not exceeding 12 inches in thickness and not less than 1.5 times the greatest particle dimension. Compact each lift with minimum of two passes of a small drum vibrator meeting the requirements of Subsection 203-3.12 (B-6) of the NYSDOT Standard Specifications. In areas inaccessible to small drum vibrator, use suitable compaction equipment. Over compaction that unnecessarily increased in place density should be avoided.

7.18LM.4. FIELD QUALITY CONTROL. During placement and compaction, a container of at least one half cubic foot (1/2 cu.ft.) shall be placed on an existing lift of materials. Then the next lift of material shall be placed in and around the container and compacted. After compaction of the following lift, the container should be removed, weighed and the in-place moist compacted density calculated. An alternate field quality control method shall be acceptable if approved by the Engineer. A minimum of two tests shall be performed for each lift.

7.18LM.5. MEASUREMENT. This work will be measured as the number of cubic yards of light weight fill material computed in the final compacted position between the payment lines shown on the plans or between revised payment lines established by the Engineer prior to performing the work.

7.18LM.6. PRICE TO COVER. The unit price bid per cubic yards of Light Weight Fill Material (60 PCF Compacted Density) shall cover the cost of all labor, materials, equipment, insurance, and incidentals necessary to furnish and place light weight fill material, complete, including, but not limited to, testing the material. No extra payment will be made for any loss of material which may result from foundation settlement, erosion, or any other cause.

Payment will be made under:

Item No.	Description	Pay Unit
7.18 LM	LIGHT WEIGHT FILL MATERIAL (60 PCF COMPACTED DENSITY)	C.Y.

SECTION 7.19AA

Post Installed Adhesive Anchors

7.19AA.1. INTENT. This section describes the construction and installation of post installed reinforcing bars to form a Load Transfer connection between the existing and new structure using adhesive anchors. The cost of concrete placed at the joint shall be paid for under the appropriate pay item, 4.06.

7.19AA.2. DESCRIPTION. Load Transfer Joints shall consist of the installation of steel dowels adhesively anchored to the existing concrete ventilation structures to form a connection with the new concrete extension walls.

7.19AA.3. MATERIALS.**7.19AA.3.1 Anchor systems.**

The following anchor systems shall be drilled, prepared and installed per manufacturers' recommendations:

Manufacturer	Product	ICC-ES Report	Address
1. Hilti	HIT-HY 200	ESR-3187	Hilti Inc. Plano, TX
2. Simpson Strong-Tie	SET-XP	ESR-2508	Simpson Strong-Tie Pleasanton, CA
3. Dewalt	Pure50+	ESR-3576	Powers Fasteners Townson, MD
4. or approved equal			

7.19AA.3.2 Rebar Dowels

1. Rebar dowels shall be in accordance with specification 4.14E.
2. The anchoring system shall be installed and prepared with the following minimum embedment's to sound concrete unless other wise noted:

Manufacturer	Product	Minimum Embedment Depth to Sound Concrete		
		#4	#5	#6
Hilti	HIT-HY 200	2-3/4"	3-3/4"	4"
Simpson	SET-XP	4"	5"	6"
Dewalt	Pure50+	2-3/4"	3-1/8"	3-1/2"

7.19AA.4. METHODS. Each load transfer joint shall be constructed as shown on the Contract Drawings.

a. Repairs to existing substrate:

1. The existing structure, within 12" of new work and as indicated by the Condition Survey, as prepared in accordance with 4.06 CS, shall be repaired in accordance with the contract drawing repair details and specifications 4.06 SR and 4.06 SCR.

b. Surface Preparation:

1. Area to come in contact with new concrete shall be roughened as per ICRI CSP 4. Holes shall be drilled into the existing structure at the position shown on the Contract Drawings and as per the adhesive anchor manufacturers' recommendation for embedment depth and placement.

c. Positioning:

1. A frame, as approved by the Engineer, must be used to hold the drill in a position perpendicular to the contact surface at the correct height and provide the means to force the bit into the concrete by lever action.

d. Sealing:

1. After surface has been mechanically roughened, adhesive dowels have been set and cured and before concrete placement, the roughened area shall be cleared of all undesirable material. Concrete shall be furnished and placed per Item 4.06. After the concrete structure has hardened, all joints shall be cleaned of all loose and undesirable materials before sealing joints.

7.19AA.5. MEASUREMENT. The quantity to be measured for payment shall be the number of adhesive anchor penetrations with dowels or U-Bars installed, counted in place, in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

7.19AA.6. PRICE TO COVER. The contract bid price per Load Transfer Dowel shall cover the cost of all labor, materials, equipment, insurance, and incidentals required to prepare the surface, furnish and install the load transfer dowel complete in place, including all steel dowel bars, adhesive mortar, etc., to furnish such samples for testing as may be required and to anchor the new to the existing structure and complete the work in accordance with the Contract Drawings, the specifications and the directions of the Engineer. The cost of concrete placed at the joint shall be paid for under the appropriate pay item, 4.06.

Payment will be made under:

Item No.	Item	Pay Unit
7.19 AA	POST INSTALLED ADHESIVE ANCHORS	EA.

SECTION 7.50 CB2
City Bench (Version 2)

7.50 CB2.1. INTENT.

This section describes the furnishing and installation of a CityBench (version 2.0). This specification includes the backed and backless bench types.

7.50 CB2.2. DESCRIPTION.

Under these items, the Contractor shall furnish and install each bench in accordance with the Contract Drawings, the specifications and directions of the Engineer.

7.50 CB2.3. MATERIALS.

(A) Bench shall be manufactured by Landscape Forms, Inc., 431 Lawndale Avenue, Kalamazoo, Michigan 49048.
Toll Free: (800) 521-2546. Phone: (269) 381-0396. Fax: (269) 381-3455.
Website: www.landscapeforms.com

(B) Bench Distributors:

- | | |
|--|--|
| <p>1. Landscape Forms, Inc.
431 Lawndale Avenue
Kalamazoo, Michigan 49048
Phone (269) 381-0396</p> | <p>3. AFD Contract Furniture Inc.
810 7th Avenue,
New York NY, 10019
Phone (212) 721-7100</p> |
| <p>2. Arenson Furniture Rental
1115 Broadway
New York, 10010
Phone (212) 633-2400</p> | <p>4. Empire Office Inc.
105 Madison Ave. #15
New York, NY 10016
Phone (212) 607-5566</p> |
| | <p>5. Or other approved supplier.</p> |

(C) STYLE:

BACKED BENCH

Chelsea Bench "QASF0886-005"
-Length: 89-1/4 inches
-Seat Height: 18 inches
-Seat Depth: 19 inches
-Seat Width: 22 inches
-Seat Radius: 79 inches
-Arm Height: 24-7/8 inches
-Back Radius: 70 inches
-Back Angle: 9-1/2 degrees
-Seat Included Angle: 98-1/2 degrees
-Height: 34 inches

BACKLESS BENCH

Chelsea Bench "QASF0886-006"
-Length: 89-1/4 inches
-Seat Height: 17-3/4 inches
-Seat Depth: 22-5/8 inches
-Seat Width: 22-5/8 inches
-Seat Radius: 79 inches
-Arm Height: 24-7/8 inches

7.50 CB2.4. METHODS.

- (A) **DELIVERY, STORAGE, AND HANDLING.** Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer. All material shall be bundled and fully supported during shipping and storage to prevent creep.

Material manufacturer's directions for storage and use shall be adhered to. Material surfaces shall be protected during shipment so as to arrive mar and scratch free in the field.

Keep materials in manufacturer's original, unopened containers and packaging until installation. Any damage or excessively scratched will be rejected and replaced with new at no additional cost to the City. All material must be straight and true when placed in the construction. Store any and all tooling, fixtures, process drawings and project files until last project phase is complete. Deliver all tooling, fixtures and documentation to the Engineer upon completion of the work.

- (B) **INSTALLATION.** Benches shall be uniquely fabricated and pre-assembled before being installed in their final location in the work. Benches shall be installed in their final position and properly secured in place, as indicated on the Contract Drawings. Protect installed product to ensure that, except for normal weathering, benches will be without damage or deterioration at time of Substantial Completion.

Note: Do not drag bench across concrete or other rough surfaces. This could damage the powder coat on the bottom of the base plate.

- (C) **TOUCHUP AND REPAIR.** For all bolted connections and minor damage caused by transportation and installation of metal powder coated surface, the touch-up finish shall be in conformance with powder coating manufacturer's recommendations. Provide touch-up such that the repair is not visible from a distance of six feet (6') under bright sunlight. The touch up color shall match the color of the powder coat.
- (D) **FOUNDATION.** If directed by the Engineer due to the condition of the sidewalk or where drilling will crack distinctive pavements, two unreinforced concrete footings, 12" x 12" in plan and 18" deep shall be provided. Concrete shall be Class B-32 per Section 3.05. Foundation shall be centered under the bench leg base. Where footings are required, the openings for the footings are to be sawcut and the joints are to be finished per **Section 4.13.4.(F), EXPANSION JOINTS.**
- (E) **ANCHORING.** Benches shall be anchored using sleeve anchors. Sleeve anchors shall be zinc-plated, 1/2" diameter, 2-1/2" length. An additional 3/4" zinc-plated flat washer shall be used under the 1/2" zinc-plated washer that comes with the sleeve anchor.
Anchoring Details are as follows:
1. Holes shall be drilled using a full-size template, not by drilling through the bench. Place template in desired position, and drill anchor holes in the desired locations. Hole depth shall be at least 2-1/2" to allow for full engagement of sleeve anchors.
 2. Remove template and clean the holes per the anchor manufacturer's requirements.
 3. Place bench in desired position and install anchors. Tighten as recommended by

anchor manufacturer. After anchors are properly tightened, mar the threads with a center punch in two places on each anchor to prevent removal of the nuts.

7.50 CB2.5. SUBMITTALS.

All submittals shall be as per **Section 1.06.31** of the NYC Department of Transportation's Standard Highway Specifications, and in accordance with the following requirements:

- (A) **WARRANTY:** The manufacturer guarantees a standard warranty that the products will be free from defects in material and/or workmanship for a period of three years from the date of invoice.

7.50 CB2.6. MEASUREMENT.

The quantity of CityBench (version 2.0) to be paid for under this item shall be the number of CityBench(es) of each type installed at the site to the satisfaction of the Engineer.

7.50 CB2.7. PRICE TO COVER.

The unit price bid for EACH type CityBench (version 2.0) shall include the cost of furnishing all labor, materials, equipment, insurance, and incidentals necessary to furnish, assemble and install benches including, but not limited to, bench arm rests and hardware; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

The unit price bid for this item shall also include the cost of concrete footings, sawcutting, sleeve anchors with nuts and washers, touch-up and repair.

Payment will be made under:

Item No.	Item	Pay Unit
7.50 CB2	CITYBENCH WITH BACK (V 2)	EACH
7.50 CBB2	CITYBENCH BACKLESS (V 2)	EACH

SECTION 7.54 R
REMOVAL AND RESETTING OF EXISTING TREE GRATES AND FRAMES

7.54R.1. INTENT. This section describes the Removal of Existing Tree Grates and Frames; and, the Resetting of Existing Tree Grates.

7.54R.2. DESCRIPTION. Under this section, the Contractor shall provide all labor, material, equipment, and incidentals required to remove existing tree guards, tree grates and frames, and reset existing tree guards, grates and frames, when and where directed by the Engineer.

7.54R.3. METHODS.

A) Removal of Existing Tree Grates and Frames. The Contractor shall carefully remove existing tree grates and frames. The location of existing tree grates and frames designated to be removed shall be as shown on the plans, unless otherwise directed by the Engineer.

Care shall be taken while removing each tree grate and frame. Any materials designated by the Engineer to be salvaged shall be cleaned of adherent material and either stored at the site for resetting under Item 7.54 RS, delivered to the property owner, or delivered to a designated Department of Parks and Recreation storage yard located within the Borough. Any salvageable material that is damaged as a result of the Contractor's operations shall be repaired or replaced in kind to the satisfaction of the Engineer. The Contractor shall notify the foreman of storage yard at least three (3) days in advance of such delivery. All other material shall become the property of the Contractor and properly disposed of away from the site.

Work under this item shall be performed under the supervision of an International Society of Arboriculture certified arborist. No machinery in excess of 1 ton in weight shall pass beneath the dripline of existing trees to remain, except on the vehicular side of existing curbline. To avoid damage to roots of existing trees to remain, only hand tools shall be used to remove tree grates and excavate their frames.

All holes left by the removal operations shall be backfilled with the soils specified for the tree pit in the Contract Drawings and compacted in a manner approved by the Engineer.

B) Resetting of Existing Tree Guards, Grates and Frames. After existing tree guards, grates and frames are removed under Item 7.54 R, those that are designated to be reset shall be cleaned and, as directed by the Engineer, prime painted in the field with a paint that is compatible with the finish paint. Then prior to installation, the grates and frames shall receive two (2) field coats of paint. The finish paint shall meet the requirements of Federal Specification TT-P-61 and shall be a black color as approved by the Engineer.

The Contractor shall first set and secure in place the existing tree guard or grate frames designated to be reset in the proposed new concrete sidewalk around existing or newly planted trees. For grates, after embedment in the new concrete sidewalk, a sand bed shall be installed within the tree pit as directed by the Engineer.

After the sand bed has been leveled to the required elevation, the seat for the grate shall be cleaned of all debris which may interfere with the proper seating of the grate. Each grate shall be installed in two half sections and securely bolted together. Grates shall be set in flush with the top of the frames.

7.54R.4. MEASUREMENT.

A) The quantity to be measured for payment shall be the number of existing tree grates or guards(each tree grate shall be defined as consisting of 2-half grate sections; each tree guard shall be defined as consisting of 3 or 4 guard setions) with frames that are actually removed to the satisfaction of the Engineer.

B) The quantity to be measured for payment shall be the number of existing tree grates or guards(each tree grate shall be defined as consisting of 2-half grate sections; each tree guard shall be defined as consisting of 3 or 4 guard setions) with frames that are actually reset to the satisfaction of the Engineer.

7.54R.5. PRICE TO COVER.

A) The contract price bid per each Removal of Existing Tree Grates and Frames shall cover the cost of all labor, material, equipment, insurance, and incidental expenses necessary to complete the work of removing an existing tree grate and frame, delivering it to a City storage yard or disposing of it when directed, and backfilling the area to grade; all in accordance with the plans, the specifications and the directions of the Engineer.

B) The contract price bid per each Resetting of Existing Tree Grates and Frames shall cover the cost of all labor, material, equipment, insurance, and incidental expenses necessary to complete the work of resetting existing tree grate and frame, and furnishing and installing sand bedding to grade; all in accordance with the plans, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Description	Pay Unit
7.54 R	REMOVAL OF EXISTING TREE GRATES AND FRAMES	EACH
7.54 RS	RESETTING OF EXISTING TREE GRATES AND FRAMES	EACH

SECTION 8.32
BARK CHIP MULCH

8.32.1. WORK: Under this item the Contractor shall furnish and place bark chip mulch in accordance with the plans, specifications, and directions of the Resident Engineer.

8.32.2. MATERIAL: Bark Chip Mulch shall be natural forest product of ninety eight percent (98%) bark containing less than two percent (2%) wood or other debris. It shall be of White or Red Fir and/or Pine bark of a uniform grade with no additives or any other treatment. Bark shall be shredded. The pH factor should range from 5.8 to 6.2.

The Contractor shall furnish a sample of the mulch, (two - one pound zip-lock bags labeled with Contractor's name and contract number), before starting work for approval by the Resident Engineer. No mulch shall be delivered until the approval of samples by the Resident Engineer, but such approval shall not constitute final acceptance. The Resident Engineer reserves the right to reject on or after delivery any materials which do not, in his opinion, meet these specifications.

8.32.3. METHOD: Bark Chip Mulch shall be applied as a ground cover to the surface of all beds and tree pits after the planting is completed. Mulch shall be applied to a uniform depth and shall be so distributed as to create a smooth, level cover. Mulch shall not be placed within two (2) inches of tree and shrub stems. Plants shall not be covered.

8.32.4. MEASUREMENT: The quantity of **BARK CHIP MULCH** to be paid for under this item shall be the number of **SQUARE YARDS** actually installed at the site to the satisfaction of the Engineer.

8.32.5. PAYMENT: The unit price bid shall be per **SQUARE YARD** and shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work; all in accordance with the plans, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
8.32	BARK CHIP MULCH	S.Y.

SECTION 9.07
NON-WOVEN GEOTEXTILE

9.07.1. INTENT. This section describes the installation of the non-woven geotextile that is to be furnished and installed as part of this project.

9.07.2. DESCRIPTION. Under these Items, the Contractor shall furnish and install non-woven geotextile to separate landscape materials in accordance with the plans and specifications, and as directed by the Engineer.

9.07.3. MATERIALS. All non-woven geotextile shall be synthetic and rot proof. It shall be manufactured for the purpose of separating two different materials.

- (A) Definition: Separation application is defined as the placement of a flexible porous geotextile between dissimilar materials so that the integrity and functioning of both materials can be maintained or improved.
- (B) Non-woven geotextile used in separation applications shall be US 160NW as manufactured by US Fabrics, FX-60HS manufactured by Carthage Mills, or 160N (non-woven) as manufactured by Mirafi, Inc., or an approved equivalent with the following minimum requirements:
- (C) Non-woven geotextile used shall conform to the following AASHTO-M-288 Class 2 properties for separation geotextiles:

	ASTM TEST	TYPE
Application		Separation
Elongation	D 4595	≥50%
Grab Strength	D 4632	157 LBF
Tear Strength	D 4533	56 LBF
Puncture Strength	D 4833	85 LBF
Permittivity (minimum)	D 4491	0.02 sec ⁻¹
Maximum Apparent Opening Sieve Size/Sieve Designation	D 4751	0.0234 in./No. 30

- (D) Submittals: All submittals shall be submitted in accordance with the requirements of the contract. The Contractor shall submit the following for the Engineer's review and approval prior to purchase.
 - 1) Manufacturer's Data: The Contractor shall submit manufacturer's data with sufficient detail to demonstrate compliance with the requirements of this specification.
 - 2) Samples: The Contractor shall furnish the required number of samples of the non-woven geotextile intended for use in the work for approval by the Engineer. The label shall include the manufacturer's product name, the type of fabric, and the weight of grade of the material. Non-woven geotextile used in the work shall conform to the approved samples.

9.07.4. METHOD.

(A) Delivery, Storage and Handling:

- 1) Delivery: Deliver materials to site in manufacturer's original, unopened packaging, with labels clearly identifying product name and manufacturer.
- 2) Storage: Store materials in clean, dry area in accordance with manufacturer's instructions.
- 3) Handling: Protect materials during handling and installation to prevent damage.

(B) Examination: Examine subgrade areas to receive non-woven geotextile. Notify Engineer if areas are not acceptable. Do not begin installation until unacceptable conditions have been corrected.

(C) Installation:

- 1) Install non-woven geotextile in accordance with manufacturer's instructions at locations indicated on the Drawings.
- 2) The non-woven geotextile shall be rolled directly on the ground. All seams shall be overlapped a minimum of six (6") inches.
- 3) No equipment, materials or machinery shall be placed on or be transported over exposed geotextile.
- 4) Topsoil as shown on the plans and as directed by the Engineer shall then be carefully placed to prevent dislocation of the fabric. If the fabric is damaged during installation, the rupture shall be removed and the damaged area shall be covered with a patch of new fabric that will overlap the undamaged fabric by at least six (6") inches in all directions. All repaired fabric surface costs shall be done at no additional cost to the City.
- 5) Cost of the Topsoil shall be paid separately under Item No.4.15 and the cost of the Structural Soil shall be paid separately under Item 4.15 SS.

9.07.5. MEASUREMENT. The quantity of Non-Woven Geotextile to be paid for shall be the number of SQUARE YARDS, measured in its final position, installed to the satisfaction of the Engineer. No additional measurement will be made for overlaps of material.

9.07.6. PRICE TO COVER. The price bid shall be a unit price per SQUARE YARD of Non-Woven Geotextile and shall include the cost of furnishing all labor, material, equipment, insurance, submittals, and incidental expenses necessary to complete the work; all in accordance with the plans and specifications and to the satisfaction of the Engineer. The cost of Topsoil and Structural Soil shall be paid separately under their respective Item No. 4.15 and 4.15 SS.

Payment will be made under:

Item No.	Item	Pay Unit
9.07	NON-WOVEN GEOTEXTILE	S.Y.

SECTION 9.07 AWB
NON-WOVEN GEOTEXTILE, WEED BARRIER AND ROOT BARRIER

9.07A.1. INTENT. This section describes the installation of non-woven geotextile that is to be furnished and installed as part of this project as WEED BARRIER and installation of High Density Polyethylene geomembrane that is to be furnished and installed as part of this project as ROOT BARRIER.

9.07A.2. DESCRIPTION. Under these Items, the Contractor shall furnish and install WEED BARRIER and ROOT BARRIER in accordance with the plans and specifications, as directed by the Engineer.

9.07A.3. MATERIALS, WEED BARRIER: All WEED BARRIER shall be non-woven geotextile and shall be synthetic and rot proof. It shall be manufactured for the purpose of providing a weed protection barrier.

- (A) Definition: Weed protection application is defined as the horizontal placement of a flexible porous geotextile under pavers and/or landscape mulch to inhibit weed growth at the landscape surface.
- (B) Weed Barrier shall be a one hundred percent (100%) polypropylene woven or non woven spun bond fabric with UV inhibitors. The fabric shall prevent weed germination and reduce maintenance while allowing water, herbicides and fertilizers to pass through. The fabric shall demonstrate the following minimum characteristics: having a minimum ASTM D-4491 water permeability of 12 gallons per minute per square foot; ASTM D-4632 Tensile Strength of 95; and an ASTM D-4355 Ultraviolet Exposure of 70% strength retained after 150 hours of exposure.
- (C) **PRODUCT SUPPLIERS:**
 - 1) Architect's Choice 295 Series; Ground Cover Industries, Inc.; Warnerville, IL
1-800-550-4424
 - 2) WB Pro Black 3 oz Fabric; DeWitt Company, Sikesone, MO 63801
1-800-888-9669
 - 3) Mirafi MSCAPE Geosynthetic; TenCate Co. Pendergrass, GA 800-685-9990;
www.mirafi.com;

9.07A.4. MATERIALS, ROOT BARRIER: All ROOT BARRIER shall be High Density Polyethylene geomembrane and shall be synthetic and rot proof. It shall be suitable for the purpose of providing a root protection barrier.

- (A) Definition: Root protection application is defined as the horizontal or vertical placement of a High Density Polyethylene (HDPE) geomembrane under or alongside planting areas to inhibit root growth and penetration beyond the designated planting area especially where such growth would interfere with structures.
- (B) High Density Polyethylene (HDPE) geomembrane Root Barrier. Thickness (minimum average): 40 mil/1.00 mm. HDPE Root Barrier specifications to meet or exceed GRI GM 13.

(C) **PRODUCT SUPPLIERS:**

- 1) GPS HDPE Root Barrier 40 mil; Global Plastic Sheeting, 1331 Specialty Drive, Vista, CA 92081 (760) 597-9298;
- 2) Root Barrier VR; Tremco, 3735 Green Road, Beachwood, OH 44122 (800) 562-2728
- 3) 40 mil Root Barrier; Americover Inc, 2067 Weinridge Place, Escondido, CA 09029 (800) 747-6095.

9.07A.5. SUBMITTALS.

(A) Submittals: All submittals shall be submitted in accordance with the requirements of the contract. The Contractor shall submit the following for the Engineer's review and approval prior to purchase:

1. **Manufacturer's Data:** The Contractor shall submit manufacturer's data with sufficient detail to demonstrate compliance with the requirements of this specification.
2. **Samples:** The Contractor shall furnish the required number of samples of the weed or root protection material for use in the work for approval and the Engineer's use, but not less than two samples 8" x 8". The label shall include the manufacturer's product name, the type of fabric, and the weight of grade of the material.
3. **Certification:** Provide the manufacturer's certificate stating the name, product name, style number, chemical composition and other pertinent information to fully describe the product.
4. **Manufacturer's installation guidelines.**
5. **Material Safety Data Sheet for active ingredients.**

9.07A.6. DELIVERY, STORAGE AND HANDLING

(A) Delivery, Storage and Handling:

1. Deliver materials to site in manufacturer's original, unopened packaging, with labels clearly identifying product name and manufacturer, style number and roll number and including a compliance statement certifying that all ingredients and inspection standards for the product have been met.
2. Materials shall be protected from damage due to shipment, water, sunlight, and contaminants. The protective wrapping shall be maintained during periods of shipment and storage.
3. During storage, product shall be elevated off the ground and out of direct sunlight.
4. **Handling:** Protect materials during handling and installation to prevent damage.
5. Either mislabeling or misrepresentation of materials shall be reason to reject those products.

(B) Examination:

1. Examine subgrade areas to receive weed barrier or root barrier. Notify Engineer if areas are not acceptable. Do not begin installation until unacceptable conditions have been corrected.

(C) Installation Weed Barrier:

1. Install non-woven, geotextile in accordance with manufacturer's instructions at locations indicated on the Drawings.
2. Areas where weed barrier fabric is to be installed shall be smooth, firm, stable and free of rocks, clods, foliage, roots, trash, debris or other material that will prevent the matting from lying in direct contact with the soil surface. The landscape fabric shall be placed where shown in the contract documents and as required by the manufacturer. Fabric shall overlap by six inches and be pinned into position using landscape wire staples 3" long with staples placed a minimum of six feet on center.
3. The woven or non-woven geotextile shall be rolled directly on the ground. All seams shall be overlapped approximately six (6") inches. When joining two pieces of geotextile, be sure they do not become separated at any point.
4. Seaming can be accomplished by using construction adhesive and/or overlapping. Sod pins may also be used for seams, but make sure there are no gaps.
5. Secure fabric with pins every six feet on center.
6. Do not allow gaps in fabric during installation or backfilling.
7. No equipment, materials or machinery shall be placed on or be transported over exposed geotextile.

D) Installation Root Barrier:

1. Install High Density Polypropylene in accordance with manufacturer's instructions at locations indicated on the Drawings.
2. Areas where root barrier material is to be installed shall be smooth, firm, stable and free of rocks, clods, foliage, roots, trash, debris or other material that will prevent the geomembrane from lying in direct contact with the subgrade surface. The material shall be placed where shown in the contract documents and as required by the
3. The material shall be rolled directly on the ground. All seams shall be overlapped approximately six (6") inches. When joining two pieces of geomembrane, be sure they do not become separated or form gaps at any point.
4. Place topsoil and/or structural soil as shown on the plans and as directed by the Engineer shall then be carefully placed to prevent dislocation of the geomembrane. If the material is damaged during installation, the rupture shall be removed and the damaged area shall be covered with a patch of new material that will overlap the undamaged fabric approximately six (6") inches in all directions. All repaired material surface costs will be deemed part of the price bid.
5. Cost of the Topsoil shall paid separately under Item No.4.15 and the cost of Structural Soil shall paid separately under Item No. 4.15 SS.

9.07A.7. MEASUREMENT. The quantity of WEED BARRIER and ROOT BARRIER to be paid for shall be the number of SQUARE YARDS of each type required, measured in its final position, furnished and installed in accordance with the plans and specifications and the directions of the Engineer.

9.07A.8. PRICE TO COVER. The price bid shall be a unit price per SQUARE YARD of each type installed and shall include the cost of furnishing all labor, material, equipment, insurance, submittals, and incidental expenses necessary to complete the work in accordance with the plans and specifications and to the satisfaction of the Engineer. The cost of Topsoil and Structural Soil shall be paid separately under their respective Item No. 4.15 and 4.15 SS.

Payment will be made under:

Item No.	Item	Pay Unit
9.07 ARB	NON-WOVEN GEOTEXTILE – ROOT BARRIER (HDPE)	S.Y.
9.07 AWB	NON-WOVEN GEOTEXTILE – WEED BARRIER	S.Y.

**SECTION HW-914
ALLOWANCE FOR WAYFINDING TOTEMS**

HW-914.1. DESCRIPTION.

Under this item, the Contractor shall be required to pay to the New York City Department of Transportation (NYCDOT) TOTEM sign Contractor for furnishing and installing new (WAYFINDING) TOTEMS.

HW-914.2. MATERIALS.

(Not applicable)

HW-914.3. CONSTRUCTION DETAILS.

The NYCDOT TOTEMS sign Contractor shall only install (WAYFINDING) TOTEMS signs once the foundation (including paving tray and steel foundation plate) has been installed by the Contractor. The Contractor shall pick up, delivery to the project site and install the paving tray and steel foundation plate in accordance with plans, specifications and as directed by the Engineer. All costs for pick up, delivery to the project site and installation of the paving tray and steel foundation plate shall be deemed to be included in all scheduled items for foundation work pertinent to (Wayfinding) TOTEMS signs.

HW-914.4. METHOD OF MEASUREMENT.

The fixed price lump sum shown in the Bid Schedule for this item shall be included in the total bid price; however, actual payment to the Contractor will be based on the actual invoices submitted by the NYCDOT TOTEM sign Contractor.

It is agreed that all work shall be based on the actual number of (Wayfinding) TOTEM SIGNS that are installed by the NYCDOT TOTEM sign contractor to the satisfaction of the Engineer.

HW-914.5. BASIS OF PAYMENT.

The fixed sum shown in the proposal for the (Wayfinding) TOTEMS sign shall be considered the price bid for this item. The fixed sum is not to be altered in any manner by the bidder. Should the amount shown be altered, the new figures will be disregarded and the original price will be used to determine the total amount bid for the contract.

The fixed sum payment made under this item shall be equal to the sum of all invoices submitted by the NYCDOT TOTEM sign Contractor as proof of work performed for this item, as approved by the Engineer.

The total estimated cost of this item is the "fixed sum" amount shown for this item in the Bid Schedule and shall not be varied in the bid. The "fixed sum" amount is included in the bid solely to ensure that sufficient monies will be available to pay the Contractor for this work, which may be more or less than the fixed sum amount.

The unit price shall cover the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work under this section in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment with be made under:

Item No.	Item	Pay Unit
HW-914	ALLOWANCE FOR WAYFINDING TOTEMS	F.S.

**SECTION 8.52 FP
(NOT A PAY ITEM)
STEEL FOUNDATION PLATE**

8.52FP.1. INTENT. This section describes the furnishing and installation of the Foundation Plate.

8.52FP.2. DESCRIPTION. The Steel Foundation Plate shall be embedded in the poured concrete footing to the nominal dimensions as indicated on the contract drawings and specifications.

8.52FP.3. MATERIALS. Steel Foundation Plates shall comply with the requirements of the NYC Department of Transportation (DOT) Standard Highway Specifications **Sections 2.35, Structural Steel** and shall be galvanized in accordance with **Section 2.34**.

8.52FP.4. SUBMITTALS. Shop drawings of each steel plate showing bolt locations shall be provided by the Contractor in accordance with the requirements of **Section 1.06.13** of the NYC DOT Standard Highway Specifications, for review and approval prior to fabrication.

8.52FP.5. NOT USED.

8.52FP.6. MEASUREMENT. Payment will be based on the computed weight of metal as shown on the approved shop drawings, and shall include, but not limited to permanent bolts and welds in the structure as erected.

Not to be included in the measurement is the weight of all erection materials including but not limited to bolts, pilot and driving nuts, temporary protective coatings, and all boxes, crates or other containers used for packing, together with sills, struts, and rods used for supporting members during transportation.

The weight of all required bolt heads, nuts and washers will be estimated, making no allowance for waste, and included in the weight for which payment will be made. The mass of all required welds will be estimated and included in the mass for which payment will be made.

8.52FP.7. PRICE TO COVER.

No separate payment will be made for steel foundation plate.

**SECTION 8.52 PT
(NOT A PAY ITEM)
PAVING TRAY**

8.52PT.1. INTENT. This section describes the furnishing of the ground level paving tray.

8.52PT.2. DESCRIPTION. Fabricated steel plate frame, angle and flat textured cover plate assembly, configured and to nominal dimensions as indicated on the contract drawings and specifications.

8.52PT.3. SUBMITTALS. All submittals shall be provided by the Contractor in accordance with the requirements of the NYC Department of Transportation's Standard Highway Specifications, General Conditions, **Section 1.06.13.**

- a. Shop Drawings: Erection and fabrication drawings for all totem components and accessories. Show plans and elevations at no less than 1/4 inch to 1'-0" scale, and details at not less than 1-1/2 inch to 1'-0" scale.
- b. Product Data: Manufacturer's printed specifications and installation instructions for each type of metal framing and accessory, including data required to show compliance with the Drawings and Specifications.

8.52PT.4. MATERIALS.

A. Steel Plate and Side Brackets:

- a. Material and Finish: Grade 304 Stainless Steel, Mill finish
- b. Thickness: 1/4"
- c. Side Brackets: As required, to be agreed with the Engineer prior to fabrication:
 1. Edges: All edges to be polished and rounded off
 2. Joints: Plate sections to be butt jointed
 3. Installed level: To be aligned flush with poured concrete sidewalk

B. Cover Plate:

- a. Material and Finish: Grade 304 Stainless Steel, Textured 'Durbar' plate
- b. Thickness: 1/4"
- c. Edges: All edges to be polished and rounded off
- d. Finished installed level: To be aligned flush with poured concrete sidewalk
- e. Mounting Screws:
 1. Exposed to Sidewalk: To be stainless steel with tamper proof torx' head or approved equivalent
 2. Beneath Sidewalk: To be stainless steel socket head

C. Temporary Cover Plate Mounting Brackets:

- c. Material and Finish: Grade 304 Stainless Steel with mill finish
- d. Nominal Thickness: As required by Contractor to safely support imposed sidewalk live loads
- e. Bolt Fixings: To be stainless steel, sized and configured to support imposed live loads

8.52PT.5. METHOD.

A. Fabrication:

- a. Plates cut and seam welded directly to each other
- b. Side brackets spot welded directly to plates
- c. Provide all necessary Jigs for placement of paving trays relative to Totem foundation plates, provide a minimum of 6 jigs per Totem type.

8.52PT.6. MEASUREMENT. The quantity to be measured for payment shall be the number of new paving trays, of each size and type listed below, actually installed to the satisfaction of the Engineer.

Type	Item	Length	Width
A	Paving Tray (Pathway Totem) Paving	1'-7¼"	8½"
B	Tray (Area Totem)	2'-11¼"	8½"
C	Paving Tray (Neighborhood Totem)	4'-3¼"	8½"

8.52PT.7. PRICE TO COVER.

No separate payment will be made for the Paving Tray.

S - PAGES

SPECIAL PROVISIONS

NOTICE

THE PAGES CONTAINED HEREIN (S-PAGES) ARE SPECIAL PROVISIONS THAT SHALL APPLY TO AND BECOME A PART OF THE CONTRACT.

(NO TEXT ON THIS PAGE)

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SPECIAL PROVISIONS

A. LINES AND GRADES. The Contractor shall furnish lines and grades in accordance with Section 1.06.27 of the Standard Specifications, except that survey controls established for this project may no longer exist and the Contractor shall be required to re-establish the survey control information using official Borough Survey Control Monuments and Bench Marks, where they exist. The Contractor shall check with Topographic Section of the Borough President's Office as to the reliability and accuracy of the data to be used for lines and grades.

B. SPECIFIC TRAFFIC STIPULATIONS. Under this contract, the Contractor shall perform the work in strict accordance with the requirements of Section 6.70 in the Standard Highway Specifications, specific traffic stipulations as called for on the plans, OCMC Traffic Stipulations attached to the end of these Special Provisions, and the directions of the Engineer. In case of a conflict, the Engineer's decision shall be final.

In addition, the cost of compliance with requirements of the OCMC Traffic Stipulations, unless otherwise provided for, shall be deemed included in the prices bid for all scheduled items.

C. HOLIDAY CONSTRUCTION EMBARGO. A special Holiday Construction Embargo shall be in effect on the Friday of the week preceding Thanksgiving Day week from 6:00 AM to 11:59 PM and again from the Monday of Thanksgiving Day week from 6:00 AM through January 2, at 11:59 PM. Roadway and sidewalk construction activities will be restricted during the embargo period on the streets listed below*.

Any permits issued prior to the date of this notice, for work during this embargo period on the streets listed below which do not already have the permit stipulation "410" are hereby suspended for the period noted above. All permittees must comply with this embargo unless a special waiver is granted by OCMC. Waiver requests must be filed at least thirteen days before Thanksgiving Day, in the Permit Office by filing a "Request for Roadway/Sidewalk Permits During Embargo Periods" and submitting supporting documentation. Waiver requests should only be submitted for critical reasons for a specific project. If a waiver is granted, the applicant will be notified so they can apply for the approved permits. Waivers **are not** required for ongoing Building Construction Activity Permits which already include the "410" permit stipulation. Waiver request forms may be obtained at any Permit Office or on the Department of Transportation's website at:

<http://www.nyc.gov/html/dot/downloads/pdf/holidayembapp.pdf>

Prior to this embargo period all necessary measures must be taken so that all roadways and sidewalks are in proper condition to allow for the expeditious and safe movement of vehicular, bicycle and pedestrian

* Please note that this embargo only applies to NYCDOT construction permits.

* List of street and maps of the affected locations are available by borough on the Department of Transportation's website at:

<http://www.nyc.gov/html/dot/html/motorist/trafalrt.shtml>

traffic. Tool carts, cable reels, containers, and material stored on roadways must be removed during the embargo period.

The opening of utility access covers is prohibited on any of the streets noted below between the hours of 6:00 AM and midnight unless the utility or Contractor files for an Emergency Authorization Number as required by section 2-07 of the Department of Transportation's Highway Rules. The planned opening of utility access covers may occur during the hours of 12:01 AM and 5:59 AM where no authorization number is required.

Temporary restoration of the streets and sidewalks and removal thereof, if required for the Holiday Embargo period, will be paid for under the appropriate scheduled items.

No extension of time due to the shutdown period will be granted to the Contractor for completion of the work.

D. DISPOSAL OF EXCESS EXCAVATED MATERIAL. All excess excavated material, with the exception of contaminated material, shall become the property of the Contractor and shall be properly disposed of away from the site, at the Contractor's expense. Contaminated material shall be disposed of separately in accordance with contract requirements.

E. CONTRACT ITEMS THAT INCLUDE BACKFILL AS A PART OF THEIR WORK. The following shall pertain to all contract items that have backfill as a part of their work: Backfilling shall comply with Subsection 4.11.3 of the Standard Specifications and no additional payment will be made for any Highway or Street Lighting work item requiring Contractor to furnish additional fill material to meet these requirements when backfilling.

F. NOISE CONTROL. The Contractor is directed to Title 24, Chapter 2 of the Administration Code of the City of New York, known as the "New York City Noise Code" by the Department of Environmental Protection. The provisions of this code and its most recent additions and revisions shall apply to this contract. In the event of a conflict between the requirements of the New York City Noise Code and the requirements of Noise Control contained in these special notes, the more stringent of the two shall apply.

The Contractor shall plan and carry out work on this Project to ensure that the noise from construction equipment and activities does not exceed the limits specified herein. The noise abatement operations and conditions specified shall be carried out by the Contractor to limit noise in project and adjacent areas. The Contractor shall conduct a continuous educational effort for the workers on the site to ensure that they are aware of their roles in minimizing noise propagating from the site.

In order to monitor noise abatement operations the Contractor shall employ services of "Noise Control Specialist" for the duration of construction activity. The contractor shall submit qualifications and experience of the prospective specialist/firm to the Engineer for prior approval. The specialist/firm must satisfy the eligibility requirements of qualifications and work experience as required by the N.Y.C.D.E.P.

The monitoring protocol shall be as follows:

- (a) There shall be one outdoor and one indoor monitoring station for each work area or 1,000 ft. of street length whichever is less.
- (b) Monitoring of noise level shall be done prior to start of construction and during construction for each station at the same work hours specified in the contract.
- (c) Locations of monitoring stations shall be recommended by the noise control specialist for approval of the Engineer.
- (d) Engineer shall provide indoor station locations to the contractor after ascertaining availability of the said station from the Community Board.

Should the Contractor fail to carry out the noise abatement operations and conditions specified herein, the Engineer shall have the authority to suspend all work until such time as the Engineer deems that the Contractor has complied with the requirements.

The following additional requirements for noise control shall apply to this contract:

1. Noise Level Requirements for Construction Equipment

- (a) The Contractor shall ensure that all Contractor and Subcontractor equipment, of the types listed in Table A to be used on-site for a total duration greater than 5 days, shall be tested for compliance with the stated noise emission limits during the first day of use on the construction site or at an alternative site acceptable to the Engineer.
- (b) All equipment as described in (a) above shall be re-tested at 6 month intervals while in use on site.
- (c) All compliance tests shall be performed by the Contractor.
- (d) For each piece of equipment tested, the Contractor shall provide a noise report to the Engineer as shown in Figure A.
- (e) Equipment of the types listed in Table A, as described above, shall not be used on-site without valid certificates of noise compliance.
- (f) The Contractor shall provide to the Engineer two noise meters meeting the requirements of Section 2(d) herein. Two acoustic calibrators of the type recommended by the meter manufacturer shall also be provided.

TABLE A

CONSTRUCTION EQUIPMENT NOISE EMISSION LIMITS:
MEASURED AT 50 FEET FROM CONSTRUCTION EQUIPMENT

<u>Equipment Category</u>	<u>Noise Level, dBA(SLOW)</u>
Auger	83
Backhoe	80
Bar Bender	80
Cherry Picker	80
Chain Saw	86
Compactor	80
Compressor	70
Concrete Mixer	86
Concrete Pump	82
Concrete or Diamond Saw	90
Crane	86
Crawler Miller	90
Dozer	86
Front End Loader	80
Generator	82
Gradall	86
Grader	86
Jackhammer	88
Man Lift	80
Mounted Impact Hammer	95
Paver	86
Pneumatic Tools	86
Roller	80
Scraper	86
Shotcrete Liner (tire-mounted)	79
Striper (walk-behind)	80
Tractor	84
Traffic Line Remover	80
Truck (including truck-mounted equipment)	84
Vibrator	80
Vibratory Pile Driver	95
All Other Equipment with Engines	
Larger than 3750W	86
Impact Pile Driver	105 dBC(FAST)

FIGURE A

CERTIFICATE OF EQUIPMENT NOISE COMPLIANCE

Contractor Name: _____
Contract Name & Number: _____
Equipment Type: _____
Manufacturer & Model Number: _____
Identification Number: _____
Rated Power & Capacity: _____
Operating Condition During Test: _____

Measured Sound Levels at 6 to 15 meters:

Measured Values and Distance:

Engine-Powered or Concrete-Breaking Equipment:
Right Side: _____ dBA (SLOW), at _____ meters
Left Side: _____ dBA (SLOW), at _____ meters
Impact Pile Driving Equipment:
Right Side: _____ dBC (FAST), at _____ meters
Left Side: _____ dBC (FAST), at _____ meters

Equivalent Values at 50 Feet Distance:

Engine-Powered or Concrete-Breaking Equipment:
Right Side: _____ dBA (SLOW).
Left Side: _____ dBA (SLOW).
Impact Pile Driving Equipment:
Right Side: _____ dBC (FAST).
Left Side: _____ dBC (FAST).

Maximum Values Allowed for this Equipment: _____ dBA (SLOW) at 15 meters
_____ dBC (FAST) at 15 meters

If equipment sound level exceeds maximum value allowed, indicate action taken to achieve compliance:

Name, Work Address & Phone No. of NYSDOT Inspector _____

Authorized Signature: _____ Date: _____

CONTRACTOR'S ACCEPTANCE: _____ Date: _____

2. Noise Level Test Procedures of Construction Equipment

- (a) All engine-powered equipment shall be operated by the Contractor or Contractor's representative at high idle (maximum governed rpm) under full load conditions during the tests.
- (b) Portable and mounted impact hammers, such as hoe rams and jackhammers to be used to concrete breaking, shall be tested during the first day of actual operation at the construction site under maximum load conditions as rated by the equipment manufacturer.
- (c) Pile driving equipment shall be tested at the construction site under maximum load conditions as rated by the manufacturer.
- (d) All noise certification measurements shall be performed with an instrument that is in compliance with the criteria for a Type 1 (Precision) or Type 2 (General Purpose) Sound Level Meter as defined in the current revision of ANSI Standard S1.4. An acoustic calibrator of the type recommended by the sound level meter manufacturer shall be used prior to all measurements.
- (e) If possible, measurements shall be made at 50 feet (± 1.5 feet) from the right and left sides of the equipment casing, at a height of 5 feet above ground level, with the equipment operating as indicated in items (a), (b) or (c) above for a minimum period of 1 minute. Measurements made at less than 50 feet, because of space limitations at the test site, shall be reduced by the values given in Table B to estimate the 50-foot sound level.

TABLE BADJUSTMENTS FOR CLOSE-IN EQUIPMENT NOISE MEASUREMENTS

Measurement Values to be Subtracted from Measured Sound Level
Distance (Feet) to Estimate Sound Level at 50 Feet (dBA)

20 to under 21	8
21 to under 23	7
23 to under 26	6
26 to under 29	5
29 to under 33	4
33 to under 37	3
37 to under 41	2
41 to under 47	1
47 to under 50	0

3. Compliance with Equipment Noise Level Requirements

- (a) The Engineer shall retain a copy of the noise report from the Contractor with each piece of equipment used on the project of the types listed in Table A. The report shall be on the form shown in Figure A with certification by the noise control specialist hired by the contractor that equipment noise emissions do not exceed those prescribed.
- (b) If the noise levels obtained during the tests exceed those specified in Table A the Contractor shall promptly modify or alter such equipment and retest, or substitute other equipment to meet the noise level requirements.
- (c) Upon compliance, (including the certification date and equipment identification number) the Engineer will keep the noise reports readily available on file in the Construction field office for inspection upon request.
- (d) The Certification of Noise Compliance will remain valid for a period of 6 months only. Delays caused by certification refusal or by time lost in improving the rejected equipment or finding alternate acceptable equipment shall not be a basis for any monetary or time delay claims or for avoidance of late completion penalties.
- (e) All equipment shall be subject to spot noise level testing by the Engineer at his discretion as necessary to determine that the equipment in use meets the requirements specified in Table A. For this purpose, the Contractor shall furnish noise-measurement instrumentation that complies with the standards specified in paragraph 2. (d). If such tests are requested by the Engineer, the Contractor shall locate and operate the equipment as directed by the Engineer so as to facilitate the measurements. The Engineer shall provide the Contractor with a copy of the results of the measurements. If such tests demonstrate that any equipment does not comply with the requirements specified in Table A, its Certificate of Noise Compliance shall be revoke and equipment shall be taken out of use until compliance is achieved. A new Certificate of Noise Compliance will then be issued.

4. Construction Noise Level Exposure Limits

- (a) In no case shall the public be exposed to construction noise levels exceeding 100 dBA (SLOW) or to impulsive noise levels exceeding 125 dBC (FAST).
- (b) Construction activities shall be conducted in such a manner that the equivalent noise level (L_{eq}) over any one-hour period does not exceed 85 dBA at any noise-sensitive locations (e.g. residence and hotels).

5. Construction Noise Level Exposure Test Procedures

- (a) All noise exposure measurements will be performed with an integrating sound level meter. An acoustic calibrator will be used prior to all measurements.
- (b) The measurement microphone of the sound level meter shall be fitted with an appropriate windscreen, and will be located 1.5 meters above the ground and at least 5 feet away from the nearest sound-reflective surface for the tests.
- (c) Noise exposure measurements will be taken at noise-sensitive locations closest to the construction activities at least once each week and as dictated by construction activities. Measurement periods at each location shall be a minimum of one hour.
- (d) Construction noise exposure measurements will coincide with periods of maximum noise-generating construction activity, and will be performed during the construction phase or activity that the greatest potential to create annoyance or to exceed the noise exposure limits.

6. Compliance with Construction Noise Level Exposure Limits

- (a) Construction noise exposure data will be collected by the Contractor on a weekly basis. The noise report will include (1) a sketch indicating the locations of the measurements and of all nearby construction equipment operating during the measurement period, (2) the measured maximum A-weighted noise level at each location, in terms of dBA (SLOW), (3) the measured maximum C-weighted noise level, in terms of dBC (FAST) and (4) the measured one-hour Leq (in dBA).
- (b) In the event that the measured noise levels exceed the limits specified in paragraph 4 above, the Engineer will immediately notify the Contractor and the Contractor shall implement corrective actions as directed by the Engineer.
- (c) All construction activities will be subject to spot noise level testing by the Engineer at his discretion as necessary to determine that the noise levels meet the exposure limits specified in paragraph 4 above. If such tests demonstrate that the noise levels exceed the specified limits, the Contractor shall implement corrective actions as directed by the Engineer.

7. General Requirements for Construction Equipment Noise Control

- (a) The Contractor shall minimize the use of impact devices, such as jackhammers, pavement breakers, and hoe rams. Where possible, concrete crushers or pavement saws shall be used rather than hoe rams for tasks such as grillage removal and pavement demolition.
- (b) All pneumatic impact tools and equipment used at the construction site shall have intake and exhaust mufflers

recommended by the manufacturers thereof, to meet relevant noise ordinance limitations.

- (c) All impact devices (i.e. jackhammers and pavement breakers) shall be equipped with acoustically attenuating shields or shrouds recommended by the manufacturers thereof, to meet relevant noise ordinance limitations.
- (d) Hoppers, conveyors transfer points, storage bins, and chutes shall be lined or covered with sound-deadening material.
- (e) The Contractor shall minimize the use of air or gasoline-driven hand tools.
- (f) All other equipment, including internal combustion engines, shall have mufflers and shield paneling recommended by the manufacturers thereof.

8. General Operational Requirements for Construction Noise Control

- (a) The Contractor shall operate equipment so as to minimize banging, clattering, buzzing, and other annoying types of noises, especially near noise-sensitive locations.
- (b) The Contractor, to the extent feasible, shall configure the construction site in a manner that keeps noisier equipment and activities as far as possible from noise-sensitive locations and nearby buildings.
- (c) The Contractor shall minimize noise from the use of backup alarms near residential buildings by using self-adjusting, ambient noise-sensitive backup alarms that meet OSHA regulations.
- (d) In no case shall the above restrictions limit the Contractor's responsibility for compliance with all applicable Federal, state and local safety ordinances and regulations and other sections of these construction specifications.

9. Acoustic Shed Requirements

- (a) All noise-generating mechanical equipment that is operated by the Contractor at any time other than weekdays between the hours of 7:00 a.m. and 6:00 p.m. shall be enclosed within an acoustic shed. Such equipment includes, but is not limited to, generators for traffic sign boards and lighting.
- (b) Acoustic sheds shall consist of three-sided, closed-top enclosures, oriented such that the open end of the shed faces away from residential or hotel buildings.
- (c) The shed shall be constructed of 0.5 inch plywood sheeting, or other acceptable material weighing at least 1.5 pounds per square foot, on timber framing with no gaps at joints or corners. Gaps between the bottom edge of the shed panels and

the ground shall not exceed 1 inch in width and shall be closed off with solid strips of rubber, neoprene or other suitably dense material.

- (d) The inside of the shed shall be lined with glass fiber or mineral wool type sound-absorbing material at least 2 inches thick, protected by wire mesh or perforated sheets that have at least 30 percent open area.

10. Cost of Work

- (a) The cost of all labor, materials, equipment, insurance necessary for noise abatement measures as described in this section, any necessary modifications of construction methods or equipment and any delays to construction due to work suspension due to non-compliance with noise control requirements or due to necessary modifications to construction methods for compliance with the noise control requirements is deemed included in the prices bid for the items of work for which the equipment is used.

G. SCHEDULE OF WORK. The Contractor shall be required to prepare a progress schedule, in accordance with the requirements of Article 9 of the Standard Construction Contract, based on simultaneously working at multiple locations using multiple crews during the construction of the contract, as approved by the Engineer.

Each work force crew shall be defined as a sufficient number of workers with support staff and equipment necessary to perform the work efficiently as directed by the Engineer. Where the Contractor can demonstrate to the Engineer that he has substantially completed work, he may be permitted to start work at additional locations, on a one to one basis, at the sole discretion of the Engineer.

Where the Contractor's work operations are not able to meet its approved progress schedule, the Engineer may order the Contractor to provide additional work force as may be necessary. Failure to comply with such orders within seven (7) calendar days after the written notice from the Engineer may result in the Contractor being declared in default of the Contract in accordance with the procedure contained in Article 48 of the Standard Construction Contract.

H. SCHEDULING PRESENTATION. The Contractor shall submit construction schedule in the form of a bar chart using "Microsoft Project 2010", or in an approved equivalent program which shall be directly and fully translatable into Microsoft Project 2010 format, within seven days of the initial Pre-Construction Meeting. Each bar in the chart shall show dates the Contractor plans to start and complete each construction activity after the initial Pre-Construction Meeting. Bar chart shall show the order and interdependence of all activities necessary to complete the work and the sequence in which activity is to be accomplished as planned by the Contractor and in accordance with all subcontractors or suppliers whose work shall be shown on the bar chart. The Contractor shall submit the bar chart for the Engineer's review and revise it, if required, until approved by the Engineer.

The Contractor shall submit weekly progress status update reports or as otherwise directed by the Engineer. The Contractor shall submit updated bar chart every month. The revised bar chart shall be made in the same form and detail as the original submittal and shall be accompanied by an explanation of the reasons for the revisions all of which shall be subject to approval by the Engineer.

I. ACCELERATED PROJECT SCHEDULE AND COMBINATION OF STAGES.

Contractor shall plan and/or stage its work schedule using all hours/days available. Contractor is advised that all applicable unit prices shall include, for the purpose of this contract, all overtime costs, premium time costs, shift differentials required to complete construction within the specified "Time(s) of Completion" stipulated in this contract.

Contractor shall be permitted to accelerate this project, to combine stages and/or work sequences. Any such changes shall be shown in the construction schedule, to be furnished in accordance with the General Provisions of the Standard Specifications and the above "SCHEDULING PRESENTATION" Article, and shall be submitted for approval of the Engineer.

J. NO EXTENSION OF TIME FOR WINTER SHUT-DOWN. Where the Contractor's approved work schedule for installing sidewalk, curb, roadway base and/or pavement falls within the winter period of December 1st through April 1st, the Contractor will NOT be granted an extension of time for completion of this contract due to the winter shut-down period, unless otherwise provided in Schedule A.

K. PRIVATE UTILITY HARDWARE ADJUSTMENTS will be performed by the owning utility company or its agent, at its expense. The Contractor shall notify the utility company 72 hours prior to start of work at each location where its hardware requires adjustment.

L. SURVEY MONUMENTS. When working in the vicinity of survey monument the Contractor shall hand excavate per Item 8.02 A and 8.02 B at City Survey Monuments, for a distance of five (5) feet around each monument, as directed by the Engineer.

M. RESTORATION OF ADJACENT AREAS. The Contractor shall be required to remove all form work. In planting strip areas, the Contractor shall be required to restore areas damaged as a result of his operations, to the satisfaction of the Engineer, with sod. The Contractor shall also, as directed by the Engineer, make safe adjacent areas to his work, such as: restoring missing or damaged pavement markings that were removed or damaged as a result of the Contractor's operations (as per requirements of Section 6.44 in the Standard Specifications); resetting granite blocks in tree pits; and, applying asphaltic concrete mixture (Item 4.02 CB) where badly broken sidewalk or curb may create a dangerous condition just outside his area of operation, where and when directed by the Engineer.

All restoration work shall be done to the satisfaction of the Engineer.

N. RAILROAD FACILITIES REQUIREMENTS. The following provisions shall apply, as necessary, should any railroad facilities pass over or under this project:

- (1) If any manhole covers are raised or lowered, cables in the manholes shall be protected by wood sheeting of two-inch nominal thickness.
- (2) Tractors, cranes, excavators, etc., used in the vicinity of an elevated structure, shall be isolated from ground. Since the elevated structure is used as a negative return path with a consequent potential between it and ground, any contact between the structure and grounded equipment could result in burning of the steel.
- (3) There shall be no machine excavation in the vicinity of power duct lines until such duct lines have been carefully exposed by hand excavation.
- (4) Duct lines must be maintained and protected during construction.
- (5) All lumber and plywood used for the protection of transit facilities must be fire retardant.
- (6) Construction materials or equipment shall not be stored on subway ventilators or gratings. Subway emergency exits must be kept clear at all times.
- (7) In excavating over or near the subway roof, special care shall be exercised so that the thin concrete protection of the subway waterproofing is not damaged.
- (8) The following Standard NYCT "Insurance Clauses" are to be made part of the Contract Documents. Proof that the necessary insurance is in effect will be required before work can commence.

O. N.Y.C. TRANSIT INSURANCE. The Contractor (Permittee) shall indemnify and save harmless the City of New York and the New York City Transit (Permitter) in accordance with the following "Insurance Requirements" and proof that the necessary insurance is in effect will be required before work can commence:

NYCT "OUTSIDE CONTRACT" INSURANCE REQUIREMENTS

1. The Permittee at its sole cost and expense shall carry or cause to be carried and shall maintain at all times during the period of performance under this Agreement policies of insurance as herein below set forth below:
 - (A) Workers' Compensation Insurance (including Employer's Liability Insurance) with limits as specified in Schedule A, which limit may be met by a combination of primary and excess insurance meeting the statutory limits of New York State. The policy shall

be endorsed to include Longshoreman's and Harbor Workers' Compensation Act/Maritime Coverage Endorsement and/or Jones Act Endorsement when applicable.

- (B) Commercial General Liability Insurance (I.S.O. 2001 Form or equivalent) approved by Permittor in the Permittee's name with limits of liability as specified in Schedule A for each occurrence on a combined single limit basis for injuries to persons (including death) and damages to property. The limits may be provided in the form of a primary policy or combination of primary and umbrella/excess policy. When the minimum contract amounts can only be met when applying the umbrella/excess policy; the Umbrella/Excess Policy must follow form of the underlying policy and be extended to "drop down" to become primary in the event primary limits are reduced or aggregate limits are exhausted. Such insurance shall be primary and non-contributory to any other valid and collectable insurance and must be exhausted before implicating any Permittor/MTA policy available.

Such policy should be written on an occurrence form; and shall include:

- Contractual coverage for liability assumed by the Permittee under this agreement;
- Personal and Advertising Injury Coverage;
- Products-Completed. Operations;
- Independent Contractors Coverage;
- "XCU" coverage (Explosion, Collapse, and Underground Hazards) where necessary;
- Contractual Liability Exclusion, applicable to construction or demolition operations to be performed within 50 feet of railroad tracks, must be voided, where necessary; and,
- Additional Insured Endorsement (I.S.O. Form CG 20 26 07/04 version or equivalent) approved the Permittor naming:

New York City Transit Authority (NYCTA), the Manhattan and Bronx Surface Transit Operating Authority (MaBSTOA), the Staten Island Rapid Transit Operating Authority (SlRTOA), MTA Capital Construction Co., the Metropolitan Transportation Authority (MTA) including its subsidiaries and affiliates, and the City of New York (as Owner).

- (C) Business Automobile Liability Insurance Policy - (I.S.O. Form CA 00 01 10 01 or equivalent) approved by the Permittor is required if Permittee's vehicle enters Permittor property. The insurance must be in the name of the Permittee or its contractor entering the Permittor property with limits of liability in the amount specified in Scheule "A" for claims for bodily injuries (including death) to persons and for damage to property arising out of the ownership, maintenance or use of any owned, hired or non-owned motor vehicle.

(D) Railroad Protective Liability Insurance policy shall be required as specified in Schedule A.

(E) Environmental/Pollution Exposures

In the event environmental or pollution exposures exist, the Permittee shall require the environmental contractor or subcontractor to provide the applicable insurance covering such exposure. The limits and type of insurance provided shall be satisfactory to the Permitter and will be confirmed to the parties prior to the start of the work.

2. General Requirements Applicable to Insurance Policies

- a) All of the insurance required by this Article shall be with Companies licensed or authorized to do business in the State of New York with an A.M. Best Company rating of not less than A-/VII or better and reasonably approved by the Permitter/MTA and shall deliver evidence of such policies.
- b) Except for Workers Compensation, all references to forms and coverages referred to above shall be the most recent used by the Insurance Services Office, Inc. (ISO) or equivalent forms approved by the Insurance Department of the State of New York, provided, however, that excess coverages may be written on forms reasonably acceptable to Permitter containing provisions other than those contained in ISO forms but otherwise conforming in substance to the requirements of this Article.
- c) The Permittee or its Contractor performing the work shall furnish evidence of all policies before any work is started to the permitter:

For NYCT Contract Inspection
C/O Mr. John Malvasio
Director, MOW Engineering
130 Livingston Street, Room 8044F
Brooklyn, NY 11201
Telephone: (718) 694-1358

These policies must: (i) be written in accordance with the requirements of the paragraphs above, as applicable; (ii) be endorsed in form acceptable to include a provision that the policy will not be canceled, materially changed, or not renewed, unless otherwise indicated herein, at least thirty (30) days prior written notice to the Permitter c/o MTA Risk and Insurance

Management (MTA RIM) Department - Standards, Enforcement & Claims Unit, 2 Broadway - 21st floor, New York, NY 10004; and (iii) state or be endorsed to provide that the coverage afforded under the contractor's policies shall apply on a primary and not on an excess or contributing basis with any policies which may be available to the Permitter/MTA, and also that the contractor's policies, primary and excess, must be exhausted before implicating any Permitter/MTA policy available. (iv) In addition, contractor's policies shall state or be endorsed to provide that, if a subcontractor's policy contains any provision

that may adversely affect whether contractor's policies are primary and must be exhausted before implicating any Permittor/MTA policy available, contractor's and subcontractor's policies shall nevertheless be primary and must be exhausted before implicating any Permittor/MTA policy available. Except for Professional Liability, policies written on claims made basis are not acceptable. At least two (2) weeks prior to the expiration of the policies, contractor shall endeavor to provide evidence of renewal or replacement policies of insurance, with terms and limits no less favorable than the expiring policies. Except as otherwise indicated in the detailed coverage paragraphs below, self insured retentions and policy deductibles shall not exceed \$100,000, unless such increased deductible or retention is approved by Permittor/MTA. The Permittee shall be responsible for all claim expense and loss payments within the deductible or self-insured retention. The insurance monetary limits required herein may be met through the combined use of the insured's primary and umbrella/excess policies.

- d) Certificates of Insurance may be supplied as evidence of policies of the above policies, except for Policy (D) Railroad Protective Liability Insurance Policy. However, if requested by the Permittor, the Permittee shall deliver to the Authority, within forty-five (45) days of be request, a copy of such policies, certified by the insurance carrier as being true and complete. The Railroad Protective Liability Insurance Policy must be provided in the form of the Original Policy. A detailed Insurance Binder may be provided, ACORD or Manuscript Form, pending issuance of the Original Policy. The Original Policy must be submitted to MTA RIM within 30 days of the Binder Approval.
- e) If a Certificate of Insurance is submitted, it must: (1) be provided on the Permittor Certificate of Insurance Form or MTA Certificate of Insurance Form for Joint Agency Agreements; (2) be signed by an authorized representative of the insurance carrier or producer and notarized; (3) disclose any deductible, self-insured retention, sub-limit, aggregate limit or any exclusions to the policy that materially change the coverage; (4) indicate the Additional Insureds and Named Insureds as required herein, along with a physical copy of the Additional Insured Endorsement (I.S.O. Form CG 20 26 07/04 version or equivalent), as applicable and the endorsement(s) must include policy number(s); (5) reference the Contract by number on the face of the certificate; and (6) expressly reference the inclusion of all required endorsements.
- f) The minimum amounts of insurance required in the detail description of policies (A), (B), (C), and (D) above shall not be construed to limit the extent of the Permittee's liability under this Agreement.
- g) If, at any time during the period of this Agreement, insurance as required is not in effect, or proof thereof is not provided to the Permittor, the Permittor shall have the options to: (1)

direct the Permittee to suspend work or operation with no additional cost or extension of time due on account thereof; or (ii) treat such failure as an Event of Default.

P. USE OF CITY WATER. The contractor is notified that for use of City water under this project the Contractor shall be required to obtain a water use permit from the Department of Environmental Protection at the Contractor's own cost.

Q. FUEL COST. The contractor is notified that the fuel cost per gallon used in the formula under Sub-Article 26.2.8 of the Standard Construction Contract for Extra Work will be derived from the fuel price index for the United States East Coast published weekly by the United States Energy Information Administration ("USEIA"), and available on its website at <http://www.eia.gov/petroleum/gasdiesel/>. The USEIA-published cost per gallon for the applicable fuel on the East Coast for the week in which the first day of each calendar quarter during the contract term occurs (i.e., January 1st, April 1st, July 1st and September 1st) will be used in the reimbursement formula for all Extra Work invoiced that was performed during that calendar quarter. Should the USEIA stop publishing this fuel price index, the fuel cost per gallon will be determined by reference to a substitute index to be agreed upon by the Contractor and the City.

R. ITEM NO. 6.52 FED. The contractor is notified that the Uniformed Flagpersons, under Item No. 6.52 FED, are to be paid not less than the most recent prevailing wages rates established for Laborers as determined by the NYC Comptroller or the US Department of Labor, whichever is higher at the time the work is being performed in accordance with the requirements of Section 6.52 FED in I - PAGES.

S. NIGHT TIME AND/OR WEEKEND DIFFERENTIAL. Any item of work ordered performed outside the normal permissible working hours of 7:00 A.M. and 6:00 P.M., Monday through Friday and/or between the hours of 6:00 P.M. Friday evening and 6:00 A.M. Monday morning, with the exception of Lump Sum items, will be paid at the unit price bid plus a ten (10%) percent night time and/or weekend differential. No differential will be applied to Lump Sum items.

T. ENGINEER'S FIELD OFFICE LOCATION. The Field Office shall be within 1/2 mile of the job site. Field offices located further than 1/2 mile from the job site shall require approval by the Assistant Commissioner for Construction.

U. VIBRATORY ROLLERS. The Contractor is notified that until further notice the use of vibratory rollers is prohibited within the project limits.

V. LONG ISLAND RAIL ROAD INSURANCE: The Contractor shall procure, at its sole cost and expense, and shall maintain in force at all times during the term of this Agreement, policies of insurance as herein below set forth, written by companies with an A.M. Best Company rating of A- or better and approved by the LIRR/MTA. The Contractor shall deliver to the LIRR/MTA evidence of such policies. These policies must:

(i) be written in accordance with the requirements of the paragraphs below, as applicable;

(ii) be endorsed in form acceptable to the LIRR/MTA to include a provision that the policy will not be canceled, materially changed, or not renewed without at least thirty (30) days prior written notice to the LIRR, Attention: Carol Berlingieri, MTA Risk and Insurance Management, Long Island Rail Road, 2 Broadway, New York, New York 10004, Telephone No. (646) 252-1429, by certified mail/return receipt requested; and

(iii) state or be endorsed to provide that the coverage afforded under the policies shall apply on a primary and not on an excess or contributing basis with any policies which may be available to the LIRR/MTA. Except as otherwise provided herein, policies written on a "claims-made" basis are not acceptable. At least two (2) weeks prior to the expiration of the policies, evidence of renewal or replacement policies of insurance, with terms and limits no less favorable than the expiring policies, shall be delivered to the LIRR/MTA. Deductibles or self-insured retentions above those specified in Schedule A will require approval from the LIRR/MTA. The Contractor shall be responsible for all claim expense and loss payments within the deductible or self-insured retention.

(1) Commercial General Liability Insurance (I.S.O. Form CG 00 01 01 96 or equivalent approved by the Railroad) in the Contractor's name with limits of liability in the amount specified in Schedule A on a combined single limit basis for injuries to persons (including death) and for damage to property. If the policy is subject to an aggregate limit, replacement insurance will be required if it is likely such aggregate will be exceeded.

Such policies shall include:

Contractual coverage for liability assumed by the Contractor;

"XCU" coverage (Explosion, Collapse, and Underground Hazards) where necessary;

Products-Completed Operations Coverage;

Independent Contractors Coverage;

Coverage for claims for bodily injury asserted by an employee of an additional insured and any Employer Liability Exclusion which may otherwise operate to exclude such coverage shall be voided in this respect; and,

Additional Insured Endorsement (latest I.S.O. Form CG 20 10 or equivalent approved by the Railroad) naming Long Island Rail Road and Metropolitan Transportation Authority (LIRR/MTA) including its subsidiaries and affiliates, and the City of New York.

(2) Worker's Compensation Insurance (including Employer's Liability Insurance) meeting the statutory limits of New York State.

(3) An Automobile Liability Insurance Policy (I.S.O. Form CA 00 01 07 97 or equivalent approved by the Railroad) in Contractor's name with the Long Island Rail Road (LIRR), Metropolitan Transportation Authority (MTA), its subsidiaries and affiliated companies, the City of New York and all other indemnified parties included in the contract as Additional Insured with limits of liability in the amount of shown on Schedule A for claims for bodily injuries (including death) to persons and for damage to property arising out of the ownership, maintenance or use of any owned, hired or non-owned motor vehicle. The policy shall be extended to include employees of any insured acting in the scope of their employment. If the policy is subject to an aggregate limit, replacement insurance will be required if it is likely such aggregate will be exceeded.

(4) Railroad Protective Liability Insurance policy shall be required as specified in Schedule A.

The Long Island Rail Road Company and Metropolitan Transportation Authority are the "Named Insureds."

The limit of liability shall be as shown on Schedule A. If policy is subject to an aggregate limit, replacement insurance will be required if it is likely such aggregate will be exceeded.

Definition of "Physical Damage to Property" must be amended to mean direct and accidental loss of or damage to "all property of any Named Insured and all property in any Named Insured's care, custody or control".

The Contractor shall furnish evidence of all policies, before any work is started, to:

Carol Berlingieri
MTA Risk and Insurance Management
Long Island Rail Road
2 Broadway
New York, New York 10004
Telephone No. (646) 252-1429

Certificates of Insurance may be supplied as evidence of policies in paragraph numbers (1), (2), and (3) above, however, if requested by the Agency, the Contractor shall deliver to the Agency, within forty-five (45) days of the request, a copy of such policies, certified by the insurance carrier as being true and complete.

If a Certificate of Insurance is submitted it must: (1) be provided on the Long Island Rail Road Certificate of Insurance Form (see attachment to Schedule A); (2) be signed by an authorized representative of the insurance carrier or producer and notarized; (3) disclose any deductible, self-insured retention, aggregate limit or any exclusions to the policy that materially change the coverage; (4) indicate the Additional Insureds and Named Insureds as required herein; (5) reference the Contract by number on the face of the certificate; and (6) expressly reference the inclusion of all required endorsements.

Evidence of policy 4. Railroad Protective Liability Insurance, requires submittal of the original Policy. The original Binder will be accepted

pending issuance of the original policy. Railroad Protective Liability Insurance cannot be submitted on insurance certificate forms. It must be provided as follows:

A detailed Binder, pending issuance of the actual policy, or the actual policy itself;

Named Insureds: Long Island Rail Road/Metropolitan Transportation Authority;

"Physical Damage to Property" definition must be amended as stated above in requirements.

If, at any time during the period of this Agreement, insurance as required is not in effect, or proof thereof is not provided to the LIRR/MTA, the LIRR/MTA shall have the option to: (i) direct the Contractor to suspend work with no additional cost or extension of time due on account thereof, or (ii) treat such failure as an Event of Default.

W. PRICES TO INCLUDE. No direct payment will be made for costs incurred in complying with the foregoing Special Provisions, unless otherwise provided. Said costs will be deemed to have been included in the prices bid for all the scheduled contract items.

Long Island Rail Road

GENERAL REQUIREMENTS FOR PROJECTS ADJACENT TO LIRR PROPERTY WITH POTENTIAL TO IMPACT LIRR SAFETY AND OPERATIONS

- Attached are "General Requirements for Outside Contractors Working on LIRR Property". These requirements apply to this project. Entry Permit requires an outside agency or contractor to reimburse the LIRR for all project costs (i.e. Flag Protection, Project engineers, Inspectors, etc.)
- Shop drawings and calculations detailing sheeting must be submitted prior to excavation, which may impact the stability of adjacent embankment supporting our tracks. Shop drawings and calculations to include the original seal and signature of a NYS Licensed Professional Engineer. Shheeting to be designed for Cooper E-80 Axle Loading as per the American Railway Engineering and Maintenance of Way Association.
- Fouling of LIRR Track includes work within 15 ft. of or along LIRR tracks. This also includes operation of equipment or any part of equipment (i.e. crane booms) which could fall onto or within six (6) feet of LIRR tracks.
- All parties are notified that fouling LIRR track without LIRR flag protection being present is a violation of Federal Law.
- CRANES
 - Crane operation must maintain at least fifteen (15) feet vertical and horizontal separation from overhead LIRR High Tension Lines. If overhead power lines from outside agencies are supported from LIRR High tension poles, a letter from that agency must be submitted to the LIRR stating their vertical and horizontal separation requirements.
 - The following conditions apply for operating cranes with booms of sufficient length to fall onto or within six (6) feet of LIRR tracks.
 - Crane information must be submitted to the LIRR for review, including proposed location of crane, proposed boom angle and loading diagram indicating that the crane is capable of supporting 150% of load to be lifted. Loading diagram to include original seal and signature of NYS Licensed Professional engineer.
 - LIRR flag protection must be on site. Crane operations will generally be restricted to 10:00 am to 3:00 pm daily.
 - Crane operator or one (1) construction supervisor who will be on the site full time must be trained and verified in Roadway Worker Protection.
 - Crane operations must follow the direction of LIRR flagmen and face boom parallel to our track when ordered to do so.

Procedure Number: 3rd Party - 3

Title: Adjacent

Revision: 2

Date: 03/13/12

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Long Island Rail Road

**GENERAL REQUIREMENTS FOR
OUTSIDE CONTRACTORS WORKING ON LIRR PROPERTY**

- Obtain Entry Permits. Call LIRR Manager – Engineering Contracts, Agreements and Materials at 718-558-3356.
- Obtain required Railroad Protective Liability Insurance and submit original signed insurance documents to the MTA Risk and Insurance Management, call 646-252-1429.
- All contractor personnel whose duties include working on, within fifteen (15) feet of or above railroad tracks or operating equipment (i.e. cranes) on or near railroad tracks shall attend annual Roadway Worker Protection (RWP). Call LIRR Training Department at 718-558-3100 to schedule.
- Two (2) weeks prior to start of construction call Managing Engineer – Civil Inspection at 718-558-3218.

Procedure Number: 3rd Party – 3

Title: General

Revision: 2

Date: 03/13/12

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Page 1 of 1

**Guidelines for Submission of Evidence of Insurance
MTA LONG ISLAND RAIL ROAD (LIRR) AGREEMENTS**

These are basic acceptance guidelines-read your agreement for specific insurance requirements.
Policies must be written by Carriers rated A-/VII or better to be acceptable to MTA & MTA's Operating Agencies.

1. General Requirements:

- Use Long Island Rail Road (LIRR) Certificate if contract applies to only LIRR;
- Use Joint Agency Certificate if contract applies to more than one MTA Agency;
- ACORD Certificate may be used for operating-funded contracts under \$250,000 unless otherwise noted in agreement.

On the Certificate, you are required to:

- Reference the Agreement or Contract #;
- Disclose any deductible, self-insured retention, sub-limit or aggregate limit;
- Provide Insured's telephone number, contact person and e-mail address;
- Must be signed by an Authorized Representative of the Insurance Carrier or Producer and notarized.
- Insurance expiration dates may not be within 30 days of submission unless written assurance from the authorized broker that the policy(s) will be renewed with the same terms and conditions is submitted with the certificate.
- Select / Check (✓) the appropriate boxes for Additional Insured / Additional Named Insureds and/or Loss Payees,

2. Minimum Coverages (Refer to Agreement for Specific Insurance Requirements):

a. Workers' Compensation

- The New York State Insurance Fund form is acceptable.
- If a company is located out of state, an "All States" endorsement is required
- Sole Proprietors may provide CE-200 form as documentation of exemption status. Others may provide a letter from their accountant or attorney as evidence of exemption.

b. General Liability (Refers To Primary and Umbrella/Excess Liability Policies)

- Minimum limits of Commercial General Liability may be satisfied by a combination of primary and umbrella / excess policies and must follow form of the underlying policy and be extended to "drop down" to become primary in the event the primary policy is exhausted.
- A physical copy of the Additional Insured Endorsement (I.S.O. Form CG 20 10 1185 version or equivalent) reflecting the policy number(s) and covering the required indemnitees in your agreement must accompany the certificate of insurance.

c. Railroad Protective Liability (RRPL) / Builder's Risk

- A Certificate of Insurance is not acceptable proof of these coverages: an Insurance binder must be provided pending issuance of actual policy.
- RRPL binder must list all required Named insured (indemnitees).
- Actual policies must be submitted within 30 days from issuance of binder.

d. Environmental Coverages - Contractor or its sub-contractor may provide:

- Contractor's Pollution Liability coverage must be endorsed to include the additional insureds per terms of contract and a copy of the physical endorsement must accompany the certificate of insurance.
- Pollution Legal Liability coverage must be endorsed to include the additional insureds as required in your contract. Evidence of coverage can be satisfied by the following:
 - Stand alone Pollution Legal Liability policy listing the Non-Owned Disposal Site
 - A Non-Owned Disposal Site Endorsement to the Contractors Pollution Liability policy.
 - A certificate of insurance from the disposal facility adding the applicable Agency (s) as additional Insured.
- The Hauler must provide evidence of their Business Auto Liability policy with copies of the MCS90 & CA9948 endorsement,

e. Joint Venture

- If the Contractor/Consultant is a joint venture, the joint venture must be listed as the insured on page one of the MTA Long Island Rail Road Certificate of Insurance.

3. Provide Signed Certificate or a Certified Copy(s) of the actual Policy(s) to:

Mailing Address: MTA Risk and Insurance Management Dept., Standards, Enforcements and Claims Unit, 2 Broadway, 21st floor, New York, NY 10004.

INS-PROCEDURE-GUIDELINES - MTARIM -07-18-11



Department of Transportation

POLLY TROTTEBERG, Commissioner

July 15, 2016

OCMC FILE NO: BNEC-16-152
 PROJECT: ATLANTIC AVENUE SAFETY IMPROVEMENTS
 LOCATION: BROOKLYN
 CONTRACT NO: HWD10105
 COMMUNITY BOARD: 6

PERMISSION IS HEREBY GRANTED TO THE **NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION** AND ITS DULY AUTHORIZED AGENT, TO ENTER UPON AND RESTRICT THE FLOW OF TRAFFIC AT THE ABOVE LOCATION AND ITS LOCAL ADJACENT STREETS FOR THE PURPOSE OF CARRYING OUT THE ABOVE NOTED PROJECT, SUBJECT TO THE STIPULATIONS, AS NOTED BELOW:

A. SPECIAL STIPULATIONS

1. **BUS STOPS** – THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO NYC DOT OCMC AND NEW YORK CITY TRANSIT (NYCT) A MINIMUM OF FIVE (5) WEEKS IN ADVANCE FOR LANE/STREET CLOSURES THAT AFFECT BUS ROUTES/BUS STOPS.
2. **METERS** – THE CONTRACTOR MAY NOT REMOVE OR RELOCATE PARKING METERS WITHOUT FIRST OBTAINING APPROVAL FROM NYCDOT PARKING METER DIVISION AT 718 – 894 – 8651.
3. **ACCESS TO ABUTTING PROPERTIES** – THE CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH ABUTTING PROPERTY OWNERS TO ENSURE ACCESS IS PROVIDED TO/FROM ENTRANCES/DRIVEWAYS AT ALL TIMES.
4. **NOTIFICATION** – THE CONTRACTOR MUST AT LEAST TWO (2) WORKING DAYS BEFORE THE START OF CONSTRUCTION NOTIFY THE NYC FIRE DEPARTMENT, NYC POLICE DEPARTMENT, NYCEMS, LOCAL COMMUNITY BOARD, BOROUGH PRESIDENT'S OFFICE-CHIEF ENGINEER, NYCDOT OCMC OFFICE, AND ALL ABUTTING PROPERTY OWNERS.
5. **ENHANCED MITIGATIONS**
6. **NYPD TRAFFIC AGENTS** ARE REQUIRED FOR THIS PROJECT: (3) POSTS PLUS RELIEF (MONDAY TO SATURDAY) ON POST FROM 6AM TO 6PM
 - o **ENHANCED MITIGATIONS PEDESTRIAN FLOW** INCLUDING METAL FENCING, SHALL BE PROVIDED TO ENSURE PEDESTRIAN STAY WITHIN THEIR DESIGNATED PATH/ROUTE. FLAGGERS SHALL BE PROVIDED TO ASSIST WITH PEDESTRIANS AT THE DESIGNATED CROSSWALK AREAS. THESE FLAGGERS SHALL BE ASSIGNED TO THIS FUNCTION ONLY.
 - o **"NO STANDING ANYTIME-TEMPORARY CONSTRUCTION" SIGNS** AND TEMPORARY PAVEMENT MARKINGS SHALL BE INSTALLED AND MAINTAINED AS WARRANTED BY THE MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) REQUIRED TO FACILITATE TRAFFIC MOVEMENTS THROUGH THE WORK ZONE. ALL TEMPORARY SIGNS AND PAVEMENT MARKINGS SHALL BE REMOVED UPON COMPLETION OF THE PROJECT.
 - o **COMMUNITY OUTREACH** SHALL BE PROVIDED FOR THE DURATION OF THE PROJECT.

B. MAINTENANCE AND PROTECTION OF TRAFFIC

ATLANTIC AVENUE FROM GEORGIA TO SHEFFIELD AVENUE
ATLANTIC AVENUE FROM SHEFFIELD AVENUE TO PENNSYLVANIA AVENUE
ATLANTIC AVENUE FROM PENNSYLVANIA AVENUE TO NEW JERSEY AVENUE
ATLANTIC AVENUE FROM NEW JERSEY AVENUE TO VERMONT STREET
ATLANTIC AVENUE FROM VERMONT STREET TO WYONA STREET
ATLANTIC AVENUE FROM WYONA STREET TO BRADFORD STREET
ATLANTIC AVENUE FROM BRADFORD STREET TO MILLER AVENUE
ATLANTIC AVENUE FROM MILLER AVENUE TO VAN SICLEN AVENUE
ATLANTIC AVENUE FROM VAN SICLEN AVENUE TO HENDRIX STREET
ATLANTIC AVENUE FROM HENDRIX STREET TO LIBERTY AVENUE
ATLANTIC AVENUE FROM LIBERTY AVENUE TO BARBEY STREET
ATLANTIC AVENUE FROM BARBEY STREET TO JEROME STREET
ATLANTIC AVENUE FROM JEROME STREET TO WARWICK STREET
ATLANTIC AVENUE FROM WARWICK TO ASHFORD STREET
ATLANTIC AVENUE FROM ASHFORD STREET TO CLEVELAND STREET
ATLANTIC AVENUE FROM CLEVELAND AVENUE TO ELTON STREET
ATLANTIC AVENUE FROM ELTON STREET TO LINWOOD STREET
ATLANTIC AVENUE FROM LINWOOD STREET TO ESSEX STREET
ATLANTIC AVENUE FROM ESSEX STREET TO SHEPHERD AVENUE
ATLANTIC AVENUE FROM SHEPHERD AVENUE TO BERRIMAN STREET

NYC Department of Transportation
 Bureau of Permit Management and Construction Control
 55 Water Street- Concourse Level New York, NY 10041
 T: 212.839.9581 F: 212.839.9696
 www.nyc.gov/dot

OCMC FILE NO: BNEC-16-152
PROJECT: ATLANTIC AVENUE SAFETY IMPROVEMENTS
CONTRACT NO: HWD10105
LOCATION: BROOKLYN
COMMUNITY BOARD: 8

ATLANTIC AVENUE FROM BERRIMAN STREET TO HIGHLAND PLACE
ATLANTIC AVE FROM HIGHLAND PLACE TO ATKINS AVENUE
ATLANTIC AVENUE FROM ATKINS AVENUE TO HALE AVENUE
ATLANTIC AVENUE FROM HALE AVENUE TO MONTAUK AVENUE
ATLANTIC AVENUE FROM MONTAUK AVENUE TO NORWOOD AVENUE
ATLANTIC AVENUE FROM NORWOOD TO MILFORD STREET
ATLANTIC AVENUE FROM MILFORD STREET TO LOGAN STREET
ATLANTIC AVENUE FROM LOGAN STREET FOUNTAIN STREET


- Work hours shall be as follows: 9:00 AM to 2PM Monday to Friday during school hours, 10:00 AM to 4:00 PM Monday to Friday only when school is closed or 10PM to 6AM Monday to Friday and Saturday 8AM to 4PM.
- The contractor must coordinate with school before working.
- Flag person must be provided to stop pedestrian and /or vehicle traffic while lifting materials overhead and also when crossing sidewalk in conjunction with crossing sidewalk permits.
- The contractor shall 4 11footlanes, two 11 foot lanes on each side of the existing center mall on Atlantic Avenue and maintain one 11foot lane on one way streets and two 11 foot lanes on two way streets.
- The contractor shall maintain 5 foot clear sidewalk or 5 foot clear pedestrian walkway in roadway. Walkway must meet NYCDOT specifications. Walkway must be ramped at entry to sidewalk for handicapped accessibility.
- Full width of roadway shall be opened to traffic when site is unattended.
 - **ATLANTIC AVENUE AND GEORGIA AVENUE**
 - **ATLANTIC AVENUE AND SHEFFIELD AVENUE**
 - **ATLANTIC AVENUE AND PENNSYLVANIA AVENUE**
 - **ATLANTIC AVENUE AND NEW JERSEY AVENUE**
 - **ATLANTIC AVENUE AND VERMONT STREET**
 - **ATLANTIC AVENUE AND WYONA STREET**
 - **ATLANTIC AVENUE AND BRADFORD STREET**
 - **ATLANTIC AVENUE MILLER AVENUE**
 - **ATLANTIC AVENUE AND VAN SICLEN AVENUE**
 - **ATLANTIC AVENUE AND HENDRIX STREET**
 - **ATLANTIC AVENUE AND LIBERTY AVENUE**
 - **ATLANTIC AVENUE AND BARBEY STREET**
 - **ATLANTIC AVENUE AND JEROME STREET**
 - **ATLANTIC AVENUE AND WARWICK TO STREET**
 - **ATLANTIC AVENUE AND ASHFORD STREET**
 - **ATLANTIC AVENUE AND CLEVELAND AVENUE**
 - **ATLANTIC AVENUE AND ELTON STREET**
 - **ATLANTIC AVENUE AND LINWOOD STREET**
 - **ATLANTIC AVENUE AND ESSEX STREET**
 - **ATLANTIC AVENUE AND SHEPHERD AVENUE**
 - **ATLANTIC AVENUE AND BERRIMAN STREET**
 - **ATLANTIC AVE AND HIGHLAND PLACE**
 - **ATLANTIC AVENUE AND ATKINS AVENUE**
 - **ATLANTIC AVENUE AND HALE AVENUE**
 - **ATLANTIC AVENUE AND MONTAUK AVENUE**
 - **ATLANTIC AVENUE AND NORWOOD STREET**
 - **ATLANTIC AVENUE AND MILFORD STREET**
 - **ATLANTIC AVENUE AND LOGAN STREET**
 - **ATLANTIC AVENUE AND FOUNTAIN STREET**


- Work hours shall be as follows: 9:00 AM to 2PM Monday to Friday during school hours, 10:00 AM to 4:00 PM Monday to Friday only when school is closed or 10PM to 6AM Monday to Friday and Saturday 8AM to 4PM.
- The contractor must coordinate with school before working.
- Flag person must be provided to stop pedestrian and /or vehicle traffic while lifting materials overhead and also when crossing sidewalk in conjunction with crossing sidewalk permits.
- The contractor shall 4 11footlanes, two 11 foot lanes on each side of the existing center mall on Atlantic Avenue and maintain one 11foot lane on one way streets and two 11 foot lanes on two way streets.
- The contractor shall maintain 5 foot clear sidewalk or 5 foot clear pedestrian walkway in roadway. Walkway must meet NYCDOT specifications. Walkway must be ramped at entry to sidewalk for handicapped accessibility.
- Full width of roadway shall be opened to traffic when site is unattended.

THIS IS NOT A PERMIT. THIS STIPULATION SHEET MUST BE SUBMITTED WITH ALL REQUESTS FOR PERMITS PERTAINING TO THE ABOVE CONTRACT AND PRESENT AT THE WORK SITE ALONG WITH ALL ACTIVE CONSTRUCTION PERMITS WHEN THE APPROVED WORK IS BEING PERFORMED.

OCMC FILE NO: BNEC-16-152
PROJECT: ATLANTIC AVENUE SAFETY IMPROVEMENTS
CONTRACT NO: HWD10105
LOCATION: BROOKLYN
COMMUNITY BOARD: 8

1. ALL RELOCATION WORK BY THE UTILITIES SUCH AS; CON EDISON, TELEPHONE, GAS AND CABLE COMPANIES SHALL PRECEDE THE CONTRACTORS' START OF WORK ON ALL AFFECTED ROADWAYS IN THE IMPACTED CONTRACT AREA.
2. THE CONTRACTOR IS ADVISED THAT OTHER CONTRACTORS MAY BE WORKING IN THE GENERAL AREA DURING THE TERM OF THIS STIPULATION. IN WHICH EVENT, THE CONTRACTOR MAY REQUIRE MODIFICATIONS BY THE OCMC-STREETS.
3. THE PERMITEE IS NOT AUTHORIZED TO ENTER, OCCUPY OR USE ANY PUBLICLY-OWNED OR PRIVATELY OWNED, NON-PAVED, LANDSCAPE OR NON-LANDSCAPED LOCATION WITHOUT SPECIFIC WRITTEN PERMISSION. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF A LIMITED-ACCESS ARTERIAL HIGHWAY, WRITTEN APPROVAL FROM THE NYCDOT OCMC-HIGHWAYS IS REQUIRED. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET OR PUBLIC PARK, WRITTEN APPROVAL FROM THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION OR NEW YORK CITY DEPARTMENT OF PARKS AND RECREATION IS REQUIRED. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF ANY OTHER JURISDICTION SUCH AS PRIVATE PROPERTY, STATE, FEDERAL ETC., IT IS THE PERMITEE'S RESPONSIBILITY TO DETERMINE THE PROPERTY OWNER AND OBTAIN THE WRITTEN APPROVAL.
4. THE PERMITEE SHALL ADHERE TO THE NYCDOT BUREAU OF BRIDGES' SPECIAL PROVISIONS FOR LANDSCAPE PROTECTION, MAINTENANCE AND RESTORATION, ITEMS 1.18.15 THROUGH 1.18.19, WHENEVER AND WHEREVER ANY OF THE PERMITEE'S ACTIVITIES OCCUR WITHIN A LIMITED ACCESS ARTERIAL HIGHWAY RIGHT - OF - WAY.
5. NO DEVIATION OR DEPARTURE FROM THESE STIPULATIONS WILL BE PERMITTED WITHOUT THE PRIOR WRITTEN APPROVAL FROM THE OCMC-STREETS. REQUEST FOR SUCH MODIFICATIONS SHALL BE SUBMITTED TO THE OFFICE OF THE OCMC-STREETS, NEW YORK CITY DEPARTMENT OF TRANSPORTATION, A MINIMUM OF TWENTY (20) DAYS IN ADVANCE FOR CONSIDERATION.
6. FOR THIS PROJECT THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN ALL NECESSARY ADVANCE WARNING AND DETOUR SIGNS, TEMPORARY CONTROL DEVICES, BARRICADES, LIGHTS AND FLASHING ARROW BOARDS IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," THE TYPICAL SCHEMES INCLUDED IN THIS SPECIFICATION; AND AS ORDERED BY THE ENGINEER-IN-CHARGE AND THE OCMC-STREETS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING HIS CONSTRUCTION SIGNAGE. THE IDENTIFICATION SHALL INCLUDE THE CONTRACTOR'S NAME, SPONSORING AGENCY NAME AND THE CONTRACT NUMBER. THE IDENTIFICATION SHALL BE PLACED ON THE BACK OF THE SIGN. THE LETTERING SHALL BE THREE (3) INCHES HIGH.
8. THE OCMC-STREETS RESERVES THE RIGHT TO VOID OR MODIFY THESE STIPULATIONS SHOULD CONSTRUCTION FAIL TO COMMENCE WITHIN TWO (2) YEARS OF THE SIGNED DATE OF THESE STIPULATIONS.
9. THE CONTRACTOR MUST COMPLY WITH ALL CONSTRUCTION EMBARGOS ISSUED BY THE NYCDOT INCLUDING THE HOLIDAY EMBARGO.


GARY SMALLS
 DIRECTOR
 OCMC STREETS


DANIEL PRINCIVIL
 PROJECT MANAGER
 OCMC-STREETS

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

Interpretive Memorandum # 2

The Contractor is notified that the following Department of Sanitation (DOS) Interpretive Memorandum # 2 does not guarantee that a temporary stockpile location will be approved for this project. In addition, the Department of Design and Construction (DDC) reserves the right to rescind approval for any temporary stockpile location at any time. No payment will be made to the Contractor if either a temporary stockpile location is not approved for this project, or DDC rescinds an approval for any reason.



THE CITY OF NEW YORK Department of Sanitation

S. ELIZABETH SEARLE
Assistant Commissioner
for Legal Affairs

Department of Sanitation Rules and Regulations Governing
Non-Putrescible Solid Waste Transfer Stations

Bureau of Legal Affairs
44 Beaver Street
New York, NY 10004
Telephone (212) 837-8110
FAX (212) 837-8243

INTERPRETIVE MEMORANDUM # 2
February 14, 1995

*Subject: Temporary Storage and Processing of Construction and Demolition Debris
by New York City Agency Contractors*

Contractors performing construction work for New York City agencies may be required to excavate dirt, concrete, rock, gravel and similar materials ("construction materials") from a contract site or to remove from a contract site construction materials resulting from construction, demolition, alteration, repair or renovation of structures, streets or buildings. On street construction projects, construction materials required to be excavated or removed may also include asphalt. The purpose of this Interpretive Memorandum is to (a) define the circumstances under which the Department of Sanitation (the "Department") will not deem its Rules and Regulations Governing Non-Putrescible Solid Waste Transfer Stations (the "Rules") to apply to the temporary storage, processing and/or stockpiling (collectively, "stockpiling") of such construction materials and (b) the procedure for ensuring such exemption. It is the responsibility of the contracting agency to oversee its contractors' compliance with the Rules and with this Interpretive Memorandum.

1. When No Transfer Station Permit is Required

Where a City contractor has:

- (a) set aside an area of a contract site for stockpiling construction materials excavated from and/or intended for that site; or
- (b) received written approval from the contracting agency for an off-site stockpiling location,

the Department will not deem such stockpiling location a transfer station and will not require the contractor to obtain a transfer station permit so long as: -

- (c) no construction materials or debris from off the contract site are received at the designated location for subsequent transfer to another location (other than the contract site); and
- (d) the temporary stockpiling location is clearly described as such in the contract or clearly approved by the construction agency and designated as such in writing to the Department by the agency; and
- (e) the construction agency represents in writing to the Department that such agency will monitor the temporary stockpiling location and ensure its clean-up and restoration pursuant to the procedures set out in this memorandum.



Help Reduce
New York's Waste.



Example: Street Construction Projects

As part of a contract for street construction, the contractor may be working at one end of a street and using an area at the other end of the street for the temporary stockpiling of construction materials. Both ends of the street are part of the construction contract site. In addition, the contractor may have leased an off-site location for temporary stockpiling of materials, which, following processing, will be reincorporated into the contract site, with some portion of the remainder designated for delivery to a Department disposal facility. Neither location will be regulated by the Department as a transfer station so long as the procedures set out in this memorandum are followed.

2. Procedure for Exception.

Upon a City construction agency's approval of any location to be designated as a temporary processing, storage or stockpiling area, that agency must determine that (a) its contract with the contractor provides for clean-up and restoration of such area by, for example, the contractor's posting of a restoration bond and/or by contractual set-off and (b) the agency has adequate procedures for monitoring the designated area to ensure that it does not violate the provisions set forth in this memorandum and that such location is cleaned up and restored at the completion of the contract work.

The City construction agency must submit an official letter to the Department acknowledging compliance with both (a) and (b) immediately above and representing that the agency will ensure the contractor's compliance. The letter to be submitted must be in substantially the following form, addressed to the Director, Bureau of Waste Disposal, Department of Sanitation, 125 Worth Street, Room 726, New York, NY 10013:

"The New York City Department of _____ (the "Agency")
has awarded a construction contract to _____ (Contractor)
_____ (the "Contractor") for work to be performed at _____ (Contract
Site) _____ .

a. This Agency has approved the following locations to be used by the Contractor for the temporary storage, processing and/or stockpiling of construction materials (the "Stockpiling Locations") excavated from the construction site or intended for the construction site:

b. The terms of the contract require the Contractor to clean up and restore the Stockpiling Locations, whether on or off the contract site, at or before the completion of the contract work.

c. This Agency assumes responsibility for the monitoring of Stockpiling Locations to ensure that only materials received from and/or intended for the construction site are stockpiled at such locations and we will enforce clean-up and restoration of such Locations at the end of their use for temporary stockpiling or at the termination of the contract, whichever occurs earlier, through restoration

bonding requirements and/or contractual set-off provisions such that the costs of clean-up and restoration will not become a charge to the Department or the City. "

3. When a Transfer Station Permit is Required

A transfer station permit will be required under any circumstances other than those outlined above. Except in the specifically defined circumstances set forth in this memorandum, any operator of a location or facility which receives, processes, stores or stockpiles construction and demolition debris or fill material for purposes of transfer to another location, including to a New York City Department of Sanitation facility, and whether or not under contract to the Department for the delivery of such materials, will be fully subject to the Department's transfer station rules and liable for enforcement for violations.

(NO TEXT ON THIS PAGE)

TF-PAGES

**TIGER/FHWA FUNDED PROJECTS
TIGER/FHWA FUNDING ATTACHMENTS**

(NO TEXT ON THIS PAGE)

Transportation Investment Generating Economic Recovery ("TIGER") and Federal Highway Administration ("FHWA") Funding Attachments

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

THIS ATTACHMENT IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

1. Any substantial modification of the Contract shall be subject to approval by the State Commissioner of Transportation and the Federal Highway Administration, in addition to the New York City ("City") agencies involved.
2. The Contractor shall be responsible for compliance with all the provisions of the following Schedules of Federal and State requirements which are hereby made a part of the original contract documents and are annexed hereto:

Attachment "A" – Required Contract Provisions for Federal-Aid Construction Contracts – FHWA 1273

Attachment "B" – Standard Clauses for New York State Contracts, Labor and Employment Provisions, and Public Notices

Attachment "C" – Notice to All Prospective Bidders, Federal-Aid Contracts - Assurance of Non-Discrimination, Subcontracts, Appendix A-1 Supplemental Title VI Provisions (Civil Rights Act)

Attachment "D" – Disadvantaged Business Enterprise Requirements

Attachment "E" – "Buy America" Requirements & Waivers

Attachment "F" - Equal Employment Opportunity Requirements

Attachment "G" – Standardized Changed Conditions Clauses

Attachment "H" – Civil Rights Monitoring and Reporting

Attachment "I" – False Claims Certification, United States Department of Transportation Hotline, New York State Inspector General Hotline

Attachment "J" – Debarment History Certification, Lobbying Activity Certification

Attachment "K" – Provisions Relating to the New York State Labor Law, Prevailing Wages, and the Use of Convict Labor and Materials on Federal & State Contracts

In addition to compliance with the above Federal and State requirements, the Contractor shall also be required to comply with all City requirements as depicted in the Information for Bidders and Standard Construction Contract herein. Wherever a conflict may exist, the Federal Regulations shall take precedence.

3. The Contractor shall not pay less than the highest minimum hourly rates as set forth by Federal, State or City laws.
4. The Contractor shall maintain his records in conformity with the current NYSDOT "Manual for Uniform Record Keeping", referred to as MURK, copies of which are available on line at the NYSDOT website www.dot.ny.gov/publications.
5. In accordance with 23 US C315 and Order 1321.1C, FHWA Directives Management, issued January 6, 2010, the construction work performed under this Contract shall be available to be subject to inspection at all times by the New York State Department of Transportation and the Federal Highway Administration.
6. Amendments to Information for Bidders:
 - a) Refer to Pages 6 and 7, Subsection 21.(C), Rejection of All Bids and Negotiation With All Responsible Bidders;
Delete Sub-Article 21.(C) and Sub-Article 21.(D) in their entirety and substitute the words "(C) (NO TEXT)." And "(D) (NO TEXT)." respectively.
 - b) Refer to Page 9, SECTION 27. Failure to Execute Contract, 6th, 7th and 8th lines;
Delete the sentence beginning with the words: "No plea of mistake in such . . ." in its entirety.
 - c) Refer to Page 10, SECTION 30. Labor Law Requirements, Sub-Article (A) General;
Add the following at the end of the Sub-Article (A): "This provision shall apply to subcontractors also."
 - d) Refer to Page 11, Subsection 33.(B), Variations from Engineer's Estimate;
Delete Subsection 33.(B) in its entirety. See Attachment "G", Standardized Change Condition Clauses, Sub-Article (3).(iv).(B).
 - e) Refer to Pages 12 and 13, SECTION 37. Locally Based Enterprise Requirements (LBE);
Delete the SECTION, in its entirety. See Attachment "D" Disadvantaged Business Enterprise Utilization Requirements.
7. Amendments to Standard Construction Contract:
 - a) Refer to Page 5, Sub-Article 5.2;
Delete the last sentence starting with the words: "In the event of . . ." and ending with the words ". . . shall take precedence."
 - b) Refer to Pages 11 and 12, ARTICLE 7. PROTECTION OF WORK AND OF PERSONS AND PROPERTY; NOTICES AND INDEMNIFICATION;
Add the following:

"7.6 In addition to the requirements stipulated herein, all work performed under this Contract shall comply with the safety and health standards of the Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor."
 - c) Refer to Page 13, Sub-Article 9.3;
Delete the first sentence starting with the words: "If the Contractor . . ." and ending with the words ". . . progress schedule."

- d) Refer to Pages 22 and 23, ARTICLE 16. OCCUPATION OR USE PRIOR TO COMPLETION;
Delete Sub-Article 16.1.4, in its entirety.
- e) Refer to Pages 23 and 24, ARTICLE 17. SUBCONTRACTS;
Delete Sub-Article 17.11.1, in its entirety;
Substitute the following revised Article 17.11.1:
"17.11.1 Payment to **Subcontractors**: The agreement between the **Contractor** and its **Subcontractors** shall contain the same terms and conditions as to method of payment for **Work**, labor, and materials, as are contained in this **Contract**."
- f) Refer to Page 26, ARTICLE 19. SECURITY DEPOSIT;
Delete Sub-Article 19.2, in its entirety;
Substitute the following Sub-Article 19.2:

"19.2 If performance and payment bonds are not required, the bid security shall be retained by the **City** as security for the **Contractor's** faithful performance of the Contract. If partial payments are provided, the bid security will be returned to the **Contractor** subject to the other provisions of this **Contract**. If partial payments are not provided, the bid security will be released when final payment is certified by the **City** for payment."
- g) Refer to Page 29, ARTICLE 21. RETAINED PERCENTAGE;
Delete Article 21, in its entirety;
Substitute the following:

"ARTICLE 21. (NO TEXT)"
- h) Refer to Page 36, ARTICLE 24. MAINTENANCE AND GUARANTY;
Delete Sub-Article 24.1 in its entirety;
Substitute the words "24.1 (NO TEXT)".
- i) Refer to Page 36, ARTICLE 24. MAINTENANCE AND GUARANTY;
Add the following to Sub-Article 24.9;

"On any contract which requires the furnishing and/or installing of electrical or mechanical equipment, the Contractor shall provide the following:

(1) Manufacturers' warranties or guarantees on all electrical and mechanical equipment, consistent with those provided as customary trade practice.

(2) Contractor's guarantees providing for satisfactory in-service operation of the mechanical and electrical equipment and related components for a period of not less than one (1) year following project acceptance.

(3) On any contract which requires maintenance and guarantee for landscape items including trees, the maintenance and guarantee period shall be twenty-four (24) months."
- j) Refer to Page 37, ARTICLE 25. CHANGES;
Add the following paragraph:

"25.5 Extra Work: It is anticipated that the preliminary engineering and the preparation of plans, specifications and contract documents have been performed with sufficient thoroughness, accuracy and care, and that changes and extra work during the construction can be held to a minimum and limited almost exclusively to revisions and additions necessitated by conditions that could not reasonably be anticipated before the project was advertised for bids or force account operations commenced."

- k) Refer to Pages 50, 51 and 52, ARTICLE 36. NO DISCRIMINATION;
Change in Paragraph 36.1.1, 4th line, "citizen of the State of New York" to "person";
Delete Paragraphs 36.1.3, 36.1.4, 36.2.2 and 36.2.4 in their entireties;
Add "or sex or age" to the expression "race, creed, color or national origin", and "or sex or age" to the expression "race, color or creed", wherever these expressions appear in Article 36.

- l) Refer to Page 59, ARTICLE 43. PROMPT PAYMENT;
Add the following sentence to the end of Sub-Article 43.5:

"The Contractor shall not hold any retainage, but may deduct an amount necessary to satisfy any claims, liens or judgments against a Subcontractor or materialman which have not been fully discharged."

- m) Refer to Pages 59 and 60, ARTICLE 44. SUBSTANTIAL COMPLETION PAYMENT;
Delete Sub-Articles 44.2 and 44.3, in their entirety;
Substitute the following:

"44.2 The **Commissioner** shall issue a voucher calling for payment of any part or all of the balance due for **Work** performed under the **Contract**, less any and all deductions authorized to be made by the **Commissioner**, under this **Contract** or by **Law**, and less twice the amount the **Commissioner** considers necessary to ensure the completion of the balance of the **Work** by the **Contractor**. Such a payment shall be considered a Partial and not a Final Payment. No **Substantial Completion** payment shall be made under this Article 44 where the **Contractor** shall fail to complete the **Work** within the time fixed for such completion in the Schedule A of the General Conditions, or within the time to which completion may have been extended, until an extension or extensions of time for the completion of **Work** have been acted upon pursuant to Article 13.

44.3 No further partial payments shall be made to the **Contractor** after **Substantial Completion**, except the **Substantial Completion** payment and **Contractor's** requisition that were properly filed with the **Commissioner** prior to the date of **Substantial Completion**; however, the **Commissioner** may grant a waiver for further partial payments after the date of **Substantial Completion** to permit payments for change order **Work**. Such waiver shall be in writing."

- n) Refer to Pages 60 and 61, ARTICLE 45. FINAL PAYMENT;
Delete Sub-Article 45.1, in its entirety;
Substitute the following:

"45.1 After completion and **Final Acceptance** of the **Work**, the **Contractor** shall submit all required certificates and documents, together with a requisition for the balance claimed to be due under the **Contract**. Such submission shall be within 90 days of the date of the **Commissioner's** written determination of **Final Acceptance**,

or within such additional time as may be granted by the **Commissioner** in writing. If the **Contractor** fails to submit all required certificates and documents within the time allowed, no payment of the balance claimed shall be made to the **Contractor** and the **Contractor** shall be deemed to have forfeited its right to payment of any balance claimed. A verified statement similar to that required in connection with applications for partial payments shall also be submitted to the **Commissioner**."

- o) Refer to Page 67, ARTICLE 59. SERVICE OF NOTICES;
Delete the words "deposited in a post office box regularly maintained by the United States Postal Service in a properly addressed, postage prepaid envelope".

- p) Refer to Pages 71, 72 and 73, ARTICLE 64. TERMINATION BY THE CITY;
Delete the text of the 1st paragraph;
Substitute the following:

"64.1 In addition to termination pursuant to any other article of this Contract, the Commissioner may, by written notice, terminate the Contract or any portion thereof after determining that for reasons beyond either Department or Contractor control it is not feasible to proceed with or complete the work as originally contracted for, and that termination would therefore be in the public interest. Such reasons for termination may include, but need not be necessarily limited to, executive orders of the President relating to prosecution of war or national defense, national emergency which creates a serious shortage of materials, orders from duly constituted authorities relating to energy conservation, and restraining orders or injunctions obtained by third-party citizen action resulting from national or local laws or regulations, or where the issuance of such order or injunction is primarily caused by acts or omissions of persons or agencies other than the Contractor, or where the orderly progression of a project is interfered with or delayed by acts or omissions of persons or agencies other than the Contractor. The Contractor specifically understands that the issuance of such notice by the Commissioner shall be conclusive as to its necessity. In such event the Contractor shall upon receipt of such notice."

- q) Refer to Pages 74 and 75, ARTICLE 67. LOCALLY BASED ENTERPRISE PROGRAM;
Delete Article 67, in its entirety, and Substitute the following "ARTICLE 67. (NO TEXT)". See Attachment "D" Disadvantaged Business Enterprise Requirements.

- r) Refer to Pages 75, 76 and 77, ARTICLE 69. MacBRIDE PRINCIPLES PROVISIONS;
Delete Article 69, in its entirety, and Substitute the following "ARTICLE 69. (NO TEXT)"

- s) Refer to Page 78, ARTICLE 75. COMPENSATION TO BE PAID TO CONTRACTOR;
Delete Article 75, in its entirety and Substitute the following "ARTICLE 75. (NO TEXT)".

- t) Add the following to Pages 92, 93, 94, 95, 96, 97, 98, and 99, PERFORMANCE BOND:

"Prior to or at the time of execution of the contract, successful bidder must deliver to the City of New York an executed bond equal to one hundred percent (100%) of the

contract price, to secure the faithful performance of the contract, and an executed bond in an amount equal to one hundred percent (100%) of the contract price, as security for the payment of all persons performing labor or furnishing materials in connection with this contract, prepared on the forms of bonds authorized by The City of New York, and made a part of the contract documents, copies of which are annexed hereto, and having as surety thereunder such surety company or companies as are approved by The City of New York and are authorized to do business in the State of New York. Premium of such bonds shall be included in the base bid.

In lieu of a performance and completion bond and labor and material bond, a contractor may deposit with the Comptroller, money or obligations of The City of New York which the Comptroller shall approve as of equal value with the amount of the performance and completion bond required.

Whenever a contractor deposits obligations of The City of New York, in lieu of a performance and completion bond and a labor and material bond, it shall be with the understanding that the Comptroller of the City of New York, or his successors, may sell and use the proceeds thereof, for any purpose for which the principal or surety on such bond would be liable under the terms of the contract. If money is deposited with the Comptroller, the Contractor shall not be entitled to receive interest on such money from The City of New York.

If the bidder to whom the contract is awarded refuses to execute it, or fails to furnish the required security and insurance within ten (10) days after receipt of notice to him of the award, the amount of his deposit, or as much thereof as may be applicable to the amount of the award made to him, shall be forfeited and shall be retained by the City as liquidated damages.”

- u) Refer to Pages 79, 80, 81, 82, 83, 84, 85, and 86, ARTICLE 78. PARTICIPATION BY MINORITY - OWNED AND WOMEN – OWNED BUSINESS ENTERPRISES IN CITY PROCUREMENT;
Delete Article 78, in its entirety, and Substitute the following “ARTICLE 78. (NO TEXT)”

8. Amendments to General Conditions of the Standard Highway Specifications:

- a) Refer to Pages 38 and 39, of the Standard Highway Specifications, Article 1.06.46. Project Sign;
Delete the Article 1.06.46, in its entirety;
Substitute the following:

“1.06.46. Project Sign. No project signs will be required on this project.”

9. Amendments to the Standard Highway Specifications:

- a) Refer to Pages 290 through 292, **SECTION 5.05 – Maintenance**;
Delete Section 5.05, in its entirety, and any references thereto;
Substitute the following:

“SECTION 5.05 – Maintenance”

- (A) CONTRACTOR TO KEEP HIMSELF INFORMED OF CONDITIONS

The Contractor must keep himself informed of the condition of the trees which are under maintenance, and will be required to make replacements without notice from the Commissioner. In case of failure or neglect on his part to do so, then the Commissioner shall have the right to purchase such plant material as he shall deem necessary, and to employ such person or persons as he shall deem proper, and to undertake and complete said replacements by contract or otherwise and to charge the expense thereof against the Performance Bond or any sum of money retained by The City, as herein provided, and the excess cost to the Contractor, and the Contractor shall pay all such expense to which The City may have been put by reason of the neglect of the Contractor to make such replacements as aforesaid.

(B) CONTRACTOR TO MAKE REPAIRS OR REPLACEMENTS

The Contractor shall remove and replace all trees under maintenance which die or, in the opinion of the Engineer, seem unhealthy, stunted or unable to flourish, within the period of maintenance, except as otherwise provided, and replace said trees with new trees of the same size and species as originally planted, except when such death, unhealthiness, stunting or inability to flourish is due to vandalism or damage resulting from causes over which the Contractor has no control, as certified by the Engineer. However, the Engineer may, at his discretion, direct a substitution of species.

(C) PERIOD OF MAINTENANCE

The period of maintenance for each individual tree planted or transplanted shall begin upon planting or transplanting and shall end twenty-four (24) months thereafter. The Contractor shall obtain the said certificate from the Department of Parks and Recreation, in writing, and file such certificate with the Engineer.

(D) MAINTENANCE NOT TO TERMINATE IN WINTER MONTHS

When the termination date of the period of maintenance for planted or transplanted trees shall fall outside the planting periods specified in **Section 4.16**, hereof, the interval between the said termination date and next planting period thereafter, or such part as the Commissioner may determine, shall not be included in the computation of the period of maintenance during which the replacement of defective trees is to be made by the Contractor, and also, in that case, the payment to be made under the provisions of this contract shall not be made until after the date appearing on the Certificate of Acceptance which the Contractor shall obtain from the Department of Parks and Recreation, and file with the Engineer, for trees planted as replacements for defective trees within the said next planting period thereafter, unless otherwise specifically permitted by the Commissioner.

(E) EXPIRATION OF MAINTENANCE

Unless otherwise permitted or directed, defective trees, as determined by the Commissioner, shall be replaced with new trees by the Contractor.

The furnishing and planting of trees as replacements for defective trees shall comply, in all respects, with the contract requirements.

In the event that The City incurs any expense in pursuance of this section of the contract, the certificate of the Commissioner as to the condition of the trees, the nature and extent of the replacements made, and expense incurred for such replacements shall be binding and conclusive on the Contractor.

(F) CONTRACTOR TO NOTIFY COMMISSIONER BEFORE MAKING REPAIRS

The Contractor shall notify the Commissioner, at least two (2) days before making any replacements of the time and place of beginning such work and shall at all times keep the

Commissioner or his representatives informed of the proposed prosecution of the work from day to day.”

10. The Contractor is hereby notified that this is a City contract funded through apportionment available under Title 23, U.S. Code, as amended, and that the contract will be awarded by the City of New York, subject to the approval of the Commissioner of the New York State Department of Transportation and the Federal Highway Administration. Furthermore, no extensions in time for completion or other changes affecting the contract work can be granted by the City of New York without concurrence of the State of New York and approval of the Federal Highway Administration.
11. All reference to the delivery of salvageable materials to a designated City-owned yard do not apply to this Contract. All salvageable materials designated by the Engineer shall be stored on site for pick-up by City forces.
12. Wherever references are made within these specifications to “race, creed, color, national origin or sex,” they shall be construed to include “sexual orientation and marital status”.

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

ATTACHMENT "A"

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

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applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

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will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

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will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

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(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

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VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

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"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

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department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

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ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

**ATTACHMENT "B" – STANDARD CLAUSES FOR NEW YORK
STATE CONTRACTS, LABOR AND EMPLOYMENT
PROVISIONS, AND PUBLIC NOTICES**

"Standard Clauses for New York State Contracts" is Appendix A from the NYS Office of General Services (OGS), as modified by NYS Department of Transportation (NYSDOT).

"Public Notices" text is from NYSDOT Standard Specifications, Section 107-04.

STANDARD CLAUSES FOR NEW YORK STATE CONTRACTS

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STANDARD CLAUSES FOR NYS CONTRACTS

The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract (the word "Contractor" herein refers to any party other than the State, whether a contractor, licensor, licensee, lessor, lessee or any other party):

1. EXECUTORY CLAUSE. In accordance with Section 41 of the State Finance Law, the State shall have no liability under this contract to the Contractor or to anyone else beyond funds appropriated and available for this contract.

2. NON-ASSIGNMENT CLAUSE. In accordance with Section 138 of the State Finance Law, this contract may not be assigned by the Contractor or its right, title or interest therein assigned, transferred, conveyed, sublet or otherwise disposed of without the State's previous written consent, and attempts to do so are null and void. Notwithstanding the foregoing, such prior written consent of an assignment of a contract let pursuant to Article XI of the State Finance Law may be waived at the discretion of the contracting agency and with the concurrence of the State Comptroller where the original contract was subject to the State Comptroller's approval, where the assignment is due to a reorganization, merger or consolidation of the Contractor's business entity or enterprise. The State retains its right to approve an assignment and to require that any Contractor demonstrate its responsibility to do business with the State. The Contractor may, however, assign its right to receive payments without the State's prior written consent unless this contract concerns Certificates of Participation pursuant to Article 5-A of the State Finance Law.

3. COMPTROLLER'S APPROVAL. In accordance with Section 112 of the State Finance Law (or, if this contract is with the State University or City University of New York, Section 355 or Section 6218 of the Education Law), if this contract exceeds \$50,000 (or the minimum thresholds agreed to by the Office of the State Comptroller for certain S.U.N.Y. and C.U.N.Y. contracts), or if this is an amendment for any amount to a contract which, as so amended, exceeds said statutory amount, or if, by this contract, the State agrees to give something other than money when the value or reasonably estimated value of such consideration exceeds \$10,000, it shall not be valid, effective or binding upon the State until it has been approved by the State Comptroller and filed in his office. Comptroller's approval of contracts let by the Office of General Services is required when such contracts exceed \$85,000 (State Finance Law Section 163.6-a). However, such pre-approval shall not be required for any contract established as a centralized contract through the Office of General Services or for a purchase order or other transaction issued under such centralized contract.

4. WORKERS' COMPENSATION BENEFITS. In accordance with Section 142 of the State Finance Law, this

contract shall be void and of no force and effect unless the Contractor shall provide and maintain coverage during the life of this contract for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

5. NON-DISCRIMINATION REQUIREMENTS. To the extent required by Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex (including gender identity or expression), national origin, sexual orientation, military status, age, disability, predisposing genetic characteristics, marital status or domestic violence victim status. Furthermore, in accordance with Section 220-e of the Labor Law, if this is a contract for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this contract shall be performed within the State of New York, Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex, or national origin: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. If this is a building service contract as defined in Section 230 of the Labor Law, then, in accordance with Section 239 thereof, Contractor agrees that neither it nor its subcontractors shall by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. Contractor is subject to fines of \$50.00 per person per day for any violation of Section 220-e or Section 239 as well as possible termination of this contract and forfeiture of all moneys due hereunder for a second or subsequent violation.

6. WAGE AND HOURS PROVISIONS. If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof, neither Contractor's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, Contractor and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law. Additionally, effective April 28, 2008, if this is a public work contract covered by Article 8 of the Labor Law, the Contractor understands and agrees that the filing of payrolls in a manner consistent with Subdivision 3-a of Section 220 of the Labor Law shall be a condition precedent to payment by the State of

any State approved sums due and owing for work done upon the project.

7. NON-COLLUSIVE BIDDING CERTIFICATION. In accordance with Section 139-d of the State Finance Law, if this contract was awarded based upon the submission of bids, Contractor affirms, under penalty of perjury, that its bid was arrived at independently and without collusion aimed at restricting competition. Contractor further affirms that, at the time Contractor submitted its bid, an authorized and responsible person executed and delivered to the State a non-collusive bidding certification on Contractor's behalf.

8. INTERNATIONAL BOYCOTT PROHIBITION. In accordance with Section 220-f of the Labor Law and Section 139-h of the State Finance Law, if this contract exceeds \$5,000, the Contractor agrees, as a material condition of the contract, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations thereunder. If such Contractor, or any of the aforesaid affiliates of Contractor, is convicted or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contract's execution, such contract, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify the State Comptroller within five (5) business days of such conviction, determination or disposition of appeal (2NYCRR 105.4).

9. SET-OFF RIGHTS. The State shall have all of its common law, equitable and statutory rights of set-off. These rights shall include, but not be limited to, the State's option to withhold for the purposes of set-off any moneys due to the Contractor under this contract up to any amounts due and owing to the State with regard to this contract, any other contract with any State department or agency, including any contract for a term commencing prior to the term of this contract, plus any amounts due and owing to the State for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The State shall exercise its set-off rights in accordance with normal State practices including, in cases of set-off pursuant to an audit, the finalization of such audit by the State agency, its representatives, or the State Comptroller.

10. RECORDS. The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this contract (hereinafter, collectively, "the Records"). The Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter. The State Comptroller, the Attorney General and any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in this

contract, shall have access to the Records during normal business hours at an office of the Contractor within the State of New York or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying. The State shall take reasonable steps to protect from public disclosure any of the Records which are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute") provided that: (i) the Contractor shall timely inform an appropriate State official, in writing, that said records should not be disclosed; and (ii) said records shall be sufficiently identified; and (iii) designation of said records as exempt under the Statute is reasonable. Nothing contained herein shall diminish, or in any way adversely affect, the State's right to discovery in any pending or future litigation.

11. IDENTIFYING INFORMATION AND PRIVACY NOTIFICATION.

(a) Identification Number(s). Every invoice or New York State Claim for Payment submitted to a New York State agency by a payee, for payment for the sale of goods or services or for transactions (e.g., leases, easements, licenses, etc.) related to real or personal property must include the payee's identification number. The number is any or all of the following: (i) the payee's Federal employer identification number, (ii) the payee's Federal social security number, and/or (iii) the payee's Vendor Identification Number assigned by the Statewide Financial System. Failure to include such number or numbers may delay payment. Where the payee does not have such number or numbers, the payee, on its invoice or Claim for Payment, must give the reason or reasons why the payee does not have such number or numbers.

(b) Privacy Notification. (1) The authority to request the above personal information from a seller of goods or services or a lessor of real or personal property, and the authority to maintain such information, is found in Section 5 of the State Tax Law. Disclosure of this information by the seller or lessor to the State is mandatory. The principal purpose for which the information is collected is to enable the State to identify individuals, businesses and others who have been delinquent in filing tax returns or may have understated their tax liabilities and to generally identify persons affected by the taxes administered by the Commissioner of Taxation and Finance. The information will be used for tax administration purposes and for any other purpose authorized by law. (2) The personal information is requested by the purchasing unit of the agency contracting to purchase the goods or services or lease the real or personal property covered by this contract or lease. The information is maintained in the Statewide Financial System by the Vendor Management Unit within the Bureau of State Expenditures, Office of the State Comptroller, 110 State Street, Albany, New York 12236.

12. EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITIES AND WOMEN.

In accordance with Section 312 of the Executive Law and 5 NYCRR 143, if this contract is: (i) a written agreement or purchase order instrument, providing for a total expenditure in excess of \$25,000.00,

whereby a contracting agency is committed to expend or does expend funds in return for labor, services, supplies, equipment, materials or any combination of the foregoing, to be performed for, or rendered or furnished to the contracting agency; or (ii) a written agreement in excess of \$100,000.00 whereby a contracting agency is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon; or (iii) a written agreement in excess of \$100,000.00 whereby the owner of a State assisted housing project is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon for such project, then the following shall apply and by signing this agreement the Contractor certifies and affirms that it is Contractor's equal employment opportunity policy that:

(a) The Contractor will not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability or marital status, shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on State contracts and will undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination. Affirmative action shall mean recruitment, employment, job assignment, promotion, upgradings, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation;

(b) at the request of the contracting agency, the Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein; and

(c) the Contractor shall state, in all solicitations or advertisements for employees, that, in the performance of the State contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

Contractor will include the provisions of "a", "b", and "c" above, in every subcontract over \$25,000.00 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor. Section 312 does not apply to: (i) work, goods or services unrelated to this contract; or (ii) employment outside New York State. The State shall consider compliance by a contractor or subcontractor with the requirements of any federal law concerning equal employment

opportunity which effectuates the purpose of this section. The contracting agency shall determine whether the imposition of the requirements of the provisions hereof duplicate or conflict with any such federal law and if such duplication or conflict exists, the contracting agency shall waive the applicability of Section 312 to the extent of such duplication or conflict. Contractor will comply with all duly promulgated and lawful rules and regulations of the Department of Economic Development's Division of Minority and Women's Business Development pertaining hereto.

13. CONFLICTING TERMS. In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this Appendix A, the terms of this Appendix A shall control.

14. GOVERNING LAW. This contract shall be governed by the laws of the State of New York except where the Federal supremacy clause requires otherwise.

15. LATE PAYMENT. Timeliness of payment and any interest to be paid to Contractor for late payment shall be governed by Article 11-A of the State Finance Law to the extent required by law.

16. NO ARBITRATION. Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration (except where statutorily authorized), but must, instead, be heard in a court of competent jurisdiction of the State of New York.

17. SERVICE OF PROCESS. In addition to the methods of service allowed by the State Civil Practice Law & Rules ("CPLR"), Contractor hereby consents to service of process upon it by registered or certified mail, return receipt requested. Service hereunder shall be complete upon Contractor's actual receipt of process or upon the State's receipt of the return thereof by the United States Postal Service as refused or undeliverable. Contractor must promptly notify the State, in writing, of each and every change of address to which service of process can be made. Service by the State to the last known address shall be sufficient. Contractor will have thirty (30) calendar days after service hereunder is complete in which to respond.

18. PROHIBITION ON PURCHASE OF TROPICAL HARDWOODS. The Contractor certifies and warrants that all wood products to be used under this contract award will be in accordance with, but not limited to, the specifications and provisions of Section 165 of the State Finance Law, (Use of Tropical Hardwoods) which prohibits purchase and use of tropical hardwoods, unless specifically exempted, by the State or any governmental agency or political subdivision or public benefit corporation. Qualification for an exemption under this law will be the responsibility of the contractor to establish to meet with the approval of the State.

In addition, when any portion of this contract involving the use of woods, whether supply or installation, is to be performed by any subcontractor, the prime Contractor will indicate and certify in the submitted bid proposal that the subcontractor has been informed and is in compliance with specifications and provisions regarding use of tropical hardwoods as detailed in §165 State Finance Law. Any such use must meet with the approval of the State; otherwise, the bid may not be considered responsive. Under bidder certifications, proof of qualification for exemption will be the responsibility of the Contractor to meet with the approval of the State.

19. MACBRIDE FAIR EMPLOYMENT PRINCIPLES. (APPLICABLE ONLY IN NON-FEDERAL AID NEW YORK STATE CONTRACTS). In accordance with the MacBride Fair Employment Principles (Chapter 807 of the Laws of 1992), the Contractor hereby stipulates that the Contractor either (a) has no business operations in Northern Ireland, or (b) shall take lawful steps in good faith to conduct any business operations in Northern Ireland in accordance with the MacBride Fair Employment Principles (as described in Section 165 of the New York State Finance Law), and shall permit independent monitoring of compliance with such principles.

20. OMNIBUS PROCUREMENT ACT OF 1992. (APPLICABLE ONLY IN NON-FEDERAL AID NEW YORK STATE CONTRACTS). It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority and women-owned business enterprises as bidders, subcontractors and suppliers on its procurement contracts.

Information on the availability of New York State subcontractors and suppliers is available from:

NYS Department of Economic Development
Division for Small Business
Albany, New York 12245
Telephone: 518-292-5100
Fax: 518-292-5884
email: opa@esd.ny.gov

A directory of certified minority and women-owned business enterprises is available from:

NYS Department of Economic Development
Division of Minority and Women's Business Development
633 Third Avenue
New York, NY 10017
212-803-2414
email: mwbecertification@esd.ny.gov
<https://ny.newnycontracts.com/FrontEnd/ VendorSearchPublic.asp>

The Omnibus Procurement Act of 1992 requires that by signing this bid proposal or contract, as applicable,

Contractors certify that whenever the total bid amount is greater than \$1 million:

(a) The Contractor has made reasonable efforts to encourage the participation of New York State Business Enterprises as suppliers and subcontractors, including certified minority and women-owned business enterprises, on this project, and has retained the documentation of these efforts to be provided upon request to the State;

(b) The Contractor has complied with the Federal Equal Opportunity Act of 1972 (P.L. 92-261), as amended;

(c) The Contractor agrees to make reasonable efforts to provide notification to New York State residents of employment opportunities on this project through listing any such positions with the Job Service Division of the New York State Department of Labor, or providing such notification in such manner as is consistent with existing collective bargaining contracts or agreements. The Contractor agrees to document these efforts and to provide said documentation to the State upon request; and

(d) The Contractor acknowledges notice that the State may seek to obtain offset credits from foreign countries as a result of this contract and agrees to cooperate with the State in these efforts.

21. RECIPROCITY AND SANCTIONS PROVISIONS. Bidders are hereby notified that if their principal place of business is located in a country, nation, province, state or political subdivision that penalizes New York State vendors, and if the goods or services they offer will be substantially produced or performed outside New York State, the Omnibus Procurement Act 1994 and 2000 amendments (Chapter 684 and Chapter 383, respectively) require that they be denied contracts which they would otherwise obtain. NOTE: As of May 15, 2002, the list of discriminatory jurisdictions subject to this provision includes the states of South Carolina, Alaska, West Virginia, Wyoming, Louisiana and Hawaii. Contact NYS Department of Economic Development for a current list of jurisdictions subject to this provision.

22. COMPLIANCE WITH NEW YORK STATE INFORMATION SECURITY BREACH AND NOTIFICATION ACT. Contractor shall comply with the provisions of the New York State Information Security Breach and Notification Act (General Business Law Section 899-aa; State Technology Law Section 208).

23. COMPLIANCE WITH CONSULTANT DISCLOSURE LAW. If this is a contract for consulting services, defined for purposes of this requirement to include analysis, evaluation, research, training, data processing, computer programming, engineering, environmental, health, and mental health services, accounting, auditing, paralegal, legal or similar services, then, in accordance with Section 163 (4-g) of the State Finance Law (as amended by Chapter 10 of

the Laws of 2006), the Contractor shall timely, accurately and properly comply with the requirement to submit an annual employment report for the contract to the agency that awarded the contract, the Department of Civil Service and the State Comptroller.

24. PROCUREMENT LOBBYING. To the extent this agreement is a "procurement contract" as defined by State Finance Law Sections 139-j and 139-k, by signing this agreement the contractor certifies and affirms that all disclosures made in accordance with State Finance Law Sections 139-j and 139-k are complete, true and accurate. In the event such certification is found to be intentionally false or intentionally incomplete, the State may terminate the agreement by providing written notification to the Contractor in accordance with the terms of the agreement.

25. CERTIFICATION OF REGISTRATION TO COLLECT SALES AND COMPENSATING USE TAX BY CERTAIN STATE CONTRACTORS, AFFILIATES AND SUBCONTRACTORS.

To the extent this agreement is a contract as defined by Tax Law Section 5-a, if the contractor fails to make the certification required by Tax Law Section 5-a or if during the term of the contract, the Department of Taxation and Finance or the covered agency, as defined by Tax Law 5-a, discovers that the certification, made under penalty of perjury, is false, then such failure to file or false certification shall be a material breach of this contract and this contract may be terminated, by providing written notification to the Contractor in accordance with the terms of the agreement, if the covered agency determines that such action is in the best interest of the State.

26. IRAN DIVESTMENT ACT. By entering into this Agreement, Contractor certifies in accordance with State Finance Law §165-a that it is not on the "Entities Determined to be Non-Responsive Bidders/Offerers pursuant to the New York State Iran Divestment Act of 2012" ("Prohibited Entities List") posted at:

<http://www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf>

Contractor further certifies that it will not utilize on this Contract any subcontractor that is identified on the Prohibited Entities List. Contractor agrees that should it seek to renew or extend this Contract, it must provide the same certification at the time the Contract is renewed or extended. Contractor also agrees that any proposed Assignee of this Contract will be required to certify that it is not on the Prohibited Entities List before the contract assignment will be approved by the State.

During the term of the Contract, should the state agency receive information that a person (as defined in State Finance Law §165-a) is in violation of the above-referenced certifications, the state agency will review such information and offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment activity which is in violation of the Act within 90 days after the determination of such violation, then the state

agency shall take such action as may be appropriate and provided for by law, rule, or contract, including, but not limited to, imposing sanctions, seeking compliance, recovering damages, or declaring the Contractor in default.

The state agency reserves the right to reject any bid, request for assignment, renewal or extension for an entity that appears on the Prohibited Entities List prior to the award, assignment, renewal or extension of a contract, and to pursue a responsibility review with respect to any entity that is awarded a contract and appears on the Prohibited Entities list after contract award.

LABOR AND EMPLOYMENT PROVISIONS

The provisions of NYS Labor Law, as amended, and referred to in *Standard Clauses for All New York State Contracts*, shall be applicable. On contracts financed with Federal-Aid, any provisions of NYS Labor Law that are in conflict with mandatory Federal-Aid construction contract compliance requirements, as contained in 23 CFR 635.117 are superseded. Any provisions of NYS Labor Law that are not in conflict with mandatory Federal-Aid construction contract compliance requirements, or the Davis-Bacon Act, but are more restrictive, shall apply.

The Contractor shall directly employ those members of its own organization. Employee leasing and other similar arrangements under which workers are employed by another organization are not permitted. No procedures or requirement shall be imposed by any state which will operate to discriminate against the employment of labor from any other state, possession or territory of the United States, in the construction of a Federal-Aid project. The selection of labor to be employed by the Contractor on any Federal-Aid project shall be of its choosing.

The Contractor shall not use convict labor unless performed by convicts who are on parole, supervised release, or probation for construction, maintenance or any other purpose at the site or within the contract limits from the time of contract award until contract final acceptance by the Department.

A. Wages. The Department will identify in the contract proposal whether the NYS Department of Labor (NYSDOL) has determined the work under the contract to be prevailing wage eligible, and if so, provide the Prevailing Rate Case (PRC) number. The PRC number is found on NYSDOL Form PW-200. The Contractor shall ensure that workers are paid the appropriate wages and supplemental (fringe) benefits. If the contract is prevailing wage eligible, all on-site work shall be paid prevailing wages. When both State and Federal prevailing wages apply, the Contractor shall pay the higher of the wages, and the higher of the combination of the wages and supplemental (fringe) benefits. The Contractor shall obtain periodic wage rate schedule updates from the NYSDOL. Wage rate amendments and supplements are available on the NYSDOL web site at www.labor.ny.gov. All changes or clarification of labor classification(s) and applicability of prevailing wage rates shall be obtained in writing from the Office of the Director, NYSDOL Bureau of Public Work. The Contractor shall include the cost of changes in wage rate schedules and supplements (fringes) over the contract duration in the contract bid prices.

B. Overtime Dispensation. All bidders, in submitting their bids, should base their bids and work progression on the assumption that Overtime Dispensation pursuant to Article 8 of the New York State Labor Law, for any workers, laborers, and mechanics to work more than 8 hours in any one calendar day or more than 5 days in any one week will not be granted for any operation for the contract duration. Regardless of approval or disapproval of overtime by the NYSDOL, no adjustment will be made in any bid prices.

Subsequent to award, where the contract proposal has imposed specific scheduling and/or phasing requirements or where it is determined by the Department to be in the best interest of the public, the Department may process, for approval by the NYSDOL, requests for overtime dispensation on certain specific operations.

The Contractor shall submit requests for overtime dispensation to the Department on Form PW- 30, Application for Dispensation for Hours, which will be provided by the Engineer upon request. The Department will review applications for overtime dispensation submitted by the Contractor associated with contracts subject to (A+B) Bidding, Incentive/Disincentive (I/D) or Lane Rental work favorably, but the application should not request more than 60 hours per week. The 60 hours per week may be either 6 - 10 hour days or 5 - 12 hour days. Overtime dispensations will be supported by the Department to advance Department goals and priorities, subject to specific circumstances and conditions associated with each contract.

The Department cannot guarantee that the NYSDOL will grant dispensation from restrictions pursuant to the provisions of Article 8 of the State Labor Law, however with the Department's certification, it is anticipated that they will act favorably, provided that the Contractor is in compliance with Labor Law requirements at the time of application.

C. Payrolls. The Contractor shall provide the Engineer, each week, a certified payroll and statement of compliance with respect to the wages paid each of its employees subject to prevailing wage requirements and a certified payroll from each Subcontractor engaged on work during the preceding weekly payroll period. If the Contractor or Subcontractor does not

maintain a place of business in New York State and the amount of the contract exceeds \$25,000., payroll records and certifications shall be kept on the worksite.

Certified payrolls shall contain for each employee, name, race, gender, home address, an individually identifying number (e.g. the last 4 digits of the employee's social security number), work class, hours worked, wage rate, supplemental (fringe) benefits paid or provided, payroll taxes, withholdings and actual wages paid. Certified payrolls shall not include full social security numbers of employees. Certified payrolls shall be submitted on Form WH-347 or Form HC-231-1 for Federal- Aid contracts and on HC-231-1 for non Federal-Aid contracts. At the Contractor's option, other payroll formats, which supply the required data and certifications, may be used. Each payroll submitted shall be accompanied by a Statement of Compliance signed by the Contractor.

Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to NYSDOL or USDOL for purposes of an investigation or audit of compliance with prevailing wage requirements. Contractors may require subcontractors to provide addresses and social security numbers to the Contractor for its own records, without weekly submission to the Department.

D. Apprenticeship.

(1) Apprenticeship Program Requirements

Notice to Bidders: Please be advised that, pursuant to the authority granted to the City under Labor Law Section 816-b, the Department of Design and Construction hereby requires that the contractor awarded a contract as a result of this Invitation for Bids, and any of its subcontractors with subcontracts worth two million dollars or over, have, prior to entering into such contract or subcontract, apprenticeship agreements appropriate for the type and scope of work to be performed that have been registered with, and approved by, the New York State Commissioner of Labor. In addition, the contractor and its subcontractors will be required to show that such apprenticeship program/s have successfully passed the two year Probation period following the initial registration date of such program/s with the New York State Department of Labor.

The failure to prove, upon request, that these requirements have been met shall result in the contract not being awarded to the contractor or the subcontract not being approved.

Please be further advised that, pursuant to Labor Law Section 220, the allowable ratio of apprentices to journeypersons in any craft classification shall not be greater than the ratio permitted to the contractor as to its workforce on any job under the registered apprenticeship program.

(2) Apprenticeship Program Questionnaire

The bidder must submit a completed and signed Apprenticeship Program Questionnaire. The Questionnaire is located in the Bid Booklet, in Volume 1 of 3 of this contract.

PUBLIC NOTICES

Before commencing any work on the site, the Contractor shall provide a satisfactory weather resistant surface, and post, in a location accessible to all workers, a copy of the NYSDOL schedules of prevailing wages and supplements for this contract, a copy of all redeterminations of such schedules for the contract, the Workers' Compensation Law notice, required safety notices, and all other notices required by law to be posted at the site. The Contractor shall maintain such notices in a legible manner and shall replace any notice or schedule which is damaged, defaced, illegible or removed for any reason. The notices shall be maintained until all work on the site is complete.

**NOTICE TO ALL PROSPECTIVE BIDDERS
FEDERAL-AID CONTRACTS**

ASSURANCE OF NON-DISCRIMINATION

The New York State Department of Transportation, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation and Title 23 Code of Federal Regulations, Part 200, Title VI Program and Related Statutes, as amended, issued pursuant to such Acts, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, sex, age, disability/handicap and income status in consideration for an award.

SUBCONTRACTS

The attention of the Contractor is directed to the requirement that the standard contract clauses, as set forth in the Proposal and in the NYS Department of Transportation Labor Compliance Manual (Federal-aid Construction, Appendix D-2, 3) must be physically incorporated in all subcontracts.

Copies of the Labor Compliance Manual referred to above may be examined in the office of the NYS Department of Transportation Regional Director.

SUPPLEMENTAL TITLE VI PROVISIONS (CIVIL RIGHTS ACT)

(To be included in all contracts)

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

- (1) **Compliance with Regulations**: The contractor shall comply with the Regulation relative to nondiscrimination in Federally assisted programs of the Department of Transportation of the United States, Title 49, Code of Federal Regulations, Part 21, and the Federal Highway Administration (hereinafter "FHWA") Title 23, Code of Federal Regulations, Part 200 as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- (2) **Nondiscrimination**: The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, religion, age, color, sex or national origin, sex, age, and disability/handicap in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by 49 CFR, section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

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- (3) Solicitations for Subcontractors, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin, sex, age, and disability/handicap.
- (4) Information and Reports: The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by NYSDOT or the FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to NYSDOT's Office of Civil Rights or FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information.
- (5) Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, NYSDOT shall impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
- a) Withholding of payments to the contractor under the contract until the contractor complies; and/or
 - b) Cancellation, termination or suspension of the contract, in whole or in part.
- (6) Incorporation of Provisions: The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The contractor shall take such action with respect to any subcontractor procurement as NYSDOT or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request NYSDOT to enter into such litigation to protect the interests of NYSDOT, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

DISADVANTAGED BUSINESS ENTERPRISE REQUIREMENTS

DBE UTILIZATION. DBE refers to a Disadvantaged Business Enterprise (DBE). The DBE program applies to Federal-Aid contracts. The program seeks to:

- Ensure nondiscrimination in the award and administration of Federal-Aid contracts;
- Create a level playing field on which DBEs can fairly compete for Federal-Aid contracts;
- Ensure that the DBE program is narrowly tailored in accordance with applicable law;
- Ensure that only firms that fully meet DBE eligibility standards are permitted to participate as DBEs;
- Help remove barriers to the participation of DBEs in Federal-Aid contracts;
- Promote the use of DBEs in all types of federally-assisted contracts and procurement activities conducted by recipients of Federal financial assistance;
- Assist in the development of firms that can compete successfully in the marketplace outside the DBE program; and
- Provide appropriate flexibility to recipients of Federal financial assistance in establishing and providing opportunities for DBEs.

The parties to this contract shall take all necessary and reasonable steps in accordance with the laws, rules and regulations cited in this subsection to promote the objectives outlined above. The Contractor shall comply with the applicable laws, rules and regulations and the DBE Program Assurance stated below.

DBE Program Assurance. The Contractor or Subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of Federal-Aid contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the Department deems appropriate, which may include, but is not limited to: (1) withholding contract payments; (2) assessing sanctions; (3) liquidated damages; and/or (4) disqualifying the Contractor from future bidding as non-responsible.

A. Statutory Authority. The statutory authority for the DBE Program is contained in the Surface Transportation Assistance Act ("STAA") of 1982 (Public Law 97-424, §105(f)), the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17, §106(c)), the Intermodal Surface Transportation Efficiency Act of 1991, the Transportation Equity Act for the 21st Century ("TEA-1") of 1998 (Public Law 105-178, §1101(b)), the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users ("SAFETEA-LU") of 2005 (Public Law 105-59 §1101(b)), the Moving Ahead for Progress in the 21st Century Act ("MAP-21") of 2012 (Public Law 112-141, §1101(b)), and the Fixing America's Surface Transportation Act ("FAST-ACT") of 2015 (Public Law 114-94, §1101(b)). New York State has enacted Section 85 of the Highway Law and Section 428 of the Transportation Law. Regulations have been promulgated under 49 CFR 21, 49 CFR 26 and 17 NYCRR 35.

B. DBE Goal(s). Federal-aid construction contracts have a single DBE goal. The Department will monitor the Contractor's attainments towards DBE goals in accordance with Attachment H, *Civil Rights Monitoring and Reporting*.

1. Established Goal(s). The Department may have established contract utilization goal(s) for DBEs, which are expressed as a percentage of the total contract price. The goal(s) are stated in the proposal and remain in effect throughout the life of the contract. In executing the contract or bid documents the Bidder declares that it subscribes to the utilization goal(s) and shall meet the goal(s) or demonstrate that it could not meet them

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despite its best efforts. Failure to provide commitments to meet the established goal(s) for the contract or failure to meet the good faith efforts shall be grounds for rejection of the bid as non-responsive. Good faith efforts shall meet the requirements of 49 CFR 26 Appendix A.

2. Zero Percent Goal(s). When a zero goal(s) for participation by DBEs has been established, and the Bidder proposes the use of a Subcontractor, the purchase of materials, the use of a Service or the use of Trucking at any time during the life of the contract, the Contractor shall promote the objectives outlined in this subsection by providing opportunities for DBEs to participate in these areas, with such participation to be credited towards the race-neutral component of the DBE Program.

C. DBE Eligibility. Only those DBE firms that are certified under the New York State Unified Certification Program are eligible to be used for goal attainment. DBE certification is not an endorsement of the quality or performance of the business but simply an acknowledgment of the firm's status as a DBE. Furthermore, DBEs must be certified for the type of work to be performed. A business directory is available on the NYS Unified Certification Program website at <https://nysucp.newnycontracts.com>.

D. Counting DBE Participation Towards the DBE Goal(s). The value of the work performed by a DBE, including that of a DBE prime contractor, with its own equipment, with its own forces, and under its own supervision will be counted toward the goal(s), provided the utilization is a commercially useful function. A DBE prime contractor shall still provide opportunities for participation by other DBEs. Work performed by DBEs on the contract will be counted as set forth below. If the Department determines that some or all of a DBE's work does not constitute a commercially useful function, only the portion of the work considered to be a commercially useful function will be credited toward the goal(s).

1. Joint Ventures. When a DBE performs as a participant in a joint venture, a portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work of the contract that the DBE performs with its own forces will be counted toward DBE goals.

2. Subcontractors. 100% of the value of the work performed by a DBE Subcontractor will be counted toward the DBE goal(s), including the cost of materials and supplies purchased by the DBE. The DBE may not rent or lease equipment from the Contractor or its affiliates. When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the DBE's subcontractor is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.

3. Manufacturers/Fabricators. 100% of the expenditure to a DBE Manufacturer or Fabricator will be counted toward the DBE goal(s). Manufacturers or Fabricators may provide materials to the Contractor, a Subcontractor, or other firm working on the contract for installation.

4. Material Suppliers. 60% of the expenditure to a DBE Material Supplier will be counted toward the DBE goal. A Material Supplier, also known as a regular dealer, is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. Packagers, brokers, manufacturer's representatives, or other persons who arrange or expedite

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transactions are not Material Suppliers. Material Suppliers may provide materials to the Contractor, a Subcontractor, or other firm working on the contract for installation.

5. Brokers/Manufacturer's Representatives. 100% of the expenditures for fees or commissions charged for assistance in the procurement of, or fees for transportation charges for the delivery of, materials or supplies provided by a DBE Broker/Manufacturer's Representative will be counted toward the DBE goal(s), provided they are determined to be reasonable and not excessive as compared with fees customarily allowed for similar services. The cost of the materials and supplies themselves will not be counted. Brokers may supply materials to the Contractor, Subcontractor, or other firm working on the contract.

6. Services. 100% of the expenditure for fees charged by a DBE for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of the contract will be counted toward the DBE goal(s), provided the fee is reasonable and not excessive as compared with fees customarily allowed for similar services.

7. Trucking Operations. A DBE trucking firm shall own and operate at least one registered, insured, and fully operational truck used on the contract and shall be responsible for the management and supervision of the trucking operation for which it is responsible. The DBE trucking firm shall control the day-to-day DBE trucking operations, and shall be responsible for: (1) Negotiating and executing rental/leasing agreements; (2) Controlling the work force; (3) Coordinating the daily trucking needs with the Contractor or Subcontractor; and (4) Scheduling and dispatching trucks.

a. DBE Owned/Leased Trucks. 100% of the value of the trucking operations the DBE provides on the contract using trucks it owns or leases on a long-term basis that are registered, insured, and operated by the DBE using drivers it employs, will be counted toward the DBE goal. A lease shall indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks shall display the name and identification number of the DBE.

b. Other DBE Trucks. The DBE may obtain trucks from another DBE, including an owner/operator. 100% of the value of the trucking operations that the other DBE provides will also be counted toward the DBE goal.

c. Non-DBE Trucks. The DBE may obtain trucks from a non-DBE, including an owner-operator. Only the value of the fee or commission that the DBE receives as a result of the arrangement with the non-DBE will be counted toward the DBE goal.

E. Conditions of Participation. DBE participation will be counted toward meeting the DBE contract goal(s), subject to the following conditions:

1. Commercially Useful Function. A DBE is considered to perform a commercially useful function when it is responsible for the execution of a distinct element of work on a contract and carries out its responsibilities by actually performing, managing, and supervising the work involved in accordance with normal industry practice. The arrangement cannot be contrived solely for the purpose of meeting the DBE goal. Regardless of whether an arrangement between the Contractor and the DBE represent standard industry practice, if the arrangement erodes the ownership, control or independence of the DBE or in any other way does not meet the commercially useful function requirement, the Contractor will receive no credit toward the goal(s) and shall

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take all necessary and reasonable steps to backfill the participation. Additionally, a DBE not performing a commercially useful function may, in some instances, warrant further investigation of the DBE's certification status or review of the DBE for fraud. A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction or contract through which funds are passed in order to obtain the appearance of DBE participation.

A DBE may present evidence to rebut a determination by the Department that the DBE is not performing a commercially useful function. Commercially useful function determinations by the Department are subject to review by the Federal Highway Administration (FHWA) but the determination may not be administratively appealed to USDOT.

2. Work Force. The DBE shall employ a work force, (including administrative and clerical) separate and apart from that employed by the Contractor, other Subcontractors on the contract, or their affiliates. The DBE shall perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force. This does not preclude the employment by the DBE of an individual that has been previously employed by another firm involved in the contract, provided that the individual was independently recruited by the DBE in accordance with customary industry practice. The routine transfer of work crews from another employer to the DBE shall not be allowed.

3. Supervision. All work performed by the DBE must be controlled and supervised by the DBE without duplication of supervisory personnel from the Contractor, other Subcontractors on the contract, or their affiliates. This does not preclude routine communication between the supervisory personnel of the DBE and other supervisors necessary to coordinate the contract work.

4. Materials. DBE Subcontractors shall negotiate price, determine quality and quantity, order and pay for the material(s) required to perform the work.

5. Equipment. DBE Subcontractors may supplement their equipment by renting or leasing additional equipment in accordance with customary industry practice. The DBE shall obtain approval of the Department prior to renting equipment from the Contractor or its affiliates, and shall provide documentation demonstrating that similar equipment and terms could not be obtained at a lower cost from other customary sources of equipment. The required documentation shall include, but not be limited to, copies of the rental or leasing agreements, and the names, addresses, and terms quoted by other sources of equipment.

F. Not Used.

G. Good Faith Efforts. To determine whether a bidder that has failed to meet the DBE contract goal(s) may receive the contract, the Department, in consultation with NYSDOT, will decide whether the efforts the Bidder made to obtain DBE participation were "good faith efforts" to meet the goal(s). Efforts to obtain DBE participation that are merely pro forma are not good faith efforts, nor are efforts that, even if they are sincerely motivated, given all relevant circumstances, they could not reasonably be expected to produce a level of DBE participation sufficient to meet the goal(s).

In order to award a contract to a bidder that has failed to meet the DBE contract goal(s), the Department, in consultation with NYSDOT, will determine that the Bidder's good faith efforts were those that, given all relevant circumstances, a bidder actively and aggressively seeking to meet the goal(s) would make.

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When a contract is awarded with DBE commitment(s) that is less than the contract goal(s), the Contractor shall continue good faith efforts. The Contractor shall continuously review items that are available for DBE participation, especially before the beginning of a new construction season and when significant new items of work are added to the contract, and conduct additional DBE solicitation.

In order to evaluate the Bidder's good faith efforts, the Department will consider the quality, quantity, and intensity of the different kinds of efforts that the Bidder has made. Below is a list of the types of actions which the Department will consider as part of the Bidder's good faith efforts to obtain DBE participation. It is not a mandatory checklist, nor is it intended to be exhaustive or exclusive. Other factors or types of efforts may be relevant in appropriate cases.

1. a. Conducting market research to identify small business contractors and suppliers and soliciting through all reasonable and available means the interest of all certified DBEs that have the capability to perform the work of the contract. This may include attendance at pre-bid and business matchmaking meetings and events, advertising and/or written notices, posting of Notices of Sources Sought and/or Requests for Proposals, written notices or emails to all DBEs listed in the State's directory of transportation firms that specialize in the areas of work desired (as noted in the DBE directory) and which are located in the area or surrounding areas of the project.
- b. The bidder should solicit this interest as early in the acquisition process as practicable to allow the DBEs to respond to the solicitation and submit a timely offer for the subcontract. The bidder should determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.
2. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units (for example, smaller tasks or quantities) to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces. This may include, where possible, establishing flexible timeframes for performance and delivery schedules in a manner that encourages and facilitates DBE participation.
3. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation with their offer for the subcontract.
4. a. Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional Agreements could not be reached for DBEs to perform the work.
- b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to

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perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

5. a. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union status) are not legitimate causes for the rejection or non-solicitation of bids in the contractor's efforts to meet the project goal. Another practice considered an insufficient good faith effort is the rejection of the DBE because its quotation for the work was not the lowest received. However, nothing in this paragraph shall be construed to require the bidder or prime contractor to accept unreasonable quotes in order to satisfy contract goals.
- b. A prime contractor's inability to find a replacement DBE at the original price is not alone sufficient to support a finding that good faith efforts have been made to replace the original DBE. The fact that the contractor has the ability and/or desire to perform the contract work with its own forces does not relieve the contractor of the obligation to make good faith efforts to find a replacement DBE, and it is not a sound basis for rejecting a prospective replacement DBE's reasonable quote.
6. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.
7. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
8. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, State, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

H. DBE Pre-Award Utilization Package. Together with its bid, each bidder shall submit a completed DBE Schedule of Utilization, as outlined below.

Low Bidders that do not have access to the approved civil rights reporting software shall contact the Department for guidance on submission of the Utilization Package. As soon as practicable, but not later than prior to the first contract payment, the Contractor shall enter all current utilization data into the approved civil rights reporting software.

For each DBE Subcontractor, the Low Bidder shall indicate the contract pay item number(s) of the work to be performed. The Low Bidder shall explain, in writing, the scope of work to be performed by the DBE for any item which is not completely performed by the DBE Subcontractor. This does not include items for which the Contractor is performing less than the total contract quantity for that item.

For each DBE Manufacturer, Fabricator, Material Supplier, or Broker, the Low Bidder shall indicate the contract pay item number(s) of the material to be manufactured, fabricated, supplied, or otherwise provided. If the material, equipment or service does not correspond to a specific contract pay item, the Low Bidder shall use a contract pay item(s) to which the activity relates.

For each DBE Service, the Low Bidder shall indicate the contract pay item number(s) of the service to be provided. If the equipment or service does not correspond to a specific

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contract pay item, the Low Bidder shall use a contract pay item(s) to which the activity relates.

For each DBE Trucking Operation, the Low Bidder shall indicate the contract pay item number(s) for which the trucking operations are to be performed. If the trucking operation does not correspond to a specific contract pay item, the Low Bidder shall use a contract pay item(s) to which the activity relates. The Low Bidder shall indicate the type of trucking operation to be performed, the number of trucks owned/leased, the number of trucks working on-site or off-site, rate per hour/ton/load/etc., duration or amount, and total dollar value of the proposed DBE commitment. The Low Bidder shall provide copies of all lease agreements utilized by the DBE.

If the Low Bidder has met or exceeded the established DBE goal(s) for the contract utilizing certified DBEs it is not necessary to submit documentation of good faith efforts.

If the Low Bidder has not met the DBE goal(s), it shall submit the *Solicitation Log*, together with other documentation that substantiates good faith efforts. Such documentation shall include, at a minimum, all envelopes of solicitation inquiries that were returned as undeliverable, quotations submitted by DBEs that are not included in the *DBE Schedule of Utilization*, and relevant non-DBE quotations with an explanation for the Bidder's action in each case.

After contract award, the Contractor shall promptly execute subcontracts, agreements, or purchase orders, as appropriate, with each DBE for the type and amount of work identified in the approved *DBE Utilization Worksheet*.

I. Bidder's Failure to Comply With DBE Program Requirements. The Department's acceptance of the Low Bidder's bid is conditioned upon the Low Bidder's fulfillment of the DBE utilization requirements. If the Low Bidder fails to submit a complete DBE utilization package with its bid and/or fails to attain the DBE utilization goal(s) and to satisfactorily document its good faith efforts, the bid shall be declared non-responsive and the deposit may be subject to forfeiture pursuant to Section 27 of the Information for Bidders. The Low Bidder, upon receipt of written notification of its failure to comply with the DBE utilization requirements shall have 5 work days to carry out the corrective action(s) described in the notification.

If the Department determines that the Low Bidder has failed to meet the good faith effort requirements, the Department will, before awarding the contract, provide the Low Bidder an opportunity for administrative reconsideration by an official who did not take part in the original determination that the Low Bidder failed to meet the goal(s) or make adequate good faith efforts to do so. As part of this reconsideration, the Low Bidder shall have the opportunity to provide written documentation or argument and to meet in person with the Department's reconsideration official concerning the issue of whether it met the goal(s) or made adequate good faith efforts to do so. The Department will send the Low Bidder a written decision on reconsideration, explaining the basis for finding that the Low Bidder did or did not meet the goal(s) or make adequate good faith efforts to do so.

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"BUY AMERICA" REQUIREMENTS & WAIVERS

BUY AMERICA In accordance 41 U.S.C. §10a et. seq., 23 CFR 635.410 and Section 146 of the State Finance Law permanently incorporated predominantly steel and/or iron products materials shall be domestically produced, regardless of the percentage they comprise in a manufactured product, or form they take.

The Contractor may permanently incorporate in the construction of this contract a minimal amount of foreign steel and/or iron materials that are subject to Buy America requirements, if the combined cost of such materials does not exceed one-tenth of one percent (0.1 %) of the total contract cost or \$2,500, whichever is greater. The combined cost of foreign steel and/or iron materials will be the value of the materials as they are delivered to the contract, documented by invoice or bill of sale to the Contractor.

To qualify as domestic, all manufacturing processes, including manufacture, fabrication, grinding, drilling, welding, finishing, and coating of any product containing steel and/or iron materials, must have been performed in the United States. To further define the coverage, a domestic product is a manufactured steel and/or iron materials construction material that was produced in one of the 50 States, the District of Columbia, Puerto Rico, or in the territories and possessions of the United States. Raw materials used in the steel and/or iron materials may be imported. Raw materials are materials such as iron ore, limestone, waste products, etc., which are used in the manufacturing process to produce the steel and/or iron materials products. Waste products include scrap; i.e., steel no longer useful in its present form from old automobiles, machinery, pipe, railroad rail, steel trimmings from mills or product manufacturing, and the like. Extracting, crushing, and handling the raw materials which are customary to prepare them for transporting are exempt from Buy America. The use of foreign source steel or iron billets is not acceptable under Buy America.

A. Control of Materials. All items, regardless of origin, shall comply with their individual specification requirements and with the requirements stated elsewhere in this subsection. In the event the contract is awarded based on using only domestic steel and/or iron materials, the Contractor shall supply only domestic steel and/or iron materials and will be paid the domestic bid prices. The Contractor shall ensure the domestic steel and/or iron materials are supplied in conformance with the above referenced laws. The Contractor shall inform all affected Subcontractors and material suppliers of these specific requirements and ascertain that steel and/or iron materials being supplied is in conformance with these requirements.

B. Waivers. Waivers to the Buy America requirement may be requested by the Contractor if it can be demonstrated that the use of domestic steel and/or iron materials would be inconsistent with the public interest, such materials and products are not produced in the United States in sufficient and reasonably available quantities and of satisfactory quality.

Provided one or more of the above requirements are met, the Contractor may submit a request for a waiver to the Engineer. The request shall include copies of all documentation verifying the unavailability of the material or product, and/or justification of the application for a waiver.

The Department will submit approved waiver requests to the FHWA for review. The Contractor shall investigate and respond to any public comments made to the FHWA Office of Program Administration, indicating that a domestic supplier can provide the material for which a waiver has been requested. Final approval of the Buy America Waiver request will be made by the Administrator, Federal Highway Administration. The waiver will be effective when it is posted in the Federal Register.

CERTIFICATIONS AND TRACKING OF FOREIGN STEEL AND/OR IRON. In order to ensure compliance with this contract requirement, all manufacturer's certifications for steel and/or iron and items including steel and/or iron must contain a statement of domestic origin, and material suppliers must certify that what they provide is the same material certified by the manufacturer. If the material or product certification does not properly identify conformance to the specification the product will be rejected and must be removed from the project site. If however the manufacturer and/or material supplier requests to leave the product in place and provide a revised certification only, the revised certification must be accompanied with a letter of explanation to the satisfaction of the Resident Engineer. The explanation shall indicate the basis for using the revised certification rather than the original supplied. The letter shall also include corrective action to assure that future certifications will be representative of the material or product supplied. The letter must be signed by a company representative that can legally bind the firm.

If the Contractor proposes to use foreign steel/iron in small amounts under the threshold, the amount allowed will be based on the material price to the Contractor, as verified by invoice and approved by the Resident Engineer. The amount is cumulative for the entire contract, so subsequent requests will have to be added to any previous requests before comparison to the allowable threshold.

The "Buy America" contract specification does not apply to iron or steel that is to be used for temporary means which will be removed during or at the end of the project.

DEFINITIONS:

Steel - Steel material of any type, including welding rod.

Iron - Iron material of any type, including cast and ductile iron, but not pig iron.

Domestic - The 50 States, the District of Columbia, Puerto Rico and territories/possessions of the US.

Foreign - Any location other than those defined as Domestic.

Manufacturing Processes - Steel and/or iron manufacturing processes must be domestic; e.g. manufacture, fabrication, grinding, drilling, welding, finishing and coating of steel. Ore, scrap, and pig iron may be foreign or domestic; however, transformation into steel and/or iron and all subsequent processes and fabrication must be domestic. The fabrication of composite items using domestic steel (e.g. casting reinforced concrete box culvert using reinforcing cut and bent to final shapes) is not considered a manufacturing process, and the composite item is acceptable.

Fabricated Product Containing Steel and/or Iron - Items, products or materials containing any amount of steel and/or iron materials; e.g., a metal pipe may be steel or iron, a reinforced concrete pipe contains steel, a prestressed beam contains steel, iron castings are iron, a steel beam is steel and steel laminated bridge bearings contain steel.

EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS

The Department seeks to ensure nondiscrimination in employment under all Department contracts. The Contractor shall comply with the following Equal Employment Opportunity (EEO) requirements. *Goals for Equal Opportunity Employment Participation* are listed in the required contract provisions section of the contract proposal. The covered area is the county or counties in which the work is located.

For Federal-Aid contracts, Equal Employment Opportunity provisions are also found in Attachment "A" - *Required Contract Provisions Federal-Aid Construction Contracts – FHWA 1273*.

Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

A. Statutory Authority. The Federal statutory authority for Equal Employment Opportunity provisions is contained in 23 U.S.C. 140(a), and Executive Order 11246. State statutory authority is contained in Section 85 of the Highway Law, Section 428 of the Transportation Law, and NYS Executive Law Articles 15 and 15-A. Regulations have been promulgated under 23 CFR 230, 41 CFR 60, 49 CFR 21, and 5 NYCRR 140-145.

B. Definitions.

For Federal-Aid contracts, a minority group member is defined under this subsection as someone who is, and can demonstrate membership in, one of the following groups:

- a. Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
- b. Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
- c. Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
- d. American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

C. Employment Goals. An employment goal(s) for minorities and a separate goal for women are presented in the contract documents. The Contractor shall provide equal employment opportunity and shall take affirmative action for all minority groups, both male and female; and women, both minority and non-minority. If the Contractor performs work outside of the covered area, it shall apply the goals established for the county where the work is actually performed. The Department will monitor the Contractor's attainments towards EEO goals in accordance with Attachment H - *Civil Rights Monitoring and Reporting*.

The goals set for the contract are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress in meeting its goals in each trade. The hours of minority and female employment and training shall be substantially uniform

throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its contracts. The transfer of minority or female employees, apprentices, or trainees from contractor to contractor or from contract to contract for the sole purpose of meeting the Contractor's goals is a violation of the contract.

D. Contractor Obligations. The Contractor shall comply with all provisions of Federal Executive Order 11246 and the provisions of State and Federal laws and regulations. The Contractor shall furnish all information and reports required by Executive Order 11246 and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Department and the U.S. Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders. The Contractor shall develop and implement an EEO policy in accordance with Attachment A, *Required Contract Provisions Federal-Aid Construction Contracts – FHWA 1273* and in accordance with Attachment B, *Standard Clauses for All New York State Contracts*.

1. Non-Discrimination. The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, disability or marital status. The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, sexual orientation, military status, sex, disability, predisposing genetic characteristics, marital status, or domestic violence victim status and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest. Such actions shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Department setting forth the provisions of this non-discrimination clause.

The Contractor shall state in all solicitations or advertisements for employees that, in the performance of the contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of age, race, creed, color, national origin, sexual orientation, military status, sex, disability, predisposing genetic characteristics, marital status, or domestic violence victim status.

The Contractor shall not use the goals or affirmative action requirements to discriminate against any person because of age, race, creed, color, national origin, sexual orientation, military status, sex, disability, predisposing genetic characteristics, marital status, or domestic violence victim status.

2. Solicitations. The Contractor shall state in all solicitations or advertisements for employees placed by or on behalf of the Contractor, that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, age, disability or marital status.

3. Collective Bargaining Agreements. The contractor shall send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments to equal employment opportunities, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

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The Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union, or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein.

Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations.

4. Complaints of Alleged Discrimination. The Contractor shall promptly investigate all complaints of alleged discrimination made to the Contractor in connection with its obligations under this contract, shall attempt to resolve such complaints, and shall take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, corrective action shall include such other persons. Upon completion of each investigation, the Contractor shall inform every complainant of all available avenues of appeal.

5. Non-Compliance. In the event of the contractor's non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further contracts in accordance with procedures authorized in Executive Order 11246, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246, or by rule, regulation, or order of the U.S. Secretary of Labor, or as otherwise provided by law.

6. Subcontracts/Purchase Orders. The Contractor shall include the provisions of Subsection D, *Contractor Obligations*, of this Attachment F, in every subcontract or purchase order, so that such provisions will be binding upon each subcontractor or vendor. In the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Department, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

E. Affirmative Action Steps. The Contractor shall take specific affirmative actions to promote equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

1. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, shall assign two or more women to each construction contract. The Contractor shall specifically ensure that all forepersons, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

2. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

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- 3.** Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
- 4.** Provide immediate written notification to the Department when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- 5.** Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by either the NYS Department of Labor or the US Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under E.2. above.
- 6.** Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- 7.** Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as superintendents, forepersons, etc., prior to the initiation of construction work at any contract site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- 8.** Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- 9.** Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- 10.** Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of the Contractor's work force.

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11. Validate all tests and other selection requirements in accordance with state and Federal laws, rules and regulations.

12. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities. Encourage these employees to seek or to prepare for promotional opportunities through appropriate training, etc.

13. Ensure that seniority practices, labor classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

14. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

15. Document and maintain a record of all solicitations of offers for Subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

16. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

F. Associations. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations. The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling one or more of its obligations, provided that the Contractor actively participates in the group, makes every effort to ensure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

G. Hometown Plans (Federal-Aid Contracts Only). If a Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the USDOL in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors participating in Hometown Plans shall be able to demonstrate their participation and document their compliance with the provision of the Hometown Plan. Each Contractor participating in an approved plan is individually required to comply with its obligation under the EEO clause and to make a good faith effort to achieve each goal under the plan in each trade in which it has employees. The overall good faith performance by other Contractors toward a goal in an approved plan does not excuse any covered Contractor's failure to take good faith efforts to achieve the Plan goals and timetables.

Notice of Requirement for Affirmative Action To Ensure Equal Employment Opportunity (Executive Order 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for minority participation and female participation are in the "Goals for Equal Employment Opportunity (EEO) Participation" section at the end of this Attachment "F".

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is the five Boroughs of New York City.

**Standard Federal Equal Employment Opportunity Construction Contract
Specifications (Executive Order 11246)**

1. As used in these specifications:

- a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
- b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
- c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
- d. "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and

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female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a

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minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

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m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, sexual orientation, gender identity, or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any

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Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

GOALS FOR EQUAL EMPLOYMENT OPPORTUNITY (EEO) PARTICIPATION

GOALS FOR MINORITY PARTICIPATION

COUNTY	%	COUNTY	%	COUNTY	%
Albany	3.2	Herkimer	2.1	* Richmond	
Allegany	6.3	Jefferson	2.5	Rockland	22.6
Broome	1.1	* Kings		St. Lawrence	2.5
* Bronx		Lewis	2.5	Saratoga	3.2
Cattaraugus.....	6.3	Livingston	5.3	Schenectady	3.2
Cayuga	2.5	Madison	3.8	Schoharie.....	2.6
Chautauqua	6.3	Monroe	5.3	Schuyler.....	1.2
Chemung	2.2	Montgomery	3.2	Seneca.....	5.9
Chenango	1.2	Nassau	5.8	Steuben	1.2
Clinton	2.6	* New York		Suffolk.....	5.8
Columbia	2.6	Niagara	7.7	Sullivan	17.0
Cortland	2.5	Oneida	2.1	Tioga.....	1.1
Delaware.....	1.2	Onondaga	3.8	Tompkins	1.2
Dutchess	6.4	Ontario	5.3	Ulster	17.0
Erie	7.7	Orange	17.0	Warren	2.6
Essex	2.6	Orleans	5.3	Washington.....	2.6
Franklin	2.5	Oswego	3.8	Wayne.....	5.3
Fulton	2.6	Otsego	1.2	Westchester.....	22.6
Genesee	5.9	Putnam	22.6	Wyoming.....	6.3
Greene	2.6	* Queens		Yates.....	5.9
Hamilton	2.6	Rensselaer	3.2		

* The following goal ranges are applicable to the indicated trades in the Counties of Bronx, Kings, New York, Queens and Richmond:

Electricians.....	9.0 to 10.2	Asbestos workers	22.8 to 28.0
Carpenters	27.6 to 32.0	Roofers.....	6.3 to 7.5
Steam fitters	12.2 to 13.5	Iron Workers (ornamental).....	22.4 to 23.0
Metal lathers.....	24.6 to 25.6	Cement masons	23.0 to 27.0
Painters.....	26.0 to 28.6	Glaziers	16.0 to 20.0
Operating engineers.....	25.6 to 26.0	Plasterers	15.8 to 18.0
Plumbers	12.0 to 14.5	Teamsters	22.0 to 22.5
Iron Workers (structural).....	25.9 to 32.0	Boilermakers	13.0 to 15.5
Elevator constructors	5.5 to 6.5	All others	16.4 to 17.5
Bricklayers.....	13.4 to 15.5		

GOAL FOR PARTICIPATION OF WOMEN

The last publication of a goal for the participation of women was April 7, 1978 (43 FR 14888, 14900). Pursuant to 41CFR 60-4.6, the 6.9% goal published on that date is hereby made the goal for all contracts and grant agreements, until further notice.

(No Further Text This Page)

STANDARDIZED CHANGED CONDITIONS CLAUSES

FHWA CHANGED CONDITION CLAUSES (23CFR635.109)

(1) Differing site conditions.

(i) During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before the site is disturbed and before the affected work is performed.

(ii) Upon written notification, the engineer will investigate the conditions, and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding anticipated profits, will be made and the contract modified in writing accordingly. The engineer will notify the contractor of the determination whether or not an adjustment of the contract is warranted.

(iii) No contract adjustment which results in a benefit to the contractor will be allowed unless the contractor has provided the required written notice.

(iv) No contract adjustment will be allowed under this clause for any effects caused on unchanged work.

(2) Suspensions of work ordered by the engineer.

(i) If the performance of all or any portion of the work is suspended or delayed by the engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the contractor shall submit to the engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

(ii) Upon receipt, the engineer will evaluate the contractor's request. If the engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the engineer will make an adjustment (excluding profit) and modify the contract in writing accordingly. The contractor will be notified of the engineer's determination whether or not an adjustment of the contract is warranted.

(iii) No contract adjustment will be allowed unless the contractor has submitted the request for adjustment within the time prescribed.

(iv) No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided or excluded under any other term or condition of this contract.

(3) Significant changes in the character of work.

(i) The engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete

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the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the contractor agrees to perform the work as altered.

(ii) If the alterations or changes in quantities significantly change the character of the work under the contract, whether such alterations or changes are in themselves significant changes to the character of the work or by affecting other work cause such other work to become significantly different in character, an adjustment, excluding anticipated profit, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the contractor in such amount as the engineer may determine to be fair and equitable.

(iii) If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.

(iv) The term "significant change" shall be construed to apply only to the following circumstances:

(A) When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or

(B) When a major item of work, as defined elsewhere in the contract, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.

MAJOR ITEM OF WORKS

The term "major item" of work shall mean any item for which the original bid price multiplied by the original contract quantity exceeds \$50,000 or 2% of the total contract bid price, whichever is less.

CIVIL RIGHTS MONITORING AND REPORTING

The approved civil rights reporting software is *Equitable Business Opportunity Solution (EBO)*. The EBO software is a web-based system owned and maintained by the New York State Department of Transportation, and provided to the Contractor at no cost. The Contractor shall use the approved civil rights reporting software on all contracts. The Contractor shall submit complete, accurate, electronic data to the Department for each month, not later than the 15th of the following month, using the approved civil rights reporting software. Data shall be current through the end of the last full payroll week for that month, or as otherwise approved by the Engineer to coordinate with contract payment submittals.

A. Civil Rights Officer(s). The Contractor shall designate a Corporate Civil Rights Officer, a Corporate DBE Representative, and a contract site Equal Employment Opportunity (EEO) Representative; and each Subcontractor shall designate a Corporate Civil Rights Officer, and a contract site Equal Employment Opportunity (EEO) Representative in the approved civil rights reporting software. The designated individuals shall have the responsibility to and shall be capable of effectively administering and promoting an active program of equal employment opportunity and who shall be assigned adequate authority and responsibility to do so. A single individual may fulfill multiple roles. The Contractor shall update the approved civil rights reporting software within 10 calendar days of any changes in these roles.

B. Workforce Participation Plan. At the pre-construction meeting, the Contractor shall submit a *Workforce Participation Plan* covering the Contractor's workforce and the workforce of its Subcontractors with subcontracts over \$10,000, together and coordinated with the contract progress schedule that addresses the Equal Employment Opportunity goals.

The Contractor shall not start work until the Department and the Contractor have agreed upon has accepted the *Workforce Participation Plan*. The Contractor shall submit a revised plan when a significant work force build-up or reduction will substantially affect goal attainment, or when a revised schedule is requested by the Department. Such revised *Workforce Participation Plan* must be agreed upon by the Department or the original will remain in effect.

C. Equal Employment Opportunity (EEO) Monitoring and Reporting. The Contractor's compliance with the EEO Requirements will be based on its Employment Utilization, affirmative action steps and its good faith efforts to meet the goals.

The Department, in evaluating the Contractor's good faith efforts to meet the EEO goal(s), will first analyze the Contractor's goal attainment on an individual contract. If the Contractor is not meeting the goal(s) for a single trade or contract, the Department will analyze, progressively, the Contractor's goal attainment on all contracts held by the Contractor. This method of analysis shall be applied primarily but not solely to contracts with small population numbers. Other factors to be considered include, but are not limited to; the location of the contracts, the relative proximity of the contracts to each other, and the nature of the work.

1. Employee Utilization Data. The Contractor shall submit employee utilization data for its workforce and for each Subcontractor with a subcontract exceeding \$10,000 on a monthly basis showing hours worked for each payroll week, for each trade and classification, by gender and ethnicity. Employee utilization data shall include data from

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the start of the contract up to and including the month being reported. For the purpose of determining utilization percentages, the hours of female and minority employment shall be tabulated separately and attainment percentages calculated separately.

2. Federal-Aid Highway Construction Contractors Annual EEO Report. The Contractor shall submit all required employee utilization data to produce a Form FHWA 1391 *Federal-Aid Highway Construction Contractors Annual EEO Report* to the Department annually not later than August 15th, covering the last payroll period worked in July, for all ongoing Federal-Aid contracts. The data shall indicate the number of minority men, minority women, non-minority men, and non-minority women employees currently engaged in each trade.

3. Subcontractor Sanctions. *The Contractor shall carry out such sanctions and penalties for violation of Attachment F - Equal Employment Opportunity Requirements, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246.*

4. Contractor Compliance. If the Contractor fails to meet the EEO goal(s) for minorities or women, the Department may require training of minorities and women to satisfy the employment goals. If the Contractor fails to meet the EEO goal(s) or is in noncompliance with the nondiscrimination clauses, the Department may determine that one of the following actions should be taken:

- a. ***entering into an agreement with the Contractor allowing the Contractor to cure the violation;***
- b. ***revoking the Contractor's pre-qualification to bid or make proposals for future contracts;***
- c. ***making a finding that the Contractor is in default of the Contract;***
- d. ***terminating the Contract;***
- e. ***declaring the Contractor to be in breach of Contract;***
- f. ***withholding payment or reimbursement;***
- g. ***determining not to renew the Contract;***
- h. ***assessing actual and consequential damages;***
- i. ***assessing liquidated damages or reducing fees, provided that liquidated damages may be based on amounts representing costs of delays in carrying out the purposes of the EEO Requirements, or in meeting the purposes of the Contract, the costs of meeting utilization goals through additional procurements, the administrative costs of investigation and enforcement, or other factors set forth in the Contract;***
- j. ***exercising rights under the Contract to procure goods, services or construction from another contractor and charge the cost of such contract to the Contractor that has been found to be in noncompliance;***
or
- k. ***taking any other appropriate remedy.***

The Contractor may also be referred to the U.S. Department of Labor, Office of Federal Contract Compliance Programs (OFCCP), which has the sole authority to determine compliance with Executive Order 11246 and its implementing regulations.

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OFCCP may declare the Contractor ineligible for further Federal-Aid contracts in accordance with procedures authorized in Executive Order 11246, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246, or by rule, regulation, or order of the U.S. Secretary of Labor, or as otherwise provided by law.

D. DBE Monitoring and Reporting. The Engineer will monitor the work to ensure that the identified DBEs perform the work as identified in the Contractor's commitments. Attainments will be measured based on payments made to DBEs. Attainments based on work completed by DBEs that are no longer certified will be counted towards the original contract goal, but will not be counted towards the overall corporate goal.

1. Monitoring Commercially Useful Function (CUF) by DBEs. Each DBE Subcontractor shall provide confirmation to the Engineer that the workforce provided meets the requirements of Attachment D, Subsection E.2, *Work Force*. Each DBE Subcontractor shall provide a copy of invoices for all material incorporated into the work to the Engineer, in order to confirm that the DBE has met the requirements of Attachment D, Subsection E.4, *Materials*. Each DBE Subcontractor shall provide a copy of a rental agreement for all non-owned equipment used to perform the work to the Engineer, in order to confirm that the DBE has met the requirements of Attachment D, Subsection E.5, *Equipment*.

The Contractor shall provide a copy of an invoice for all material provided by a DBE Manufacturer, Fabricator or Material Supplier to the Engineer. The Contractor shall provide a copy of a rental agreement with each DBE Equipment Rental firm to the Engineer. The Contractor shall provide a copy of an invoice that details the work product(s) provided from each DBE Professional Service to the Engineer.

2. Report of Payments to Subcontractors and DBEs. The Contractor shall report payments made to all Subcontractors and all DBEs, in order to measure goal attainment and to gauge the effect of DBE goal(s) on the industry. The Contractor shall submit payment data for all Subcontractors and for all DBEs approved by the Department that are due a payment or have received a payment within the last month. The Subcontractor or DBE shall acknowledge payment not later than 7 calendar days after receipt. The date of receipt is: (1) the date the payment was made by electronic funds transfer to an account identified and agreed to by both parties; (2) the date the envelope containing the payment was date stamped by the US Postal Service; or (3) the date the payment was physically provided to a previously authorized representative of the Subcontractor or DBE, either by the Contractor, or by a delivery service.

The Contractor shall enter the final payment to each Subcontractor or DBE and designate it as such when the final payment is made, or as a separate \$0.00 entry indicating final payment has been made, prior to contract final acceptance, excepting those payments due from work contained in a change order that have not been approved. The Subcontractor or DBE shall acknowledge payment not later than 7 calendar days after receipt.

3. Revisions to DBE Utilization. The Contractor shall utilize the DBEs committed to to perform the work or supply materials for which each is listed. The Contractor shall obtain Department approval for substantial revisions in DBE utilization prior to implementing any proposed change through submission of a revised *DBE Utilization Worksheet* using

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the approved civil rights reporting software. Unless approval for revision is granted, the Contractor will not be entitled to any payment for work or material committed to a DBE unless it is performed or supplied by the approved DBE.

If the reduction of the DBE's work or the removal of the DBE, including for reasons of commercially useful function violations, causes the DBE utilization to fall below the goal(s), the Contractor shall make good faith efforts to find another DBE to substitute for the original DBE to perform at least the same amount of work as the DBE that was terminated, to the extent needed to meet the contract goal(s).

A DBE may be substituted if the work committed to the DBE is deleted or reduced by the Department and enough work remains to substitute an equal commitment amount to the affected DBE. If not enough work remains, the Department may relieve the Contractor from attaining that portion of the commitments.

The following modifications will be considered a substantial revision in DBE utilization:

1. Adding, removing or substituting a DBE;
2. Adding new item(s) of work to a DBE within a NAICS Code for which the DBE is not currently approved;
3. Significantly reducing the dollar value of or eliminating the DBE's item(s) of work. Significant reduction will be determined by comparison to the total DBE contract goal.

The following modifications will not be considered a substantial revision in DBE utilization:

1. Increasing the dollar value of an item(s) of work or adding new item(s) of work within the same NAICS Code to a DBE;
2. Substituting similar dollar values of work within NAICS Codes that the DBE is currently approved for;
3. Changes in utilization due to differences between estimated quantities and actual work performed.

a. DBE Program. In accordance with 49 CFR 26.53(f)(1), the Contractor shall not terminate a DBE listed on the approved DBE Utilization plan without the prior written consent of the Department. This includes, but is not limited to, instances in which a contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.

The Department will consent only if the Contractor has good cause to terminate the DBE firm. Good cause includes, at a minimum, one the following circumstances:

- The listed DBE fails or refuses to execute a written contract;
- The listed DBE fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the Contractor;
- The listed DBE fails or refuses to meet the Contractor's reasonable, nondiscriminatory bond requirements.
- The listed DBE becomes bankrupt, insolvent, or exhibits credit unworthiness;

ATTACHMENT "H"

- The listed DBE is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1,200 or applicable state law;
- The Department has determined that the listed DBE is not a responsible contractor;
- The listed DBE voluntarily withdraws from the project and provides to the Department written notice of its withdrawal;
- The listed DBE is ineligible to receive DBE credit for the type of work required;
- A DBE owner dies or becomes disabled with the result that the listed DBE is unable to complete its work on the contract;
- Other documented good cause that you determine compels the termination of the DBE. Provided, that good cause does not exist if the Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the Contractor can self-perform the work for which the DBE was engaged or so that the Contractor can substitute another DBE or non-DBE contractor after contract award.

Before submitting its request to terminate and/or substitute a DBE to the Department, the Contractor shall give notice in writing to the DBE subcontractor, with a copy to the Engineer, of its intent to request to terminate and/or substitute, and the reason for the request.

The Contractor shall give the DBE five days to respond to the notice and advise the Department and the Contractor of the reasons, if any, why the DBE objects to the proposed termination of its subcontract and why the Department should not approve the Contractor's action. If required in a particular case as a matter of public necessity (e.g., safety), the Department may approve a response period shorter than five days.

3. Contractor DBE Program Compliance. If the Contractor fails to meet the DBE utilization goal(s), to exert a good faith effort, or otherwise fails to comply with the DBE requirements, the Department may take further actions, as follows. The Department may determine that one of the following actions should be taken:

- a. entering into an agreement with the Contractor allowing the Contractor to cure the violation;
- b. revoking the Contractor's pre-qualification to bid or make proposals for future contracts;
- c. making a finding that the Contractor is in default of the Contract;
- d. terminating the Contract;
- e. declaring the Contractor to be in breach of Contract;
- f. withholding payment or reimbursement;
- g. determining not to renew the Contract;
- h. assessing actual and consequential damages;
- i. assessing liquidated damages or reducing fees, provided that liquidated damages may be based on amounts representing costs of delays in carrying out the purposes of the DBE program, or in meeting the purposes of the Contract, the costs of meeting utilization goals through additional procurements, the administrative costs of investigation and enforcement, or other factors set forth in the Contract;

ATTACHMENT "H"

- j. exercising rights under the Contract to procure goods, services or construction from another contractor and charge the cost of such contract to the Contractor that has been found to be in noncompliance; or
- k. taking any other appropriate remedy.

The Contractor may also be referred to the USDOT for possible suspension or debarment as provided in 49 CFR 29 and such other sanctions as may be imposed and remedies invoked as provided under the authority of 49 CFR 26, or by rule, regulation, or order of the Commissioner or as otherwise provided by law.

E. Apprenticeship Monitoring and Reporting. The Contractor shall report all apprenticeship participation as part of its Employee Utilization Data submitted monthly per Subsection C.1 of this Attachment "H". The Contractor shall provide, with the final request for payment, a Certification of Compliance that:

- a. lists all New York State Department of Labor approved apprenticeship programs utilized in the execution of the Contract;
- b. certifies that all apprenticeship participation has been submitted as part of the monthly Employee Utilization Data;
- c. certifies that the requirements of the above listed apprenticeship programs have been met.

F. Compliance Reviews. The New York State Department of Transportation and the Department conduct annual civil rights contract compliance reviews of selected Federal-aid contracts in accordance with 23 CFR 230.409. A compliance review consists of a thorough review of all civil rights contract requirements, including Nondiscrimination in Labor/Employment, EEO, Training, and DBE requirements. A Contractor will typically not be selected for more than one compliance review per year statewide. Based on contract monitoring and/or the results of compliance review(s), the New York State Department of Transportation and the Department may conduct a review of some or all ongoing contracts with a single Contractor, regardless of funding source.

**False Claims Certification
(31 USC §3729, NYS Finance Law Article 13)**

Under the Federal False Claims Act, 31 US Code §3729, any person or entity who knowingly presents, or causes to be presented to the Federal Government, a false or fraudulent claim for payment or approval is liable to the United State Government for a civil penalty of not less than \$5,000 and not more than \$10,000, plus three times the amount of damages the Government sustains.

Under the New York State False Claims Act, NYS Finance Law Article 13, any person or entity who knowingly presents or causes to be presented to the State of New York or Local Governments within the State of New York, a false or fraudulent claim for payment or approval is liable to the Government for a civil penalty of not less than \$6,000 and not more than \$12,000, plus three times the amount of damages the Government sustains.

"Knowingly" is defined as: (1) actual knowledge; (2) acting in deliberate ignorance of the truth or falsity of information; or (3) acting in reckless disregard of the truth or falsity of information; no proof of specific intent to defraud is required.

The Contractor to whom the above-identified contract is to be awarded does hereby certify to New York State Department of Transportation that it understands the prohibitions under the Federal and New York State False Claims Acts, and that it has not and will not submit or caused to be submitted any fraudulent claims in the submission of this bid or in connection with the above-identified contract. The Contractor further certifies that it understands retaliatory actions, against employees and officers who initiate a *Qui Tam* (public) action on behalf of the government or cooperate in the investigation of a false claim, are prohibited and are subject to an assessment of damages and penalties, under the provisions of the Federal and New York State False Claims Acts.

UNITED STATES DEPARTMENT OF TRANSPORTATION HOTLINE

Persons with knowledge of bid collusion (i.e., contractors, suppliers, work persons, etc.), or other questionable contract related practices (inadequate materials, poor workmanship, theft of materials, etc.), are encouraged to report such activities by calling the U.S. DOT HOTLINE. The HOTLINE number is 1-800-424-9071 and calls will be answered from 8:00 A.M. to 5:00 P.M. EST, Monday through Friday.

This HOTLINE is under the direction of the U.S. DOT's Inspector General. All information will be treated confidentially and the caller's anonymity will be respected.

NEW YORK STATE INSPECTOR GENERAL HOTLINE

Reports of New York State Governmental Misconduct may be made in strict confidence to the New York State Inspector General on the Toll Free Statewide HOTLINE or by writing to the Office of the State Inspector General. The Toll-Free Statewide HOTLINE telephone number is 1-800-367-4448 and calls will be answered between 9:00 A.M. and 5:00 P.M., Monday through Friday. The address of the Office of the Inspector General is P.O. Box 9, One Commerce Plaza, Albany, New York 12260.

(NO TEXT THIS PAGE)

MA 2A (03-09-33)
NYCDOT

**NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
DEBARMENT HISTORY CERTIFICATION
CONTRACT NO. _____**

I, _____, being duly sworn, certifies that,
(PRESIDENT OF AUTHORIZED OFFICIAL)

except as noted herein, _____ or any person
(THE COMPANY)

associated therewith in the capacity of owner, partner, director, officer, principal investigator, project director, manager, auditor, or any position involving the administration of Federally Aided Projects:

is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any governmental entity;

has not been suspended, debarred, voluntary excluded or determined ineligible by any governmental entity within the past three (3) years;

does not have a proposed debarment pending; and

has not been indicted, convicted, or had a civil judgement rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three (3) years.

(INSERT EXCEPTIONS HERE. ATTACH SUPPLEMENTAL SHEETS AS NECESSARY)

Exceptions will not necessarily result in denial of approval, but will be considered in determining responsibility. For any exception noted herein, indicate to whom it applies, initiating governmental entity and dates of action. A material false statement willfully or fraudulently made in connection with this certification may result in rendering the company not responsible for the project and any future projects, and in addition may subject the person making the false statement to criminal charges.

(PRINT NAME)

(SIGNATURE)

(TITLE)

(DATE)

Subscribed and sworn to before me this _____ day of _____, 20_____.

MA 2A (03-09-33)
NYCDOT

**NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
DEBARMENT HISTORY CERTIFICATION
CONTRACT NO. _____**

GOVERNMENTAL ENTITY:

Governmental Entities shall include any/all city, state and federal public agencies, quasi-public agencies, authorities and corporations, public development corporations, and local development corporations.

COMPANY:

Companies shall include the persons or affiliates for which a suspension or debarment decision has been rendered, and shall include all subsidiaries, divisions and other organizational elements thereof unless said decision is limited by its terms to one or more specifically identified individuals or organizational elements or to specific types of transactions.

PERSON:

Persons shall include any individual, corporation, partnership, association or legal entity however organized, including any subsidiary of the foregoing.

SUBSIDIARY:

Subsidiaries shall include any corporation, partnership, association or legal entity however organized, which is owned or controlled by another person.

AFFILIATE:

Persons are affiliates of one another if, directly or indirectly, one owns, controls, or has the power to control the other, or a third person owns, controls, or has the power to control both.

CONTROL:

Control shall be taken to mean the power to exercise, either directly or indirectly, a controlling influence over management, policies or activities of a person, whether through ownership of voting securities, through one or more intermediary persons, or otherwise. Indications of control shall include, but not be limited to: a person who owns or has the power to vote more than 25 percent of the voting securities of another person, or 25 percent of the total equity if the other person has no voting securities; interlocking management or ownership; identity of interests among family members; shared facilities and equipment; common use of employees; and establishment, following debarment, suspension or other exclusion decision, of any organization or entity which is to operate in the same business or activity and is to have substantially the same management, ownership or principal employees as the debarred, suspended or excluded person.

LOBBYING ACTIVITY CERTIFICATION

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions. (See Exhibit 1 annexed hereto)

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

0348-0046

(See reverse for public burden disclosure.)

<p>1. Type of Federal Action:</p> <p><input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance</p>	<p>2. Status of Federal Action:</p> <p><input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award</p>	<p>3. Report Type:</p> <p><input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change</p> <p>For Material Change Only: year _____ quarter _____ date of last report _____</p>
<p>4. Name and Address of Reporting Entity:</p> <p><input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, if known:</p> <p>Congressional District, if known:</p>	<p>5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime:</p> <p>Congressional District, if known:</p>	
<p>6. Federal Department/Agency:</p>	<p>7. Federal Program Name/Description:</p> <p>CFDA Number, if applicable: _____</p>	
<p>8. Federal Action Number, if known:</p>	<p>9. Award Amount, if known:</p> <p>\$ _____</p>	
<p>10. a. Name and Address of Lobbying Registrant (if individual, last name, first name, MI):</p>	<p>b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):</p>	
<p>11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.</p>	<p>Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____</p>	
<p>Federal Use Only:</p>		<p>Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)</p>

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

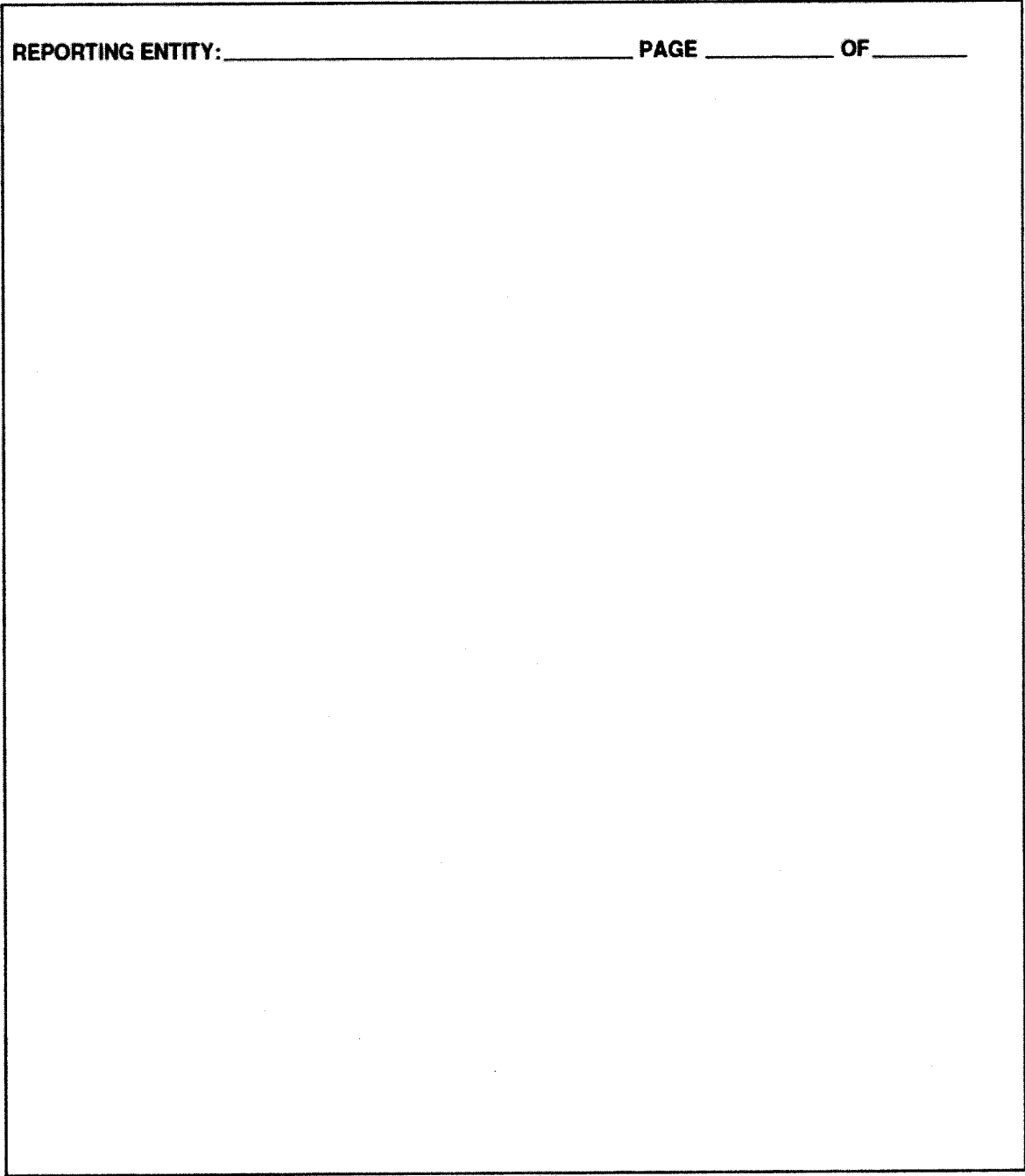
(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.

**DISCLOSURE OF LOBBYING ACTIVITIES
CONTINUATION SHEET**

APPROVED BY OMB
0346-0046

REPORTING ENTITY: _____ PAGE _____ OF _____



Authorized for Local Reproduction - Standard form LLL

**PROVISIONS RELATING TO THE NEW YORK STATE LABOR LAW,
PREVAILING WAGES, AND THE USE OF CONVICT LABOR AND
MATERIALS ON FEDERAL & STATE CONTRACTS**

GENERAL PROVISIONS. All projects funded with Federal aid and let to contract in New York State shall conform to the provisions of the New York State Labor Law, except that in accordance with the authorization in Article 4, Section 85 of the New York State Highway Law, any provisions of the above referenced Labor Law which are in conflict with the following enumerated mandatory Federal Aid highway construction compliance requirements, as contained in Section 635 of the Code of Federal Regulations, Title 23-Highways, and other Federal legislation, rules, and regulations, as referenced below, are superseded:

CONVICT LABOR. No convict labor, unless performed by convicts who are on parole, supervised release, or probation, shall be employed in construction or used for maintenance or any other purposes at the site or within the limits of any Federal Aid highway construction project from the time of award of the contract or the start of work on force account until final acceptance of the work by the Owner.

SELECTION OF LABOR. No procedures or requirements shall be imposed by any state or municipal subdivision thereof which will operate to discriminate against the employment of labor from any other state, possession, or territory of the United States, in the construction of a Federal Aid project. The selection of labor to be employed by the Contractor on any Federal Aid project shall be of his/her own choosing.

WAGE RATES ON FEDERAL AID PROJECTS. Attention is directed to the statutory provisions governing the prevailing rates of wages for workmen, mechanics, and laborers who are employed on this project. Section 220 of the New York State Labor Law, as amended, requires that the wages paid for a legal day's work shall be not less than the rate of wages plus the supplements prevailing at the time the work is performed, the current schedules of which shall be included in the contract documents. Such schedules may be amended or supplemented from time to time, and such amendments or supplements shall be forwarded to the Contractor.

The Federal Aid Highway Act of 1968 provides for the payment of wages at rates not less than those determined in accordance with the Davis-Bacon Act (40 USC, Section 276-a), the schedule of which shall also be included in the contract documents.

On-site materials suppliers, in addition to all subcontractors, are subject to the provisions of the Davis-Bacon Act. This will not necessarily be construed as causing the on-site material suppliers to be classified as subcontractors as part of the 50% limitation on the subcontracting of this project.

In case of a variance between (1) the schedules of prevailing rates of wages and supplements as determined under Section 220 of the New York State Labor Law, and (2) the schedule of rates of wages as determined pursuant to the Davis-Bacon Act, the Contractor shall accept and use the schedule or schedules that establish the higher rate of wages as the minimum for the workmen who are employed on the project.

ATTACHMENT "K"

CONSTRUCTION BY FEDERAL AGENCIES. When construction on Federal Aid highways is being performed by any Federal agency under its procedures and by Federal contract, the labor standards relating to direct federal contracts shall be applicable.

NON-DISCRIMINATION. Employment shall be provided without regard to race, color, religion, sex, or national origin.

CONVICT-PRODUCED MATERIALS. The use of convict-produced materials on any Federal or Federally-assisted contract must comply with the following requirements:

a. Materials produced by convict labor may only be incorporated in a Federal Aid highway construction project if such materials have been:

1. Produced by convicts who are on parole, supervised release, or probation from a prison; or
2. Produced in a qualified prison facility and the cumulative annual production amount of such materials for use in Federal Aid highway construction does not exceed the amount of such materials produced in such facility for use in Federal Aid highway construction during the 12-month period ending July 1, 1987.

b. "Qualified prison facility" means any prison facility in which convicts, during the 12-month period ending July 1, 1997, produced materials for use in Federal Aid highway construction projects.

c. Standard State and Federal Aid contract procedures may be used to assure compliance with the requirements of this paragraph.

FEDERAL WAGE RATES

The following pages contain the Federal Wage Rates in effect at the time of bidding. Current rates can be found at: www.wdol.gov/wdol/scafiles/davisbacon/ny3.dvb

General Decision Number: NY170003 02/10/2017 NY3

Superseded General Decision Number: NY20160003

State: New York

Construction Types: Building, Heavy, Highway and Residential

Counties: Bronx, Kings, New York, Queens and Richmond
Counties in New York.

BUILDING & RESIDENTIAL CONSTRUCTION PROJECTS (includes single family homes and apartments up to and including 4 stories),
HEAVY AND HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.20 for calendar year 2017 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.20 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2017
1	01/13/2017
2	02/03/2017
3	02/10/2017

ASBE0012-001 06/27/2016

	Rates	Fringes
Asbestos Workers/Insulator Includes application of all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems.....	\$ 64.91	33.06
HAZARDOUS MATERIAL HANDLER.....	\$ 39.00	12.75

BOIL0005-001 01/01/2013

	Rates	Fringes
BOILERMAKER.....	\$ 49.47	33%+22.87+a

FOOTNOTE:

- a. PAID HOLIDAYS: New Year's Day, Thanksgiving Day, Memorial

Day, Independence Day, Labor Day and Good Friday, Friday
after Thanksgiving, Christmas Eve Day and New Year's Eve

BRNY0001-001 07/01/2016

	Rates	Fringes
BRICKLAYER.....	\$ 56.77	24.75
MASON - STONE.....	\$ 62.67	30.59

BRNY0001-002 07/01/2016

	Rates	Fringes
Pointer, cleaner and caulker.....	\$ 50.43	25.26

BRNY0004-001 07/01/2016

	Rates	Fringes
MARBLE MASON.....	\$ 57.32	33.08

BRNY0007-001 07/01/2016

	Rates	Fringes
TERRAZZO FINISHER.....	\$ 50.21	33.54
TERRAZZO WORKER/SETTER.....	\$ 51.82	33.55

BRNY0020-001 07/01/2016

	Rates	Fringes
MARBLE FINISHER.....	\$ 45.66	31.80

BRNY0024-001 07/01/2016

	Rates	Fringes
BRICKLAYER MARBLE POLISHERS.....	\$ 40.04	24.92

BRNY0052-001 06/06/2016

	Rates	Fringes
Tile Layer.....	\$ 48.51	26.37

BRNY0088-001 12/07/2015

	Rates	Fringes
TILE FINISHER.....	\$ 42.42	29.13

CARP0001-009 07/01/2016

	Rates	Fringes
CARPENTER		

Carpenters.....	\$ 52.50	45.58
Soft Floor Layers.....	\$ 52.50	45.58

 CARP0740-001 07/01/2016

	Rates	Fringes
MILLWRIGHT.....	\$ 51.50	51.71

 CARP1556-006 07/01/2016

	Rates	Fringes
Dock Builder & Piledrivermen DOCKBUILDERS.....	\$ 51.63	47.95

 CARP1556-007 07/01/2016

	Rates	Fringes
Diver Tender.....	\$ 46.44	47.95
Diver.....	\$ 65.38	47.95

 CARP1556-011 07/01/2016

	Rates	Fringes
Carpenters: TIMBERMEN.....	\$ 46.99	47.56

 ELEC0003-001 05/11/2016

	Rates	Fringes
ELECTRICIAN Electricians.....	\$ 54.00	41.4%+12.75
Jobbing, and maintenance and repair work.....	\$ 25.30	15.13+a

PAID HOLIDAYS:

- a. New Years Day, Martin Luther King, Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Election Day, Thanksgiving Day, the day after Thanksgiving Day, and Christmas Day

 ELEC1049-001 04/03/2016

QUEENS COUNTY

	Rates	Fringes
Line Construction (Substation and Switching structures pipe type cable installation and maintenance jobs or projects; Railroad electrical distribution/transmission systems maintenance (when		

work is not performed by
 railroad employees) Overhead
 and Underground
 transmission/distribution
 line work. Fiber optic,
 telephone cable and equipment)

Groundman.....	\$ 31.37	21.72
Heavy Equipment Operator....	\$ 41.82	25.06
Lineman and Cable Splicer...	\$ 52.28	28.39
Tree Trimmer.....	\$ 30.09	14.12

ELEV0001-002 03/17/2013

	Rates	Fringes
ELEVATOR MECHANIC		
Elevator Constructor.....	\$ 57.01	27.605+a+b
Modernization and Repair....	\$ 45.14	27.455+a+b

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Good Friday, President's Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

b. PAID VACATION: An employee who has worked less than 5 years shall receive vacation pay credit on the basis of 4% of his hourly rate for all hours worked; an employee who has worked 5 to 15 years shall receive vacation pay credit on the basis of 6% of his hourly rate for all hours worked; an employee who has worked 15 or more years shall receive vacation pay credit on the basis of 8% of his hourly rate for all hours worked.

ENGI0014-001 07/01/2016

	Rates	Fringes
POWER EQUIPMENT OPERATOR (HEAVY & HIGHWAY)		
GROUP 1.....	\$ 92.76	31.15
GROUP 2.....	\$ 76.51	31.15
GROUP 3.....	\$ 78.96	31.15
GROUP 4.....	\$ 77.07	31.15
GROUP 5.....	\$ 75.55	31.15
GROUP 6.....	\$ 72.53	31.15
GROUP 7.....	\$ 73.90	31.15
GROUP 8.....	\$ 71.78	31.15
GROUP 9.....	\$ 70.24	31.15
GROUP 10.....	\$ 67.16	31.15
GROUP 11.....	\$ 62.73	31.15
GROUP 12.....	\$ 64.13	31.15
GROUP 13.....	\$ 64.63	31.15
GROUP 14.....	\$ 48.73	31.15
GROUP 15.....	\$ 45.27	31.15
POWER EQUIPMENT OPERATOR (PAVEMENT-HEAVY & HIGHWAY)		
Asphalt Plants.....	\$ 59.14	31.15+a

Asphalt roller.....	\$ 69.91	31.15+a
Asphalt spreader.....	\$ 71.78	31.15+a
POWER EQUIPMENT OPERATOR (STEEL ERECTION)		
Compressors, Welding Machines.....	\$ 45.34	31.15
Cranes, Hydraulic Cranes, 2 drum derricks, Forklifts, Boom Trucks.....	\$ 76.43	31.15
Three drum derricks.....	\$ 79.54	31.15
POWER EQUIPMENT OPERATOR (UTILITY)		
Horizontal Boring Rig.....	\$ 68.25	31.15
Off shift compressors.....	\$ 56.70	31.15
Utility Compressors.....	\$ 44.98	31.15

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Tower crane

GROUP 2: Backhoes, power shovel, Hydraulic clam shells, moles and machines of a similar type

GROUP 3: Mine hoists and crane, etc. used as mine hoists

GROUP 4: Gradalls, keystones, cranes (with digging buckets), bridge cranes, trenching machines, vermeer cutter and machines of a similar nature

GROUP 5: Piledrivers, derrick boats, tunnel shovels

GROUP 6: All drills, and machines of a similar nature

GROUP 7: Back filling machines, cranes, mucking machines, dual drum pavers

GROUP 8: Mixers (concrete w/loading attachments), concrete pavers, cableways, land derricks, power house (low pressure units), concrete pumps

GROUP 9: Concrete plants, well drilling machines, stone crushers double drum hoist, power house (other than above)

GROUP 10: Concrete mixers

GROUP 11: Elevators

GROUP 12: Concrete breaking machine, Hoists (single drum), load masters, locomotive and dinkies over 10 tons

GROUP 13: Vibratory console

GROUP 14: Compressors (portable 3 or more in battery), tugger machine (caissons), well point pumps, chum drill

GROUP 15: Boilers, (high pressure, compressors (portable, single, or 2 in battery, not over 100' apart), pumps (river cofferdam and welding machines (except where arc is operated by members of local 15) push button machines, all engines irrespective of power (power pac) used to drive

auxilliary equipment, air, hydraulic etc.

PREMIUMS ON CRANES (Crawler or Truck):

100' to 149' boom - add .50
 150' to 249' boom - add .75
 250' to 349' boom - add 1.00
 350' to 450' boom - add 1.50

Premiums for Cranes on Steel Erection:

100' to 149' boom - add 1.75
 150' to 249' boom - add 2.00
 250' to 349' boom - add 2.25
 350' to 450' boom - add 2.75
 Tower crane - add 2.00

FOOTNOTE:

a. Paid Holidays: New Year's Day; Lincoln's Birthday; Washington's Birthday; Memorial Day; Independence Day; Labor Day; Veterans Day; Columbus Day; Election Day; Thanksgiving Day; and Christmas Day; provided the employee works one day the payroll week in which the holiday occurs.

 ENGI0014-002 07/01/2016

	Rates	Fringes
Power Equipment Operator		
BUILDING & RESIDENTIAL		
GROUP 1.....	\$ 71.85	31.15+a
GROUP 2.....	\$ 76.12	31.15+a
GROUP 3.....	\$ 69.39	31.15+a
GROUP 4.....	\$ 63.12	31.15+a
GROUP 5.....	\$ 47.26	31.15+a

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Double drum

GROUP 2: Stone derrick, cranes, hydraulic cranes, boom trucks

GROUP 3: 4 pole Hoist, Single Drum Hoists

GROUP 4: Fork lift, house cars, plaster (platform machine), plaster bucket, concrete pump and all other equipment used for hoisting material

GROUP 5: Compressors, welding machines (cutting concrete work), paint spraying, sand blasting, pumps (with the exclusion of concrete pumps), house car (settlement basis only), all engines irrespective of power (power pac) used to drive auxiliary equipment, air, hydraulic, etc., boilers

Premiums for Cranes:

100'-149' boom - add 1.75
 150'-249' boom - add 2.00
 250'-349' boom - add 2.25
 350'-450' boom - add 2.75
 Tower cranes add 2.00

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Lincoln's Birthday, Memorial Day, Independence Day, Labor Day, Veteran's Day, Columbus Day, Election Day, Thanksgiving Day, and Christmas Day, provided the employee works one day in the payroll week in which the holiday occurs

 ENGI0015-001 07/01/2016

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
HEAVY AND HIGHWAY		
GROUP 1.....	\$ 65.94	32.95
GROUP 2.....	\$ 63.98	32.95
GROUP 3.....	\$ 60.69	32.95
GROUP 4.....	\$ 57.42	32.95
GROUP 5.....	\$ 39.70	32.95

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cherrypickers 20 tons and over and loaders (rubber-tired and/or tractor type with a manufacturer's rated capacity of six cubic yards and over

GROUP 2: Backhoes, Basin Machines, Groover, Mechanical Sweepers, Bobcat, Boom Truck, Barrier Transport (Barrier Mover) and machines of a similar nature, Boat Captains, Boat Operators, operation of Churn Drills and machines of a similar nature, Stetco Silent Hoist and machines of a similar nature, Vac-alls, Meyers Machines, John Beam and machines of a similar nature, Ross Carriers and Travel Lifts and machines of a similar nature, Bulldozers, Scrapers, and Turn-a Pulls, Tugger Hoist (used exclusively for handling excavated material), Tractors with attachments, Hyster and Roustabout Cranes, Cherrypickers, Austin Western, Grove and machines of a similar nature, Scoopmobiles, Monorails, Conveyors, Trenchers, Loaders-Rubber-tired and Tractor, Barber Greene, Eimco Loaders and Eimco Backhoes, Mighty Midget and similar breakers and tampers, Curb and Gutter Pavers and Motor Patrol, Motor Graders and all machines of a similar nature, Locomotives ten (10) tons or under, Mini-Max, Break-Tech and machines of a similar nature, Milling Machines, robotic and demolition machines and machines of a similar nature including Bobcat, Pile Rig Rubber-tired Excavator (37,000 lbs. and under), 2 man auger

GROUP 3: Minor Equipment such as Tractors, Post Hole Diggers and Drivers, Ditch Witch (Walk Behind), Road Finishing Machines, Rollers (five (5) tons and under), Tugger Hoists, Dual Purpose Trucks, Fork Lifts and Dempsey Dumpsters

GROUP 4: Oilers for the following equipment: (all gasoline, electric, diesel, or air operated) gradalls and concrete pumps or similarly equipment manned by two-men

GROUP 5: Oilers for the following equipment: (all gasoline, electric, diesel, or air operated) shovels, cranes

(draglines), backhoes, pavers, trenching machines, gunite machines, compressors (3 or more in battery)

Premiums for Cranes:

100'-149' boom - add 1.75
 150'-249' boom - add 2.00
 250'-349' boom - add 2.25
 350'-450' boom - add 2.75
 Tower cranes add 2.00

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Lincoln's Birthday, Memorial Day, Independence Day, Labor Day, Veteran's Day, Columbus Day, Election Day, Thanksgiving Day, and Christmas Day, provided the employee works one day in the payroll week in which the holiday occurs

 ENGI0015-002 07/01/2016

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
BUILDING		
GROUP 1.....	\$ 65.94	32.95
GROUP 2.....	\$ 63.98	32.95
GROUP 3.....	\$ 57.42	32.95

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Oiler

GROUP 2: Oilers on Crawler Cranes, Backhoes, Trenching machines, Gunite machines, Compressors (3 or more in Battery)

GROUP 3: Gradalls: Concrete Pumps, Power Houses - All equipment in same is manned by two (2) men only, Driving Truck Cranes

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Lincoln's Birthday, Memorial Day, Independence Day, Labor Day, Veteran's Day, Columbus Day, Election Day, Thanksgiving Day, and Christmas Day, provided the employee works one day in the payroll week in which the holiday occurs

 IRON0040-002 07/01/2016

BRONX, NEW YORK, RICHMOND

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 49.50	69.74

 IRON0046-003 07/01/2014

	Rates	Fringes
IRONWORKER		
METALLIC LATHERS AND		
REINFORCING IRONWORKERS.....	\$ 40.60	30.56

IRON0197-001 07/01/2016

	Rates	Fringes
IRONWORKER		
STONE DERRICKMAN.....	\$ 46.34	38.50

IRON0361-002 07/01/2016

KINGS, QUEENS

	Rates	Fringes
Ironworkers:		
(STRUCTURAL).....	\$ 49.50	69.74

IRON0580-001 07/01/2015

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 43.20	47.42

LABO0006-001 07/01/2013

	Rates	Fringes
LABORER (Cement and Concrete Workers).....	\$ 42.38	20.52

LABO0029-001 07/01/2016

	Rates	Fringes
Laborers:		
Heavy		
Blasters (hydraulic trac drill).....	\$ 45.78	33.94
Blasters.....	\$ 44.93	33.94
Hydraulic Trac Drill.....	\$ 40.12	33.94
Jackhammers, Chippers, Spaders, Concrete Breakers, All Other Pneumatic Tools, Walk Behind Self-Propelled Hydraulic Asphalt and Concrete Breaker.....	\$ 38.23	33.94
Powder Carriers.....	\$ 34.20	33.94

LABO0078-001 02/01/2013

	Rates	Fringes
LABORERS		
BUILDING CONSTRUCTION		
ASBESTOS (Removal, Abatement, Encapsulation or Decontamination of asbestos); LEAD; & HAZARDOUS WASTE LABORERS (Hazardous Waste,		

Hazardous Materials,
 Biochemical and Mold
 Remediation, HVAC, Duct
 Cleaning, Re-spray
 Fireproofing, etc).....\$ 35.90 14.75

LABO0079-001 01/01/2017

	Rates	Fringes
Laborers Building Construction		
Demolition Laborers		
Tier A.....	\$ 38.48	26.17
Tier B.....	\$ 27.06	19.38
Mason Tenders.....	\$ 39.80	27.30

CLASSIFICATIONS

TIER A: Responsible for the removal of all interior partitions and structural partitions that can consist of sheet rock, block or masonry. Also, all structural slab openings for ducts, mechanical, shafts, elevators, slab openings and exterior walls where the building is not being completely demolished.

TIER B: Responsible for shoveling of debris into containers, pushing containers from the inside to the outside of the building.

LABO0147-001 07/01/2013

	Rates	Fringes
LABORERS (FREE AIR & TUNNEL).....	\$ 52.23	37.23

Maintenance Men, Inside Muck Lock Tenders, Pump Men, Electricians, Cement Finishers, Caulkers, Hydraulic Men, Shield Men, Monorail Operators, Motor Men, Conveyor Men, Powder Carriers, Pan Men, Riggers, Chuck Tenders, Track Men Painters, Nippers, Brakemen, Cable Men, Hose Men, Grout Men, Gravel Men, Form Workers, Concrete Workers, Tunnel Laborers, Mole Nipper (one (1) Mole Sipper per Working Shaft per Shift for up to and including Two (2) Moles

LABO0731-001 07/01/2016

	Rates	Fringes
LABORER		
Building, Heavy and Residential Construction		
LABORER: (Asbestos, Lead, Hazardous Waste Removal (including soil)/CEMENT/CONCRETE.....	\$ 41.00	38.53
UTILITY LABORER.....	\$ 40.85	38.53

Paid Holidays: Labor Day and Thanksgiving Day

LABO1010-001 07/01/2016

	Rates	Fringes
Laborers:		
HIGHWAY CONSTRUCTION		
Fence Installer & Repairer.	\$ 41.48	38.30
FORMSETTERS.....	\$ 45.35	38.30
LABORERS.....	\$ 41.48	38.30
Landscape Planting & Maintenance.....	\$ 41.48	38.30
Maintenance Safety Surface.	\$ 41.48	38.30
Slurry/Sealcoater/Play Equipment Installer.....	\$ 41.48	38.30
Small Equipment Operator (Not Operating Engineer)...	\$ 41.48	38.30
Small Power Tools Operator.	\$ 41.48	38.30

FOOTNOTES:

a. PAID HOLIDAYS: Memorial Day, Fourth of July, Labor Day, Columbus Day, Election Day and Thanksgiving Day, provided the employee has worked one (1) day in the calendar week in which the said holiday occurs.

LABO1010-002 07/01/2016

	Rates	Fringes
Laborers-Asphalt Construction:		
Micro Paver.....	\$ 45.95	38.30
Raker.....	\$ 45.35	38.30
Screeperson.....	\$ 45.95	38.30
Shoveler (Production Paving Only).....	\$ 42.06	38.30
Small Equipment Operator (Asphalt).....	\$ 42.06	38.30

* PAIN0009-001 11/01/2016

	Rates	Fringes
GLAZIER.....	\$ 44.70	38.42
PAINTER		
Painters, Drywall Finishers, Lead Abatement Worker.....	\$ 42.50	26.62
Spray, Scaffold and Sandblasting.....	\$ 45.50	26.62

PAIN0806-001 10/01/2016

	Rates	Fringes
Painters:		
Structural Steel and Bridge.	\$ 49.50	30.35

PAIN1974-001 12/28/2016

	Rates	Fringes
Painters:		
Drywall Tapers/Pointers.....	\$ 47.82	22.66

 PLAS0262-001 08/01/2016

	Rates	Fringes
PLASTERER.....	\$ 44.93	28.15

 PLAS0262-002 08/01/2016

KINGS AND QUEENS COUNTIES

	Rates	Fringes
PLASTERER.....	\$ 44.93	28.15

 PLAS0780-001 07/01/2016

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 49.72	31.81

 PLUM0001-001 07/01/2016

	Rates	Fringes
PLUMBER		
MECHANICAL EQUIPMENT AND SERVICE		
Any repair and/or replacement of the present plumbing system that does not change the existing roughing.....	\$ 39.92	14.41
PLUMBERS:.....	\$ 67.25	29.30

 PLUM0638-001 12/28/2016

	Rates	Fringes
PLUMBER		
SERVICE FITTERS.....	\$ 26.30	2.55
SPRINKLER FITTERS,		
STEAMFITTERS.....	\$ 61.81	48.30

Service Fitter work shall consist of all repair, service and maintenance work on domestic, commercial and industrial refrigeration, air conditioning and air cooling, stoker and oil burner apparatus and heating apparatus etc., including but not exclusively the charging, evacuation, leak testing and assembling for all machines for domestic, commercial and industrial refrigeration, air conditioning and heating apparatus. Also, work shall include adjusting, including capacity adjustments, checking and repairing or replacement of all controls and start up of all machines and repairing all defects that may develop on any system for domestic,

commercial and industrial refrigeration and all air conditioning, air cooling, stoker and oil burner apparatus and heating apparatus regardless of size or type.

 ROOF0008-003 07/01/2016

	Rates	Fringes
ROOFER.....	\$ 41.50	30.87

 SHEE0028-002 07/31/2014

	Rates	Fringes
SHEET METAL WORKER		
BUILDING CONSTRUCTION.....	\$ 50.91	36.70
RESIDENTIAL CONSTRUCTION....	\$ 27.22	16.48

 TEAM0282-001 07/01/2015

	Rates	Fringes
TRUCK DRIVER		
Asphalt.....	\$ 39.96	44.7525+a
Euclids & Turnapulls.....	\$ 40.06	44.7525+a
High Rise.....	\$ 48.36	42.9525+a

FOOTNOTES:

PAID HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Election Day, Veterans' Day (Armistice Day), Thanksgiving Day, Day after Thanksgiving and Christmas Day. Employees working two (2) days in the calendar week in which a holiday falls are to be paid for such holiday, provided that they shape each remaining workday during such calendar week.

 WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.
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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information

on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

NOTICE

The Standard Sewer And Water Main Specifications of the Department of Environmental Protection (dated July 1, 2014), Sewer Design Standards of the Department of Environmental Protection (dated (September 2007) Revised January 5, 2009), Water Main Standard Drawings of the Department of Environmental Protection (latest revisions), and Specifications For Trunk Main Work of the Department of Environmental Protection (dated July 2014) shall be included as part of the contract documents. These said specifications and standard drawings are hereby revised under the following section headings:

- A. NOTICE TO BIDDERS
- B. REVISIONS TO THE STANDARD SEWER AND WATER MAIN SPECIFICATIONS
- C. REVISIONS TO THE SPECIFICATIONS FOR TRUNK MAIN WORK

(NO TEXT ON THIS PAGE)

A. NOTICE TO BIDDERS

- (1) The Contractor is notified that a Notice To Proceed (NTP) date will be issued for work to commence within twenty-one (21) to thirty (30) days of Contract Registration.
- (2) The Contractor shall furnish, install, maintain and subsequently remove temporary Protective Tree Barriers. Protective Tree Barriers shall be Type B, unless otherwise directed by the Engineer, and shall be constructed and installed as shown on the Protective Tree Barrier sketch in Department Of Transportation, Standard Highway Details Of Construction, Drawing No. H-1046A, as directed by the Engineer, and in accordance with Department of Parks and Recreation requirements.
- (3) All utility locations and invert elevations are not guaranteed, nor is there any guarantee that all existing utilities, whether functional or abandoned within the project area are shown.
- (4) All existing house connections shall be maintained and supported during construction. The Contractor shall replace any existing house connection damaged as a result of the Contractor's construction operations as ordered by the Engineer at no cost to the City.
- (5) The Contractor is advised that any City owned light poles, traffic signals, street name signs, traffic signs and encumbrances including, but not limited to, underground conduit displaced as the result of the installation of the new sewers, water mains, catch basins, catch basin connections and appurtenances shall be replaced in kind and as directed by the Engineer. The cost of such work shall be deemed included in the prices bid for all items of work under this contract.
- (6) The Contractor is notified that Victaulic Style 77 Coupling is no longer acceptable for use in any steel water main work. All reference to Victaulic Style 77 Coupling within the Standard Sewer And Water Main Specifications of the Department of Environmental Protection (dated July 1, 2014), the Water Main Standard Drawings of the Department of Environmental Protection (latest revisions), the Specifications For Trunk Main Work (dated July 2014), and the contract drawings, shall be replaced with Bolted Split-Sleeve Restrained Coupling.
- (7) The Contractor is notified that the fuel cost per gallon used in the formula under **Sub-Article 26.2.8** of the Standard Construction Contract for **Extra Work** will be derived from the fuel price index for the United States East Coast published weekly by the United States Energy Information Administration ("USEIA"), and available on its website at <http://www.eia.gov/petroleum/gasdiesel/>. The USEIA published cost per gallon for the applicable fuel on the East Coast for the week in which the first day of each calendar quarter during the contract term occurs (i.e., January 1st, April 1st, July 1st and September 1st) will be used in the reimbursement formula for all **Extra Work** invoiced that was performed during that calendar quarter. Should the USEIA stop publishing this fuel price index, the fuel cost per gallon will be determined by reference to a substitute index to be agreed upon by the Contractor and the City.
- (8) The Contractor is responsible for any damage to the existing street and traffic signal equipment, including underground conduits and the safety of both pedestrian and vehicular traffic for the duration of the contract.

Should any conduits, cables or foundations need repair due to the Contractor's negligent operations during construction, all work shall be performed according to NYCDOT Bureau of Traffic's Standard Drawings and Specifications at the sole expense of the Contractor.

It is the Contractor's responsibility to secure an approved electrical contractor to perform all traffic signal work (if any). For list of approved electrical contractors, contact Mr. Michael R. LeFosse of New York City Department of Transportation at (212) 839-3799.
- (9) The Contractor is advised that where the existing roadway pavement is designated to be replaced from curb to curb, then no full depth saw cutting of pavement for sewer and water main trenches will

be required, except at the limits of full width pavement restoration. No separate or additional payment will be made for any saw cutting.

- (10) The Contractor shall exercise extreme caution and take all necessary precautions in placing sheeting and excavating to prevent any damage to the existing LONG ISLAND RAIL ROAD subway structures and its appurtenances during construction work throughout the project area. The Contractor shall take full responsibility to protect the said NYC TRANSIT'S subway structures and its appurtenances and any damage caused by the Contractor's operations shall be made good by the Contractor to the satisfaction of the Engineer at no additional cost to the City.
- (11) The Contractor shall submit shop drawings to LONG ISLAND RAIL ROAD showing all the details and methods of construction, such as, sheeting and bracing, including the Contractor's procedure and sequence of construction, supporting and/or protection of the existing LIRR's structures and its appurtenances, with necessary design calculations for approval prior to starting of the construction. The design shall be made by a New York State Licensed Professional Engineer skilled in this type of construction and as further evidenced by the imprint of Professional Engineer's seal and signature on all drawings. The cost of this work shall be deemed included in the price bid for all items of work under this contract.
- (12) Contractor shall coordinate with NYCDOT/Bridges project HBK1201: Rehabilitation Atlantic Avenue Bridge over LIRR Atlantic Branch from Atlantic Avenue & Georgia Avenue This project is scheduled to begin June 2017 and end 2020. Contractor shall coordinate activities at Georgia Avenue and elsewhere to avoid interferences and shall not impede access by other contractor to their work site.
- (13) Access to Sperendeo playground (South side of Atlantic Avenue between Linwood Street & Elton Street shall be maintained during construction which may require phasing of sidewalk demolition and reconstruction in front of the park. Also advised that the Contractor shall procure NYCDPR Construction Permit for working in front of the park.
- (14) The existing 48" cast-iron water main in Atlantic Avenue, installed in 1905, shall be supported and protected during construction of the proposed sewer and distribution water mains. The Contractor shall exercise extreme care and take all the necessary precautions to prevent any damage to the water main. The costs for supporting and protecting shall be deemed included in the various bid items in the contract. No additional payment shall be made to the contractor for this work.
- (15) The field office shall be within ½ mile of the job site. Field offices located further than ½ mile from the job site shall require approval by the Assistant Commissioner for Construction.

B. REVISIONS TO THE STANDARD SEWER AND WATER MAIN SPECIFICATIONS

- (1) **Refer to Subsection 10.21 - Contractor To Notify City Departments, Page I-13:**
Add the following to **Subsection 10.21:**

(1) N.Y.C. D.E.P., BUREAU OF WATER AND SEWERS OPERATIONS

The Contractor shall notify Mr. Peter Gordon, P.E., Chief, Linear Capital Program Management Division at the Department of Environmental Protection, 59-17 Junction Blvd., 3rd floor low rise, Corona N.Y. 11368, at least thirty (30) days prior to the start of construction.

(2) NEW YORK CITY FIRE DEPARTMENT

The Contractor shall notify the Bureau of Fire Communications at least thirty (30) days prior to the start of construction by contacting Mr. Ed Durkin at (718) 624-4194 or (718) 624-3752.

(3) N.Y.C. DEPARTMENT OF TRANSPORTATION

The Contractor shall notify Mr. Steve Galgano, P.E. Chief of Signal/Street Lighting Operations, 34-02 Queens Blvd., Long Island City, N.Y. 11101 at (212) 839-3350, at least seventy-two (72) hours prior to the start of construction.

(4) N.Y.C. DEPARTMENT OF PARKS AND RECREATION

The Contractor shall notify the Parks Department at least seventy-two (72) hours prior to the start of construction by contacting Mr. James Cruickshank at (718) 965-7739.

(5) N.Y.C. TRANSIT AUTHORITY

The Contractor is advised that bus routes as well as bus stops, within the scope of this project may be affected during construction operations. The Contractor shall notify the Transit Authority at least two (2) weeks prior to the start of construction, in order to make the necessary arrangements

Arrangements shall be made through:

Ms. Sarah Wyss
Director Of Short Range, Bus Service Planning (SRB)
New York City Transit
2 Broadway, 17th Floor
New York, N.Y. 10004
Telephone No. (646) 252-5517
sarah.wyss@nyct.com

- (2) **Refer to Subsection 10.30 - Contractor To Provide For Traffic, Page I-15:**
Add the following to **Subsection 10.30:**

(1) Traffic Stipulations:

The Contractor shall refer to Traffic Stipulations identified in the maintenance of traffic requirements under Highway Contract No. HWD10105.

- (3) Refer to **Subsection 71.41.4 - Specific Pavement Restoration Provisions**, Page VII-67:
Add the following to **Subsection 71.41.4**:

(E) Specific Pavement Restoration Provisions:

- (1) Within the limits of the highway reconstruction the restoration shall be accomplished and paid for in accordance with Highway Construction Plans, Details and Specifications for Highway Project ID. HWD10105

(NO FURTHER TEXT ON THIS PAGE)

C. REVISIONS TO THE SPECIFICATIONS FOR TRUNK MAIN WORK

- 1) **Refer** to Part 1 – Furnishing And Delivering Steel Pipes And Appurtenances 30 Inches In Diameter And Larger, Section 11. Fabrication:, Page 4;
Add the following to Section 11:

All steel water mains shall be spiral welded pipes, and all steel water main fittings shall be fabricated from qualified spiral welded pipe. Can type pipe is not acceptable.

- 2) **Refer** to Part 1 – Furnishing And Delivering Steel Pipes And Appurtenances 30 Inches In Diameter And Larger, Section 13. Special Fittings:, Page 5;
Add the following to Section 13:

The steel reducer shall have a length of seven (7) feet for every twelve (12) inches reduction in diameter.

END OF SECTION

This Section consists of five (5) pages

NO TEXT ON THIS PAGE

EP7 - PAGES

**GAS COST SHARING (EP-7)
STANDARD SPECIFICATIONS**

NOTICE

THE PAGES CONTAINED IN THIS SECTION (EP7-PAGES) REPRESENT THE GAS COST SHARING WORK THAT SHALL APPLY TO AND BECOME A PART OF THE CONTRACT.

(NO TEXT ON THIS PAGE)

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- NO. 5 - Gas Main Encroachment On And/Or Parallel To Excavation Of Unsheeted Trench

V - PRELIMINARY GAS WORK TO BE PERFORMED BY FACILITY OPERATOR

VI - LISTING OF APPROXIMATE LOCATIONS OF EP-7 BID ITEMS QUANTITIES

I - NOTICE TO ALL BIDDERS; GAS COST SHARING WORK

All prospective bidders are hereby advised that, pursuant to the "Gas Facility Cost Allocation Act", ("the Act"), the City of New York has entered into an agreement ("the Agreement") with the gas companies (Con Edison or National Grid (formerly KeySpan Energy Delivery)) operating in their respective areas of the City to "share" the cost of facility relocation and/or support and protection of facilities disturbed by proposed water and/or sewer and related City work specified in this contract. Therefore, bid items, specifications and estimated quantities for the incremental costs of support and protection of certain gas facilities have been included in this contract. The low bid for this contract shall be determined by examining each bid for all work to be performed under this contract including any work of support and protection of gas facilities to be performed. The Contractor shall not seek additional compensation from gas companies except as specifically set forth in its contract.

II - GENERAL PROVISIONS; GAS COST SHARING WORK

1. General:

The Contractor shall perform City work with interferences from existing live and abandoned gas facilities. This shall be defined as utility work. Therefore, this contract includes bid items, specifications and estimated quantities designed to fully compensate him/her for the incremental costs of supporting, protecting, providing accommodations and, avoiding disturbing gas facilities located in the streets shown on the contract drawings. In the event that any other provisions of this contract related to gas facilities (or private utilities) conflict with these provisions, these provisions shall supersede and govern all work related to gas facilities owned by the companies operating in the project area. All utility work, as defined in these specifications, including changes and additions thereto shall be paid solely by the City except when specified otherwise in this contract. Contractor hereby agrees that the facility operator shall not be liable to pay him/her for any work performed including extra utility work. Contractor agrees that its bid prices include all compensation for loss of productivity and efficiency, idle time, delays (including any delays occasioned by negotiation of a contract change), change in operations, mobilization, demobilization, remobilization, added cost or expense, lost of profit, other damages or impact costs that may be suffered by or because of utility work, or the presence of gas facilities in the proximity of City work and that it will not seek additional compensation for these items. All disputes shall be resolved as specified in the contract.

Pursuant to the Act, Agreement, and the New York City Administrative Code, the gas company(ies) has been directed by the Commissioner and is required to perform all maintenance, repairs, replacement, shifting, alteration, relocation, and/or removal work that are not part of this contract. By having bid on this contract, the Contractor understands and agrees that the Commissioner has preasserted any right the City has to require, including the issuance of any directives or so called "order outs" under the New York City Administrative Code, any or all gas companies to maintain, repair, replace, protect, support, shift, alter, relocate, and/or remove all gas facilities that are about to be disturbed by the City contract work. The issuance of additional such directives during the performance of the contract work, where necessary in the sole judgment of the Commissioner, shall be initiated by such Commissioner as set forth in the relevant sections of the Act and Agreement. Contractor further agrees to insert such requirements as set forth herein above into any contracts with its approved subcontractors so that its subcontractors also understand and agree to such contract requirements.

2. Gas Interferences And Accommodations:

During the performance of sewer and water main work funded by the New York City Department of Environmental Protection (NYCDEP), as instructed by the Engineer, the use of any applicable contract bid item is allowed in order to resolve and accommodate all gas facilities interferences with such City work, including the removal of contaminated soil in associated trench excavation. This is in addition to the specified EP-7 bid items in the contract. Payment for such accommodation shall be funded by EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS" (F.S. Fixed Sum). The value of such accommodation shall be computed by multiplying the appropriate unit prices bid to the quantity of work performed, as determined by the Engineer, and applying the total amount thus to be paid

to EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS". When EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS" does not exist, such additional accommodation work shall be at no cost to the City but shall be a matter of adjustment between gas facility operator and Contractor. Private facilities, other than gas, that become in interference due to gas interferences accommodations shall also be accommodated, if so directed by the Resident Engineer, at no additional cost to the City and, provided that its owner agrees to be responsible for all additional costs to Contractor, otherwise, such facility shall be ordered by the City to be maintained, shifted, relocated or replaced by its owner at his/her expenses.

2a. Water Main Accommodations:

When water main construction is to be performed in this contract, Contractor shall be required, if warranted by field conditions, and at locations designated by the Resident or Borough Engineer, to change the vertical or horizontal alignment of water mains including but not limited to all additional labor, material, work method accommodations, furnishing, delivering and laying offset fittings and pipes, etc., necessary in order to complete water main installation and, avoid gas interferences in the project area, including street intersections. Typical work method accommodations shall include, but not be limited to, pier and plate, installation of filter fabric and select fill, etc. Such work shall be performed as directed by the Engineer and in accordance with contract specifications and latest edition of water mains standards and specifications.

2b. Sewer Accommodations:

When sewer construction is to be performed in this contract, Contractor shall be required, if warranted by field conditions, and at locations designated by the Resident or Borough Engineer, to change the horizontal alignment of sewer facilities (if possible) including but not limited to all additional labor, material, work method accommodations, furnishing, delivering and construction of additional manholes or modification of manholes/catch basins, extending chute connections, house connections, using alternate materials and methods, poured-in-place structures, etc., necessary in order to complete sewer installation and, avoid gas interferences in the project area, including street intersections. The term sewer facility shall include, but not be limited to, all sewer pipe and appurtenances, manholes, catch basins, catch basin chutes, etc. Such work shall be performed as directed by the Engineer and in accordance with contract specifications and latest edition of sewer standards and specifications.

3. Quantity Overruns, EP-7 Funded Bid Items:

No quantity overrun, in excess of one hundred twenty five (125) percent, shall be permitted for EP-7 funded bid items (gas) included in this contract, except when Resident Engineer determines that such overruns are caused by field modifications to planned City work, or approved construction methods, or contract scope changes. Overruns not paid by City shall be negotiated and paid to Contractor by gas facility operator who then shall be entitled to reimbursement by NYCDEP under established cost sharing procedures.

4. Changes And Extra Work:

This section is not applicable to work defined under "Emergency Reconstruction Contracts" or so-called "Where and When Contracts" since these projects, by definition, inherently encounter unanticipated gas facilities and cannot be pre-engineered. In all other cases, any contract changes proposed for City work shall also cover and include all associated changes to support and protection of gas facilities affected by such changes to City work. In all other cases where the Contractor finds that City work cannot be performed as planned and specified and/or, as approved because of a need to support, protect and/or alleviate interferences from gas facilities that were not listed and/or shown, or incorrectly shown in contract plans and specifications, he shall immediately notify the Resident Engineer and the facility operators' representative of his findings. Resident Engineer shall promptly examine such claims and determine whether or not such work is covered by contract bid items and /or specifications (contract bid items and specifications shall include city contract items as well as EP-7 items). The Resident Engineer shall also

examine the claim to determine if the application of EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS" is appropriate to resolve the claim. If upon examination, the Engineer determines that such field conditions were unanticipated (not shown and/or listed, or incorrectly shown in contract documents) and are not covered by bid items and contract specifications, he shall then direct the Contractor and the affected facility operator to negotiate the cost of supporting and protecting, and/or alleviating the impact on City work caused by such unanticipated gas facilities with each other with the understanding that the performance of City work shall continue during negotiations. If a cost agreement is reached, the Contractor and facility operator shall adjust such costs between themselves at no additional costs to the City contract. If the Contractor and affected facility operator do not reach an agreement concerning the price to be paid for the extra work within five (5) business days of the Engineer's directive to engage into such negotiations and, after considering: public safety and inconvenience, requirements of laws and regulations applicable to private utilities, integrity of all utility systems, including but not limited to sewer and water, gas, electric, telephone and, cable TV facilities, sound engineering practices, cost (long and short term) to all affected parties, and potential City work delays, then the Resident Engineer, depending on nature and severity of interferences with City work, shall either, direct the facility operator to relocate or replace its facilities at its own discretion and cost, reimbursable by NYCDEP under established gas cost sharing procedures or, direct the Contractor to perform the utility work on actual time, material and equipment costs basis pursuant to relevant contract requirements and amendments. Contract bid prices for any applicable items of work involved shall be applied, or converted to an allowance for time and material charges. Changes shall be for affected portions of utility work and, shall be processed with EP-7 funds.

5. Excavation:

All excavators shall notify the NYC/LI One Call Center at 1-800-272-4480 at least two (2) working days, not including the day of the call, but not more than ten (10) working days in advance of the start of any excavation work. The gas company(ies) will mark out its facilities within the project limits and provide Construction Inspector(s) during all excavation work in close proximity (within twelve (12) inches) to gas facilities. The Contractor shall exercise extreme caution when excavating in the vicinity of any gas facilities. Hand excavation shall be performed within twelve (12) inches of gas facilities. The Contractor prior to excavating underneath these facilities shall adequately support all gas facilities. Standard support details for gas facilities have been included in the specifications. Any damage to gas facilities shall be reported immediately to the gas company(ies). The Contractor shall be responsible for all cost associated with repairs made necessary by damages caused by his operations.

6. Backfilling And Street Restoration:

Backfilling operations and street restorations shall be in accordance with contract requirements.

7. Non-Responsive Bids:

Every gas (EP-7) bid item has a suggested "Not less than" value per unit indicated on contract bid sheet. Bids resulting in cost of less than suggested for EP-7 items are hereby prohibited and if submitted shall be considered NON-RESPONSIVE.

8. Minimum Clearances:

Clearance requirements for City work shall govern and supersede any clearance requirement of gas facility operator. Therefore, a minimum of twelve (12) inches clearance between private utilities and City water mains, sewers or related structures to be installed in this contract shall be maintained. When this clearance is not attainable, the Resident Engineer may allow a minimum of four (4) inches clearance. With less than twelve (12) inches clearance a neoprene/polyethylene shield (to be provided by facility operator) shall be installed as part of all work item specifications. However, if Resident Engineer determines that City work cannot be performed within allowable clearance and no reasonable City accommodation (no-cost change to City work) is possible, the City shall direct the facility operator to remove, relocate, shift, or alter their facility(ies) pursuant to the New York City Administrative Code.

9. Work By Facility Operator:

The facility operator may find it necessary to perform the following types of work during performance of City work: accommodating a contractor's request for gas facilities modifications (in order to facilitate City contractor's proposed construction method) or, remedial and emergency work on gas facilities proper with their own resources and materials if an approved method of construction for City work causes unanticipated disturbances to gas facilities or, replacing defective gas facilities when they are exposed by the Contractor and their actual conditions are observable by the facility operator. Also included in the above category of defective gas facilities are: the presence of environmental contaminants attributable to the gas facility in or around gas facilities. If such work is deemed required by the facility operator or if facility operator is directed by the City to address such deficiencies at any time during the course of construction, the Contractor shall modify the construction schedule at no cost to the City and allow the facility operator five (5) business days to perform such work without interferences. Additional costs to the facility operator (in cases of accommodations) or, Contractor (in cases of defective gas facilities) due to such gas work, if any, shall be the responsibility of the parties involved and not of the City. Such costs shall be a matter of adjustment between the Contractor and the facility operator.

10. Materials Furnished By Facility Operator:

It shall be the Contractor's responsibility to inspect material to be installed by him immediately upon delivery and advise the facility operator through its authorized representative, of all damaged materials. The Contractor at no additional costs to the City or the facility operator shall replace any material that is damaged or lost after the Contractor's inspection.

11. Liability And Insurance:

Notwithstanding the provisions of this contract, the existing division of liabilities to third parties shall remain the same as between the City and the company. Therefore, it is specifically agreed by the City, company and Contractor (by bidding on this contract) that for the purpose of any liabilities to third parties, that the City contractor performing work directly and physically relating to gas company facilities in this project, shall be deemed an agent of the company and not an agent of the City, the New York City Municipal Water Finance Authority, or the New York City Water Board. Contractor shall include the company as an additional insured on all insurance policies maintained to comply with the City's insurance requirements.

12. Width And Depth Of Excavation:

Contractor shall not be authorized to deliberately change trench or excavation widths and/or depth specified without Engineer's approval. Enlargement of any side of excavation up to eighteen (18) inches beyond pay limits (or inside face of sheeting) requested by the Contractor for the installation of certain types of sheeting may be granted. However, such enlargements or those greater than allowable shall not be approved when, in the sole judgment of the City, field conditions allow the water mains and sewer work to be performed within the limits specified and, the sole purpose of such enlargement request is to impact adjacent utilities (public or private) whose support and protection are part of this contract. Any approval shall be given at no additional cost to the City contract, including EP-7 funding, and all costs associated with unauthorized enlargements shall be the sole responsibility of the Contractor.

13. Depth And Crossing Angles Of Gas Facilities:

Where gas facilities are shown (or specified as) crossing proposed alignment of sewers, water mains, catch basins and chute connections or any other proposed excavations at specific angles (as measured off plans or sketches or specified in contract), it shall be understood that actual field measurements may deviate (plus or minus) forty-five (45) degrees from those shown or specified. The cover, or depth from street surface to top of facilities, shall be as shown or specified in contract documents, no deviation is to be assumed. Where gas facilities are not shown on contract documents, but their support and protection are otherwise included in this contract then, all references to facilities crossing at "various angles and depth" in the gas sections shall mean that such facilities are crossing sewer, water, catch basin and, catch basin chute, and other excavations at a ninety (90) degree angle to the proposed sheeting line or side of

excavation (for unsheeted trenches) with an allowable deviation of forty-five (45) degrees in any direction, except for catch basin chute excavation where the allowable deviation shall be sixty (60) degrees. Where the cover is not noted or specified, the bottom face of such facilities shall be assumed to be crossing catch basin chutes at a depth of three (3) foot eight (8) inches or less from the street surface. Paragraph No. 2 above shall apply in cases of distribution water main construction. Appropriate bid items and specifications are provided for cases where angle and depth are greater than stated above. This section also applies to work defined in "Emergency Reconstruction Contracts" or so-called "Where and When Contracts". These contracts are not pre-engineered and consequently have no drawings, sketches or determined locations and so, gas facilities encountered will be crossing existing and proposed sewer, water, catch basin/catch basin chutes and all appurtenances at various angles and depths.

14. Maintenance Of Traffic For Gas Work:

All work pertaining to gas bid items and specifications shall be performed within the contract maintenance of traffic plan as specified in the contract document. The bid price for the Maintenance and Protection of Traffic shall cover all work pertaining to gas items. The City shall make compensation for additional maintenance and protection of traffic items in connection with gas item of work only when such additional work is deemed reasonable and necessary by the Resident Engineer and is approved by him prior to its performance.

15. Relocated Gas And Temporary Systems Installation:

In cases where the Contractor is allowed to select the location for temporary construction such as, installation of dewatering headers, wells, well points, etc., he shall not disturb any gas facilities shown on sketches provided in this section. The only exception shall be, if the affected gas company agrees to such relocation and provided that the cost of such relocation is a matter of adjustment between the company and Contractor, and at no cost to the City.

16. Role Of Company Inspector:

In any case in which the City elects to perform some or all support and protection work with its own employees, personnel or contractors, the facility operator shall provide onsite inspectors to approve and certify such support and protection work (exclusive of City accommodations) performed by the City's own employees, personnel, and contractors. Facility operator's inspectors are not authorized to direct City contractor during the performance of contract work. They shall act through the City Resident Engineer and provide him/her required approvals and certifications, prior to preparing partial payments of EP-7 items, in a format and frequency to be prescribed by the appropriate City Head of Construction.

17. Coordination With Gas Company:

The Contractor shall be required to notify the gas company(ies), in writing, at least two (2) weeks prior to the start of final paving in order to allow companies to complete any unfinished gas work located within the area to be paved. Every effort shall be made to maintain gas service with minimum inconvenience to the public.

III - TECHNICAL SECTION

SECTION 6.01 - Trench Crossings; Support And Protection Of Gas Facilities And Services.

1. Description:

Under this section, the Contractor shall provide all labor, materials, equipment, and incidentals required to

support and/or protect the integrity of gas mains, services and appurtenances of any sizes, configurations, and operating pressures crossing trench excavations above subgrade for planned construction of sewers and water mains facilities. A gas service shall be defined as a gas pipe of three (3) inches in diameter or less branching from the main to a customer pick up point or property valve box. A gas main may be any size pipe that is part of a distribution or transmission network other than services described above. Crossings shall be defined as gas facilities spanning the width of excavation (one side to the other side). These crossings may be at various angles and depth as shown on "Gas Cost Sharing Work Standard Sketches Nos. 1 and 1A", and as specified in "General Provisions; Gas Cost Sharing Work Paragraph No. 13" and, at the locations shown or listed in contract documents. The gas company operating in the area, (facility operator), owns these facilities. The work shall be performed in accordance with contract specifications, plans, and at the directions of the Resident Engineer in consultation with the authorized representatives of the facility operator.

2. Method Of Construction:

- A. Protection: In general, the gas facilities shall be protected as required by New York State Industrial Code 753. In particular, the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) directly below the pavement base to expose the gas facilities (marked out by facility operators) and to ascertain the clearances and cover of the facilities with respect to the proposed excavation. Upon exposing the affected facilities sufficiently, at the discretion of the Resident Engineer, to ascertain the foregoing, Contractor shall be permitted to proceed with a combination of hand and machine excavation, as appropriate, outside a zone of protection whose limit shall be defined as a perimeter located twelve (12) inches from the outside face of each gas facility crossings (See "Gas Cost Sharing Work Standard Sketch No. 2"). If the facilities are in direct interference with City work, meaning that "Minimum Clearances" described in "General Provisions; Gas Cost Sharing Work Paragraph No. 8" cannot be maintained, and excavation has to be temporarily or permanently abandoned then this particular location shall become a test pit and dealt with as specified in Section 6.07, and "General Provisions; Gas Cost Sharing Work Paragraphs Nos. 2 and 8".
- B. Support: Gas mains or services crossing excavations equal or less than four (4) feet wide are generally self supporting, unless field conditions as determined by the Resident Engineer require otherwise. The support requirements for gas mains and services crossing excavations greater than four (4) feet wide shall be as shown on the attached "Gas Cost Sharing Work Standard Sketch No. 1" and Contractor shall use sheeting methods that permit the maintenance of gas facilities in their existing locations and configurations. Alternate methods equivalent to those shown on the sketch or accommodations by the facility operator proposed by the Contractor in order to facilitate the execution of the specified work shall be allowable, provided that prior approval is obtained by the Contractor from the Engineer and the facility operator. The support and protection of gas facilities crossings shown on plans, drawings, listings or otherwise identified in this contract shall not be circumvented with the issuance of so called "order outs".

3. Method Of Measurement:

The Contractor shall be paid for supporting and/or protecting gas facilities crossing trench excavations under the appropriate bid items covered by this section. The Contractor shall be directly responsible to the facility operator for the total cost of using any alternate method requiring the use of resources owned by the facility operator. Regardless of the method used, the City shall pay the bid price for the appropriate support and/or protect item of work. The average rate charged by the facility operator for alternate support and protection work such as, disconnecting and reconnecting gas services is listed in attached "Schedule GCS-A".

4. Payment Restrictions:

These items shall not be paid for: gas services crossing unsheeted water main trench excavation; abandoned gas main/services identified by facility operator; gas mains/services crossing trench excavations for fire hydrant branch connections pipes, catch basins and/or chutes (sewer drain pipe), house sewer and/or water services; gas facilities encroaching any face of excavation for sewer and/or

water construction, all of which are covered under other contract sections. Also this item shall not be paid for new gas mains and services crossing water trenches when trenching for such new facilities has been performed by the Contractor in common with trench excavation for City work (overlapping trench limits). The cost of supporting and protecting such gas facilities crossings shall be deemed included in the cost of trench excavation for the new gas facilities. This payment restriction shall apply even if such common trench gas excavation is not part of the contract. The prices bid for items covered by this section represent full compensation to Contractor to completely perform the work described. No other bid items shall be combined with these items in order to pay for gas main and/or services crossing excavations specified herein.

5. Method Of Payment:

Each (Ea.) gas facility crossing trench excavation as described in these specifications shall be counted for payment.

6. Price To Cover:

The cost of timber/steel supports installed for gas facilities shall be included in the bid price. The bid price for each crossing shall also cover all additional supervision, labor, material (except those provided by the facility operator), equipment and insurance necessary to completely maintain the gas facilities without disruption of service to the customers and in accordance with contract plans, specifications and facility operator standards. The price shall also include: changes of method of operations; sheeting modifications where necessary to accommodate the gas facilities crossings; installation and removal of water pipe under gas facilities (so called "snaking"); extra care during excavation (including hand excavation under existing single and multiple gas facilities); extra backfilling and compaction around, over and under gas facilities; installation and removal of sheeting around gas facilities; associated maintenance and protection of traffic; barricades; and traffic plates that may be required to temporarily close and/or complete the work.

SECTION 6.02 - Extra Excavation For The Installation Of Catch Basin Sewer Drain Pipes With Gas Interferences.

1. Description:

Under this item, the Contractor shall provide all labor, materials, equipment, insurance, and incidentals for the extra excavation associated with the installation of catch basin sewer drain pipes (chute) under gas facilities of various sizes crossing the trench excavation at various angles and depth at the locations shown in the contract documents and also, for the support and protection of these facilities during associated excavation and backfill operations. The gas company operating in the area, (facility operator), owns these facilities.

2. Method Of Measurement:

The bid price shall be per location (Each) where extra excavation is required when catch basin sewer drain pipes are installed at an upstream invert depth lower than four (4) feet (up to a maximum of six (6) feet) from the proposed pavement grade because the bottom faces of interfering gas mains and appurtenances are located at a depth greater than three (3) foot eight (8) inches from proposed pavement surface (See "Gas Cost Sharing Work Standard Sketch No. 4").

3. Method Of Construction:

Incremental cost responsibility for chute excavation is determined by the first private facility encountered starting from catch basin structure proper and that prevents the installation of the chute connection at an upstream cover less than or equal to three (3) feet or any other minimum cover required to avoid City facilities (e.g. water, sewer, etc.) as directed by the Resident Engineer.

4. Payment Restrictions:

This item shall not apply and related bid item shall not be paid in cases where:

- A. Upstream invert chute is more than six (6) feet deep because of gas facilities.
- B. Chute cannot be installed above existing gas facilities because of interferences with other private facilities that are not otherwise covered under this contract, regardless of upstream invert depth.

The above cases shall be at no cost to the City, but shall be a matter of adjustment between the Contractor and the facility operator(s).

5. Price To Cover:

The bid price shall cover the additional cost of all additional supervision, labor, materials, equipment and insurance, to complete the installation of catch basins and associated sewer connections in accordance with the contract plans and specifications. The price shall include: excavation by hand around and under single and multiple gas facilities; locating, supporting and protecting gas facilities; backfilling and all other items necessary to perform all work incidental thereto including: installation and removal of drain pipe under gas facilities ("snaking"); widening of trenches to facilitate the above work; subsequent additional backfill and pavement restoration; modifying precast catch basin window to accommodate connection; changing sheeting method and configuration to accommodate gas facility crossings; maintenance and protection of traffic; barricades; and installation of traffic plates that may be required to temporarily close and/or complete the work. The price shall not include removal of ledge rock and/or excavation of boulders in open cut.

SECTION 6.02.1 - Extra Excavation For The Installation Of Catch Basin Sewer Drain Pipes With Upstream Inverts Greater Than Six (6) Feet.

1. Description:

Under this item, the Contractor shall provide all labor, materials, equipment, insurance and incidentals for the extra excavation of catch basin chutes where the upstream invert is greater than six (6) feet under gas facilities of various sizes crossing the trench excavation at various angles and depth at the locations shown in the contract documents or as determined by field conditions and also, for the support and protection of these facilities during the associated excavation, sheeting and backfilling operations.

2. Method Of Measurement:

The bid price shall be per location (Each) where extra excavation and sheeting is required when the catch basin chute installed at an upstream invert depth lower than six (6) feet from the proposed pavement grade because the bottom faces of the interfering gas mains and appurtenances are located at a greater depth than three foot eight inches from the proposed pavement surface only.

3. Method Of Construction:

Incremental cost responsibility for chute excavation is determined by the first private facility encountered during such excavation when initiated from catch basin structure and that prevents the installation of the chute at an upstream cover less than or equal to three (3) feet or any other cover required to avoid City facilities as directed by the Resident Engineer.

4. Payment Restriction:

This item shall not apply and related bid item shall not be paid in cases where:
Upstream invert chute is less than or equal to six (6) feet deep because of gas facilities. Section 6.02 shall be paid.

5. Price To Cover:

The bid price shall cover the additional cost of all supervision, labor, materials, equipment and insurance to complete the installation of catch basin and associated sewer connections in accordance with the contract plans and specifications. The price shall include: excavation by hand around and under single and multiple gas facilities; locating, supporting and protecting gas facilities incidental thereto; widening of trenches to facilitate the above work; subsequent additional backfilling and pavement restoration; modifying pre-cast basin window to accommodate connection; the installation of catch basin with deeper sumps as specified; additional sheeting and changes in sheeting method and configuration to accommodate gas facility crossings; maintenance and protection of traffic; barricades; and installation of traffic plates that may be required to temporarily close and/or complete the work.

SECTION 6.03 - Removal Of Abandoned Gas Facilities. All Sizes.

1. Description:

Under this section the Contractor shall provide all labor, materials, equipment, insurance and, incidentals required for the removal of abandoned gas mains, services, or appurtenances thereof, located within the street shown on the contract plans, owned by gas company operating in the project area (facility operator), used or to be used for or in connection with or to facilitate the conveying, transportation, distribution or furnishing of gas (natural or manufactured or mixture of both) for light, heat, or power, but does not include property used solely for or in connection with business of selling, distributing or furnishing of gas in enclosed containers. Such removal shall include only abandoned gas facilities that interfere with (i.e. cause additional work) City work.

2. Determination Of Operating Status Of Gas Facilities:

The Contractor shall notify facility operator, as required by New York State Industrial Code 753. Gas facilities shall not be removed without the approval of the facility operator whose authorized representative shall certify in writing (specific facility or area wide facilities certification) and in a timely manner acceptable to the Resident Engineer that abandoned facilities are free of combustible gas and any other environmental contaminants prior to removal. The Resident Engineer shall rely on facility operator's certification. The facility operator may request the excavation of test pits (See Section 6.07) for this determination ahead of City work and, Contractor shall provide safe access, facilitate and permit facility operator to enter test pit excavations for the purpose of testing gas facilities to be removed by the Contractor. However, facility operator may prefer to make this test during performance of City work, in order to issue the above certification. This shall be permitted provided that it is agreed that additional costs, if any resulting from this choice shall be a matter of adjustment between the Contractor and facility operator only, and at no cost to the City.

3. Restrictions:

The facility operator shall be solely responsible for its contaminated gas facilities, surrounding contaminated soil and their disposal and abatement procedures, unless contract bid items are applicable and provided for such work. In such cases, the quantity removed shall be charged to EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS" at the City bid prices.

4. Method Of Measurement:

Abandoned gas pipeline removal shall be measured for payment per linear foot of pipe and appurtenances removed.

5. Price To Cover:

The price shall cover all additional cost of supervision, labor, materials, equipment, and insurance necessary to complete this work in accordance with the contract plans and specifications, including excavation by hand around and under other City and facility operator owned properties and, where necessary, support and protection of such properties. The price shall also cover breaking, cutting, and/or burning of abandoned gas pipes and their disposal from the site; sealing open ends remaining in the excavation with concrete or caps (caps to be provided by the facility operator) and backfilling of the area where the pipeline has been removed with clean backfill. The price shall also include any required dump charges. This item does not include any type of extra excavation, backfilling, compaction, pavement removal and restoration associated with abandoned gas facilities removal, all of which are covered under Section 6.06.

SECTION 6.03.1 - Removal Of Abandoned Gas Facilities With Possible Coal Tar Wrap. All Sizes. (For National Grid Work Only)

1. Description:

Under this section the Contractor shall provide all labor, materials, equipment, insurance and, incidentals required for the removal of abandoned gas mains, services or appurtenances thereof, located within the street shown on the contract plans, owned by the gas company operating in the project area (facility operator), used or to be used for or in connection with or to facilitate the conveying, transportation, distribution or furnishing of gas (natural or manufactured or mixture of both) for light, heat, or power, but does not include property used solely for or in connection with business of selling, distributing or furnishing of gas in enclosed containers. Such removal shall include only abandoned gas facilities that interfere with (i.e. cause additional work) City work. These gas facilities may be coated with Coal Tar Wrap and so, may require special handling and disposal methods as specified in National Grid Standard Operating Procedure 12-2, Coal Tar Wrap Handling and 12NYCRR56.

2. Determination Of Operating Status Of Gas Facilities:

The Contractor shall notify facility operator, as required by New York State Industrial Code 753. Gas facilities shall not be removed without the approval of the facility operator whose authorized representative shall certify in writing (specific facility or area wide facilities certification) and in a timely manner acceptable to the Resident Engineer that abandoned facilities are free of combustible gas and any other environmental contaminants prior to removal. The Resident Engineer shall rely on the facility operator's certification. The facility operator may request the excavation of test pits (See Section 6.07) for this determination ahead of City work and, the Contractor shall provide safe access, facilitate and permit facility operator to enter test pit excavations for the purpose of testing gas facilities to be removed by the Contractor. However, the facility operator may prefer to make this test during performance of City work, in order to issue the above certification. This shall be permitted provided that it is agreed that additional costs, if any, resulting from this choice shall be a matter of adjustment between the Contractor and the facility operator only, and at no cost to the City contract. Should such investigation result in the determination that the abandoned gas facilities do not contain Coal Tar Wrap then the removal of said facilities shall be covered under separate item (See Section 6.03).

3. Requirements:

The City Contractor shall excavate abandoned gas facility sufficiently, either in its entirety, or at locations determined by Contractor to allow the removal of Coal Tar Wrap (if present on the abandoned gas facility) and to facilitate the safe extraction of manageable lengths of abandoned pipe without damage to adjacent facilities, utilities or City structures either parallel to or crossing above or below abandoned gas facility. The Contractor is to allow access to the designated cutting points within the Contractor's trench by authorized National Grid personnel who will remove the Coal Tar Wrap as per National Grid procedures. This work by National Grid personnel shall be performed in a timely fashion and shall not unduly impede the Contractor's progress and/or productivity. Upon completion of the coating removal, the Contractor shall be allowed to cut, burn or grind the gas facility and remove the section of abandoned pipe. The

Contractor at a site designated by the Contractor shall stockpile the removed pipe. The facility operator will be responsible to provide trucking and disposal services with its own personnel and shall remove the stockpiled pipes during off hours or during such time as agreed to by the Contractor. Since the pipe removed will remain the property of the facility operator and is to be disposed of by the facility operator, the facility operator shall be responsible for any required notifications, filings, dump charges and incidentals associated with the disposal of abandoned gas facilities found to contain Coal Tar Wrap.

4. Method Of Measurement:

Abandoned gas pipeline removal shall be measured for payment per linear foot of pipe and appurtenances removed.

5. Price To Cover:

The price shall cover all additional cost of supervision, labor, materials, equipment and insurance necessary to complete this work in accordance with the contract plans and specifications, including excavation by hand around and under other City and facility operator owned properties and, where necessary, the support and protection of such properties. The cost shall also include hand excavation in the area(s) of proposed abandoned pipe cut(s), cutting and/or burning of abandoned gas pipes and stockpile of removed sections of abandoned pipe and associated maintenance and protection of traffic, blocking and temporary fencing if required. The unit price shall also cover sealing open ends remaining in the excavation with concrete or end caps (end caps to be provided by the facility operator) and backfilling of the area where the abandoned pipeline has been removed with clean backfill material. This item does not include any type of extra excavation, backfilling, compaction, pavement removal and/or restoration (temporary and permanent) associated with abandoned pipe removal ("lost trench"), all of which are covered under separate Section 6.06. The price shall also include allowance for any loss of productivity by the Contractor due to required facility operator work to remove pipe coating and prepare pipe for cutting as well as any change in Contractor's excavation method, additional trucking and/or stockpiling costs.

**SECTION 6.03.1a - Removal Of Abandoned Gas Facilities With Possible Coal Tar Wrap.
All Sizes. (For Con Edison Work Only)**

1. Description:

Under this section the Contractor shall provide all labor, material, equipment, insurance and, incidentals required to prepare abandoned gas mains, services and appurtenances thereof located within the street shown on contract plans, owned by the gas company operating in the project area (facility operator), for removal due to interference with proposed City work. These abandoned gas facilities were, at one time, used for or in connection with or to facilitate the conveying, transportation, distribution or furnishing of gas (natural, manufactured or a combination of both) for light, heat, or power, but does not include property used solely for or in connection with business of selling, distribution or furnishing of gas in enclosed containers. Such preparation for removal shall include only abandoned gas facilities that interfere with (i.e. cause additional work) City work. These gas facilities may be coated with Coal Tar Wrap which may contain asbestos or PCB's and so, may require special handling and disposal methods as specified in Con Edison - ASBESTOS MANAGEMENT MANUAL, CHAPTER 6 - ASBESTOS WORK PROCEDURES, SECTION 06.04 - COAL TAR WRAP REMOVAL. For under 25' (feet) in length and an approved NYC-DEP variance for over 25' (feet).

2. Determination Of Operating Status Of Gas Facilities:

The Contractor shall notify facility operator, as required by New York State Industrial Code 753. Gas Facilities shall not be removed without the approval of the facility operator whose authorized representative shall certify in writing (specific facility or area wide facilities certification) and in a timely manner acceptable to the Resident Engineer that abandoned facilities are free of combustible gas and any other environmental contaminants prior to removal. The Resident Engineer shall rely on the facility

operator's certification. The facility operator may request the excavation of test pits (See Section 6.07) for this determination ahead of City work and Contractor shall provide safe access, facilitate and permit facility operator to enter test pit excavations for the purpose of testing gas facilities. However, the facility operator may prefer to make this test during performance of City work in order to issue the above certification. This shall be permitted provided that it is agreed that additional costs, if any, resulting from this choice shall be a matter of adjustment between the Contractor and the facility operator only, and at no cost the City contract. Should such investigation result in the determination that the abandoned gas facilities do not contain Coal Tar Warp then the removal of said facilities shall be covered under separate item (See Section 6.03).

3. Requirements:

The Contractor shall excavate abandoned gas facility sufficiently, either in its entirety, or at locations determined by Contractor to allow the removal of Coal Tar Wrap (if present on the abandoned gas facility) and to facilitate the safe extraction of manageable lengths of abandoned pipe without damage to adjacent facilities, utilities or city structures either parallel to or crossing above or below abandoned gas facility. The Contractor is to allow access to the designated cutting points within the Contractors trench by authorized Con Edison personnel who will remove the Coal Tar Wrap as per Con Edison and/or NYC-DEP approved procedures. This access shall conform to all applicable codes, rules & regulations. This work by Con Edison personnel shall be performed in a timely fashion and shall not unduly impede the Contractors progress and/or productivity. Upon completion of the coating removal, the Contractor shall be allowed to cut, burn or grind the gas facility and remove the section of abandoned pipe. Contractor shall designate a specific site to stockpile those removed pipes. The facility operator will be responsible to provide trucking and disposal services with its own personnel and shall remove the stockpiled pipes during off hours or during such time as agreed to by the Contractor. Since the pipe removed will remain the property of the facility operator and is to be disposed of by the facility operator, the facility operator shall be responsible for any required notifications, filings, dump charges and incidentals associated with the disposal of abandoned gas facilities found to contain Coal Tar Wrap.

4. Method Of Measurement:

Abandoned gas facility removal shall be measured for payment per linear foot of pipe and appurtenances removed.

5. Price To Cover:

The price shall cover all additional cost of supervision, labor, materials, equipment and insurance necessary to complete this work in accordance with the plans and specifications, including, but not limited to, excavation by hand around and under other City and facility operator owned properties and, where necessary, the support and protection of such properties. The cost shall also include hand excavation in the area(s) of proposed abandoned pipe cut(s), cutting and/or burning of abandoned gas pipes and stockpile of removed sections of abandoned pipe and associated maintenance of traffic, blocking and temporary fencing if required. The unit price shall also cover sealing open ends remaining in the excavation with concrete or end caps (end caps to be supplied by facility operator) and backfilling of the area where the abandoned pipeline has been removed with clean backfill material. This item does not include any type of extra excavation, backfilling, compaction, pavement removal and/or restoration (temporary and permanent) associated with abandoned pipe removal ("lost trench"), all of which are covered under separate Section 6.06. The price shall also include allowance for any loss of productivity by the Contractor due to required facility operator work to remove pipe coating and prepare pipe for cutting as well as any change in Contractor excavation method, additional trucking and/or stockpiling costs.

SECTION 6.04 - Adjust Hardware To Grade Using Spacer Rings/Adaptors. (Street Repaving.)

1. Description:

Under this section, the Contractor shall provide all labor, supervision, materials, equipment, insurance and incidentals required to adjust to final grade gas street surface hardware located within the contract area boundaries shown on the plans. The gas company operating in the area, (facility operator), owns these facilities. The work shall be performed in accordance with the contract plans, specifications and at the directions of the Resident Engineer in concurrence with authorized representative of the facility operator.

2. Materials:

The facility operator shall furnish and deliver all prefabricated hardware parts required. These include adaptors for the grade adjustment proper and new street hardware if existing ones are found to be defective, all in accordance with the facility operator standards and City rules and regulations. The Contractor shall notify the facility operator of the installation schedule at least three (3) business days before materials are required on the site. Should the facility operator fail to deliver the necessary material according to any schedule mutually agreed upon by the Contractor and facility operator, the City shall not be responsible for any delays attributable thereto, nor for the failure of delivery of such materials. On project where material storage is not permitted on site, the facility operator shall deliver the required material to the Contractor's yard and it shall be the Contractor's responsibility to transport the material to the work site when needed for installation. It shall also be the Contractor's responsibility to inspect the materials to be installed by him immediately upon delivery and advise the facility operator through its authorized representative, of all damaged materials. The Contractor at no additional expense to the City or the facility operator shall replace any material that is damaged or lost after the Contractor's inspection.

3. Method Of Measurement:

The Contractor shall be paid for each six (6) inch round box and/or nine (9) inch square box adjusted to grade regardless of adjustment height requirements.

4. Price To Cover:

The unit price bid for this item shall include all additional labor, supervision, insurance, equipment and, material (except those to be provided by the facility operator), required to adjust each box to grade as required in the contract plans and specifications. The bid price shall also include the removal of existing frames and covers from existing facilities to be salvaged and returned to the facility operator and, all material transportation from the Contractor's material storage yard to the work site. In addition the bid price shall include "chipping" around existing box using appropriate means and methods where grinding is required.

SECTION 6.05 - Adjust Hardware To Grade By Resetting. (Road Reconstruction.)

1. Description:

Under this item, the Contractor shall provide all labor, supervision, materials, equipment, insurance and incidentals required to adjust to the proposed grade gas street surface hardware located within the contract area boundaries shown on the plans. The gas company operating in the area, (facility operator), owns these facilities. The work shall consist of either building up or lowering or resetting the casting by removing the existing frame and cover building up or decreasing the existing installation, replacing the frame and/or cover if damaged or worn out, as determined by the Resident Engineer, with a new frame and/or cover furnished by the owner, and setting the frame and cover to new elevation. The work shall be performed in accordance with the contract plans, specifications and at the directions of the Resident Engineer.

2. Materials:

The facility operator shall furnish and deliver all new hardware parts required. The Contractor shall furnish materials such as mortar, bricks and concrete in compliance with contract requirements. At locations

where high-early strength concrete is required under this contract to be placed adjacent to gas facilities, then the requirement for concrete shall be high-early strength complying with the current New York State Department of Transportation, Standard Specifications for Class F concrete. Existing castings may be replaced as required and deemed necessary by the Engineer and by City rules and regulations. The Contractor shall install the new castings of various sizes furnished by the facility operator. The Contractor shall notify the facility operator of the installation schedule at least three (3) business days before materials are required on the site and, shall provide off-loading services to the facility operator. Should the facility operator fail to deliver the necessary material according to any schedule mutually agreed upon by the Contractor and facility operator, the City shall not be responsible for any delays attributable thereto, nor for the failure of delivery of such materials. Such delays shall be a matter of adjustment between the Contractor and the facility operator. On project where material storage is not permitted on site, the facility operator shall deliver the required material to the Contractor's yard and it shall be the Contractor's responsibility to transport the material to the work site when needed for installation. It shall also be the Contractor's responsibility to inspect the materials to be installed by him, immediately upon delivery and advise the facility operator through its authorized representative, of all damaged materials. The Contractor at no additional expense to the City or the facility operator shall replace any material that is damaged or lost after the Contractor's inspection.

3. Methods Of Construction:

The Contractor shall remove and reinstall existing castings or install new castings to the proposed grade. Setting and resetting the castings shall be done with mortar and brick according to the standards of the facility operator. Work shall be performed in a workmanlike manner. Castings that are deemed unacceptable for resetting shall remain the property of the facility operator and he shall be responsible for their removal and proper disposal from site. No traffic shall be allowed on adjusted street hardware until permitted by the Engineer.

4. Method Of Measurement:

The Contractor shall be paid for each gas hardware adjusted to grade regardless of size or adjustment height requirements (up or down).

5. Price To Cover:

The unit price bid for this item shall include all additional labor, supervision, insurance, equipment and material (except those to be provided by the facility operator), required to adjust each gas hardware to grade as required in the contract plans and specifications. The bid price shall also include the removal of existing frames and covers from existing facilities; building up the existing installations with bricks and mortar, or lowering the existing installation by removing bricks and mortar; replacing damaged frames and/or covers with new frames and/or covers furnished by the facility operator; setting the frames and covers to the new elevations; protect existing installations; repair minor structural damages to existing installations prior to resetting frames; unloading of furnished castings at the Contractor's yard and transporting castings from the Contractor's yard to the job site as required; completing the work in accordance with the contract plans, specifications and, at the directions of the Engineer. In addition the bid price shall include "chipping" around existing gas facilities using appropriate means and methods where grinding is required.

SECTION 6.06 - Special Care Excavation And Backfilling.

1. Description:

Under this section, the Contractor shall provide all labor, materials, equipment, insurance and incidentals required to support and protect the integrity of live gas facilities including mains, services, related structures and appurtenances during excavations. The gas company operating in the area, (facility operator), owns these facilities. The work shall be performed in accordance with the contract plans, specifications and at the directions of the Resident Engineer in consultation with authorized

representatives of the facility operator.

2. Applicability Of Section:

This section shall apply to live gas facilities of various sizes located within two (2) feet of any face of unsheeted excavation, (unsheeted excavation refers to any excavation performed for city work and includes excavations performed that are to be subsequently sheeted using approved methods) and paralleling or, encroaching any face of excavation. Also, for crossings greater than forty-five (45) degrees and/or located at a cover depth greater than five (5) feet from existing street surface. Parallel facilities are not exposed at any time during excavation (See "Gas Cost Sharing Work Standard Sketch No. 5"). Encroaching facilities are partially exposed inside the limit of excavation (See "Gas Cost Sharing Work Standard Sketch No. 5"). This section shall also apply to gas facilities crossing catch basins excavation, and catch basins sewer connections (chutes) trench excavation only when extra depth (covered in other section), is not required for chutes installations because of such utilities interferences (See "Gas Cost Sharing Work Standard Sketch No. 3"). This section shall also apply to gas services (if shown or otherwise listed in contract documents) crossing unsheeted excavations for water mains, gas facilities crossing fire hydrant branch connections, house sewer and/or water service connections excavations. This section shall also apply for so called "loss trench", as described further, and for additional excavation (pavement and/or soil), backfilling, compaction, roadway base and pavement restoration due to abandoned gas facilities, only if removed by Contractor. If operating status of gas facilities cannot be determined prior to excavation then such facilities shall be considered live and this section shall fully apply. The excavation around fully exposed live gas facilities along and within limits of excavation (not crossings) shall be covered by this section also (not shown on "Gas Cost Sharing Work Standard Sketch No. 5"), however the support requirement, if any is required, of such facilities is beyond the scope of these specifications and therefore shall be the responsibility of facility operator to determine and prescribe, at no cost to the City contract, but shall be a matter of adjustment between the Contractor and facility operator.

3. Payment Restriction:

No special care excavation shall be paid for abandoned gas facilities paralleling and/or encroaching excavation and therefore are not in direct interference with City work. Except as allowed in this section, the bid item specified under this section shall not be used in combination with items covered under other sections for work done due to a particular gas facility. This item shall not be paid for new gas facilities when trenching for such new facilities has been performed by the Contractor of record in common with trench excavation for City Work (overlapping trench limits). The cost of excavating with care as defined in this section shall be deemed included in the cost of trench excavation for the new gas facilities. This restriction shall apply even if such gas common trench excavation is not part of the contract. If facilities are in direct interference with City work, meaning that "Minimum Clearances" described in "General Provisions; Gas Cost Sharing Work Paragraph No. 8" cannot be maintained and excavation has to be temporarily or permanently abandoned then this particular location shall become a test pit and dealt with as specified in Section 6.07 and "General Provisions; Gas Cost Sharing Work Paragraphs Nos. 2 and 8".

4. Method Of Construction:

All excavation in the vicinity of gas facilities shall be as required by NYS Industrial Code 753. Where these facilities are paralleling and located two (2) feet or less from the limits of the proposed excavation, the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) to ascertain the clearances of these facilities with respect to the proposed excavation. Once the location of these facilities with respect to the proposed excavation is verified to the satisfaction of the Resident Engineer, the Contractor shall then proceed with a combination of hand and machine excavation as required preserving the integrity of the facilities. The installation of timber supports or underpinning, when soil foundation cannot fully support partially exposed pipes, may be required to prevent pipe movement as directed by the Resident Engineer.

5. Method Of Payment:

The unit price for this work item shall be based on cubic yard (CY) of average excavation with care and, is

to be considered as an incremental cost for performing City work with gas facilities interferences.

6. Method Of Measurement:

- A. For Paralleling Facilities: Volume calculated as: Depth as measured from existing street surface to the bottom of unsheeted trench excavation allowable by OSHA regulations, multiplied by, the width measured as one (1) foot from the face of excavation toward the center of excavation, multiplied by the length of parallel facility, divided by twenty-seven (27) cubic feet per cubic yard (See "Gas Cost Sharing Work Standard Sketch No. 5"). The gas facility is no longer considered to be in interference once sheeting has been installed, therefore no further compensation for paralleling facilities as described above will be made.
- B. For Encroaching Facilities: Volume calculated as: Depth of trench as allowable by OSHA, maximum up to five (5) feet multiplied by, the width of partially exposed pipe plus one (1) foot, multiplied by the length of facility encroachment, divided by twenty-seven (27) cubic feet per cubic yard (See "Gas Cost Sharing Work Standard Sketch No. 5").
- C. Fully Exposed Gas Facilities: (Not shown on "Gas Cost Sharing Work Standard Sketch No. 5") along and inside trench and/or crossing trench at an angle greater than forty-five (45) degrees and/or a cover depth greater than five (5) feet from the existing street surface. The volume shall be measured as the depth of trench excavation multiplied by the distance measured along the sheeting line between two (2) points of intersections of the gas facilities and the sides of trench excavation, multiplied by the width of trench excavation.
- D. For Additional Excavation And Restoration Due To So Called "Loss Trench", When The Integrity Of Pavement And Soil Above And Around Existing Live Gas Facilities Cannot Be Maintained Due To Its Lack Of Cohesiveness: Volume shall be calculated as: Depth of unsheeted trench excavation multiplied by width measured as distance of facility from closest edge of unsheeted excavation plus, width of facility proper plus, one (1) foot or a maximum width of three (3) feet multiplied by length of facility fully exposed divided by, twenty-seven (27) cubic feet per cubic yard (not shown on "Gas Cost Sharing Work Standard Sketch No. 5").
- E. For Facilities Crossing Excavation For Catch Basins, Or Chutes Installations (When NYCDEP Funded) Or Fire Hydrant Branch Connections, Or Unsheeted Water Main Trench, Or House Sewer And/Or Water Services: Volume calculated as: Depth as measured from existing street surface to the bottom of the trench excavation multiplied by, the width taken as the outside diameter of pipe or the width of structure plus one (1) foot on either side (two (2) feet), multiplied by, the length of exposed facility crossing the trench, divided by twenty-seven (27) cubic feet per cubic yard (not shown on "Gas Cost Sharing Work Standard Sketch No. 5").

Overlapping volume dimensions measured as described above may occur when multiple facilities are paralleling excavations, encroaching excavations or crossing catch basins and catch basin chute installations. In such cases, all such facilities shall be counted as one limited by the extreme pipes, faces (See "Gas Cost Sharing Work Standard Sketch No. 2"). The volume shall then be calculated as described above.

7. Price To Cover:

The bid price shall also cover all additional supervision, labor, material, equipment and insurance necessary to excavate while protecting and maintaining (excluding supports for fully exposed live gas) gas facilities without disruption of service to the public and in accordance with contract specifications. The price shall also include, changes of sheeting method and excavation width configuration where necessary to accommodate gas facilities in their existing locations; difficulties during the installation of catch basins, chute connections, hydrant branch, and house sewer and water connections under or over gas facilities; loss of productivity due to slower rate of excavation (special care) during excavation, including the use of such methods as: hand excavation around existing single and multiple facilities, extra excavation and backfilling due to lost trench because of existing and adjacent gas facilities, compaction, removal of

sheeting from the facilities, extra roadway base restoration and temporary pavement, associated maintenance and protection of traffic, barricades, and traffic plates that may be required to temporarily close and/or complete the work.

SECTION 6.07 - Test Pits For Gas Facilities.

1. Description:

Under this section, the Contractor shall furnish all labor, materials, insurance, equipment and appliances necessary to excavate, sheet and, maintain test pits at locations approved by the Resident Engineer in consultation with the facility operator. Test pits shall be dug in order to ascertain exact locations, cover and invert elevations, clearances, alignment and operating status (live or dead) of existing gas facilities. The Contractor shall inspect jointly with the Resident Engineer and facility operator, gas facilities and other structures uncovered, take all relevant measurements and elevations as directed by the Resident Engineer. Tests to determine operating status of gas facilities shall be performed by facility operator. The pits shall be covered with steel plates during daytime nonworking hours, and uncovered, as required, until the inspection work is completed. Testing of gas facilities may require a maximum of four (4) hours. Then, the pits shall be backfilled with clean fill, and resurfaced with temporary pavement. All traffic shall be maintained and all safety measures as stipulated shall be complied with.

2. Methods Of Construction:

A. **Excavation:** Existing pavement to be removed shall be neatly cut along lines of removal with a saw or other approved equipment which leaves a neat straight joint line along the juncture with subsequently replaced pavement. Excavation in the vicinity of utilities and other structures shall be performed using hand tools. Use of hand operated pneumatic and electric jackhammers will be permitted only for breaking pavement and removal of masonry, concrete and boulders, or as otherwise directed by the Resident Engineer. The Contractor shall properly dispose of all materials excavated from test pits away from site. Test pits shall be excavated at locations shown on the contract drawings or as directed by the Resident Engineer. Additional test pits may be required and shall be excavated where required, as ordered by the Resident Engineer. All test pits shall be excavated to a depth and size necessary to locate the existing facilities. Sheeting shall be used when depth of excavation exceeds five (5) feet. The sheeting required shall be furnished and installed in full compliance with the State of New York and Federal Safety Codes requirements and as specified in contract, whichever is more stringent. Care shall be taken that no existing gas facilities or other structures are broken or damaged. All broken or damaged facilities shall be reported immediately to facility operator who shall decide whether such facilities shall be repaired or replaced by company forces or by City contractor and in conformance with "General Provisions; Gas Cost Sharing Work Paragraph No. 9". Contractor shall excavate all material encountered, including large masses of concrete, cemented masonry and boulders, as directed by the Resident Engineer. Any type of excavation protection used, shall satisfy the following:

(a) Industrial Code Rule 753.

(b) Prevent injury to workers and the public, and avoid damage to existing water, sewer, and gas pipes or other structures, and to pavements and their foundations, through caving or sliding of the banks of the excavation.

Should it become necessary, as determined by the Resident Engineer, to enlarge any test pit in any dimension after sheeting has been placed, the Contractor shall remove portions of the sheeting, as necessary, enlarge the test pits as directed, and replace the sheeting without additional compensation for this work other than for the additional volume of material excavated.

B. **Maintenance Of Test Pits:** Excavated test pits shall be maintained free of debris and kept dry by the Contractor in order to permit the inspection and measurements and to determine the locations of facilities. In order to accomplish this, Contractor shall, upon completion of excavation and placement of sheeting (if depth greater than five (5) feet), furnish and install adequate steel plates and posting

over the excavated pits and shall temporarily remove all equipment debris and workers, and relocate barricades in order to open the full width of street to traffic during nonworking hours. The Contractor shall then, at no additional cost, relocate such barricades, barrels, cones and other warning devices and remove steel plates, as and when directed by the Resident Engineer to facilitate the inspection of exposed facilities. When work is being performed and the pits are not covered with steel plates, the Contractor shall provide complete and safe access to the test pits as may be required, and he shall provide construction barricades and maintain traffic at all times as shown or as directed by the Resident Engineer. Upon completion of test pit inspection by the Resident Engineer, the pit shall be backfilled by the Contractor as specified in contract, except that backfill material shall conform to contract specifications for such purpose.

- C. **Pavement And Sidewalk Restoration:** After backfilling is completed, the Contractor shall construct a temporary pavement consisting of a minimum of four (4) inches thick asphaltic concrete mixture in roadway areas or a two (2) inches thick asphaltic concrete mixture in sidewalk areas in order to maintain existing pedestrian and vehicular traffic. This temporary pavement shall be maintained until permanent pavement and sidewalk replacement is constructed as specified in contract.

3. **Measurements:**

The quantity to be measured for payment shall be the number of cubic yards of material removed from within the limits of the pit dimensions as directed by the Resident Engineer. The volume occupied by existing pipes or other structures remaining within the maximum payment lines will not be deducted from the total volume measured except, where the cross sectional area of these facilities exceeds four (4) square feet. As determined by the Resident Engineer, the quantity measured for payment may be proportionate to a fair and reasonable estimate of gas responsibility in the total volume excavated.

4. **Price To Cover:**

The contract price bid per cubic yard for test pits shall cover all additional costs of labor, material, insurance, equipment, appliances and incidentals required to excavate test pits, including removal and disposal of excavated materials, sheeting, steel plating, backfill, compaction and temporary pavement and sidewalk restoration all in accordance with the specifications and as directed by the Resident Engineer. The price shall also include the cost of providing safe access to the excavation by facility operator for the performance of certain test to determine operating status of gas facilities prior to City work. The price shall also include support and protection of all gas facilities crossing excavation, paralleling and/or encroaching any face of excavation.

**SECTION 6.09 - Trench Excavation and Backfill for New Gas Mains and Services
(For National Grid Work Only)**

1. **Description:**

Under this section, the contractor shall furnish all labor, materials, equipment, insurance, permits and incidentals required to break/remove roadway and sidewalk pavement, excavate, backfill and restore gas trenches. The trench to be excavated shall be determined by the size of the gas facility to be installed. The work shall be performed in accordance with applicable specifications, and/or at the direction of the Resident Engineer in consultation with the facility operator.

2. **Materials:**

All materials used to excavate and prepare trenches shall be supplied by the Contractor and be approved by the facility operator in consultation with the Resident Engineer.

3. **Method of Construction:**

Excavation – The Contractor shall saw cut and/or break and remove existing roadway which may include

but is not limited to, asphalt, concrete and cobblestone, utilizing approved equipment that leaves a neat straight joint line along the juncture with subsequently replaced pavement. Prior to starting the trenching operation, the contractor shall excavate the appropriate gas main tie-in pits at the extremities of the gas main sections to be replaced. Test pits shall be excavated to determine exact location of all tie-in pits and at appropriate intervals along proposed trench excavation to verify lane and clearances as shown on the contract plans. The tie-in pits shall be adequately protected by the contractor using wood fencing or steel traffic plates until such time when the facility operator has completed the tie-in work. The Contractor shall be permitted to excavate utilizing a combination of machine and hand excavation, as field conditions warrant, and as directed by the facility operator. The trench shall be adjusted so as to provide for a nominal cover on the new gas facilities or as required based on field conditions, applicable specifications, or as directed by the facility operator in consultation with the Resident Engineer. The width of the trench shall be as directed by the facility operator in consultation of the Resident Engineer. The bottom of the trench shall be graded smooth with a minimum cushion of 3 inches of clean sand and in conformance with applicable specification and be compacted, to minimize initial settlement and to avoid "point" support of new gas facilities. All stones projecting into the trench bottom shall be removed, and the voids backfilled before the new gas facilities are installed. Where streets are not to final grade, the cover shall be measured from the final grade, or the existing grade, whichever provides the deeper trench. Excavation in the vicinity of utilities and other structures shall be performed using hand tools. The contractor shall properly dispose of all materials excavated away from site. Size and location of excavation shall be as directed by the facility operator in consultation with the Resident Engineer. Trenches shall be excavated to a depth and size necessary to facilitate the installation of the new gas facility and in conformance with the applicable specification. All existing facilities that are encountered during trench excavating shall be protected in a manner suitable to the facility operator in consultation with the Resident Engineer. Tight sheeting shall be used, as required, based on field conditions and/or when the depth of excavation is equal to or greater than five feet. Skeleton type sheeting will not be permitted. The sheeting required shall be furnished and installed in full compliance with the State of New York and Federal Safety Code requirements and in compliance with applicable specifications and/or as directed by the facility operator in consultation with the Resident Engineer. Care shall be taken that no existing gas facilities or other structures are broken or damaged. Contractor shall excavate all material encountered necessary to facilitate the installation of the new gas facilities, and as directed by the facility operator. Care should be taken to avoid damage to existing utility facilities and structures, and to pavements and their foundations, and to avoid caving or sliding banks within the excavation.

Maintenance of Trench Excavation - Excavated trenches shall be maintained free of debris and kept dry by the contractor. In order to accomplish this, contractor shall, upon completion of excavation and placement of sheeting (as required and/or if depth is equal to or greater than five feet), furnish and install adequate steel plates, as directed by the facility operator in consultation with the Resident Engineer, and posting over the excavated trenches and shall temporarily remove all equipment debris and workers, and relocate barricades in order to open the full width of street to traffic during non-working hours, as required based on DOT requirements. National Grid forces will perform all live gas main connections, dead gas main cut-outs, and/or service work associated with disconnecting and reconnecting from old to new gas main. The Contractor shall then, at no additional cost, relocate such barricades barrels, cones and other warning devices and remove steel plates, as and when directed by the facility operator in consultation with the Resident Engineer to facilitate the installation of the new gas facilities. When work is being performed and the excavations are not covered with steel plates, the Contractor shall provide complete and safe access to the trench as may be required, and shall provide construction barricades and maintain traffic at all times as shown or as directed by the facility operator in consultation with the Resident Engineer. The contractor has the responsibility to maintain and set to grade all National Grid hardware during backfill and pavement restoration. Upon completion of installation of the new gas facility, the trench excavation shall be backfilled by the contractor in accordance with Contract requirements and all backfill material shall conform to contract specifications for such purpose.

Pavement and Sidewalk Restoration - After backfilling is completed, the contractor shall install temporary pavement consisting of six inches (6") thick asphaltic concrete mixture in roadway areas or a two inches (2") thick asphaltic concrete mixture in sidewalk areas in order to maintain existing pedestrian and vehicular traffic. This temporary pavement shall be maintained until permanent replacement as specified in contract. Permanent pavement restoration shall be as required by the appropriate contract

specifications and as directed by the Resident Engineer.

4. Method of Measurement:

The quantity to be measured for payment shall be the number of cubic yards (C.Y.) of trench actually excavated, including roadway pavement, base and/or sidewalk concrete removed within the limits of the trench as directed by the Resident Engineer in consultation with the facility operator. The volume occupied by existing pipes or other structures will be deducted from the total volume measured as shown on contract drawing(s) Title: EP-7 SECT. 6.09 GAS SPECIALTY CONTRACTOR WORK, or as encountered based on existing field conditions.

5. Price to Cover:

The unit price bid per cubic yard for excavation shall include the cost of all supervision, labor, material, equipment, insurance and incidentals necessary to complete excavation trenches, including backfill, compaction testing and restoration of trenches and tie-in pits as specified or shown on the contract, plans. The bid price shall also include the cost of coordinating the sewer and water main work to be performed by the contractor with the gas installation work to be performed by others. The price shall also include, associated maintenance of traffic, and traffic plates and openings and closings of plates as may be required in order to provide access to the facility operator during the new gas facility installation, and installing, removing and maintaining tight sheeting that may be required, cut, break and remove various thickness of surface and base pavement, excavate by hand, furnish, place and compact, in compliance with DOT requirements, clean sand backfill following installation of the gas facility. Any required removing, trucking, storing, and disposing of material shall be deemed included in the unit price. The price shall also include the cost of providing temporary pavement restoration. Permanent pavement restoration shall be deemed included in this item, as required and as directed by the Resident Engineer.

SECTION 6.09a Trench Excavation and Backfill for New Gas Mains and Services (For Con Edison Work Only)

1. Description:

Under this section, the contractor shall furnish all labor, materials, equipment, insurance, permits and incidentals required to break/remove roadway and sidewalk pavement, excavate, backfill and restore gas trenches. The trench to be excavated shall be determined by the size of the gas facility to be installed. The work shall be performed in accordance with applicable specifications, and/or at the direction of the Resident Engineer in consultation with the facility operator.

2. Materials:

All materials used to excavate and prepare trenches shall be supplied by the Contractor and be approved by the facility operator in consultation with the Resident Engineer. Clean sand backfill material shall be used and shall conform to Con Edison specification EO-1181-rev.6, General Specification for Backfilling of Trench and Small Openings.

3. Method of Construction:

Excavation – The Contractor shall saw cut and/or break and remove existing roadway which may include but is not limited to, asphalt, concrete and cobblestone, utilizing approved equipment that leaves a neat straight joint line along the juncture with subsequently replaced pavement. Prior to starting the trenching operation, the contractor shall excavate the appropriate gas main tie-in pits at the extremities of the gas main sections to be replaced. Test pits shall be excavated to determine exact location of all tie-in pits and at appropriate intervals along proposed trench excavation to verify lane and clearances as shown on the contract plans. The tie-in pits shall be adequately protected by the contractor using wood fencing or steel traffic plates until such time when the facility operator has completed the tie-in work. The Contractor shall be permitted to excavate utilizing a combination of machine and hand excavation, as field conditions warrant, and as directed by the facility operator. The trench shall be adjusted so as to provide for a

nominal cover on the new gas facilities or as required based on field conditions, applicable specifications, or as directed by the facility operator in consultation with the Resident Engineer. The width of the trench shall be as directed by the facility operator in consultation of the Resident Engineer. The width and depth of the trench shall conform to Con Edison Gas Operations drawing 309495 rev. 4, Trench Excavation for Gas Mains Up to 350 PSIG, or as directed by the facility operator in consultation of the Resident Engineer. The bottom of the trench shall be graded smooth with a minimum cushion of 3 inches of clean sand and in conformance with applicable specification and be compacted, to minimize initial settlement and to avoid "point" support of new gas facilities. All stones projecting into the trench bottom shall be removed, and the voids backfilled before the new gas facilities are installed. Where streets are not to final grade, the cover shall be measured from the final grade, or the existing grade, whichever provides the deeper trench. Excavation in the vicinity of utilities and other structures shall be performed using hand tools. The contractor shall properly dispose of all materials excavated away from site. Size and location of excavation shall be as directed by the facility operator in consultation with the Resident Engineer. Trenches shall be excavated to a depth and size necessary to facilitate the installation of the new gas facility and in conformance with the applicable specification. All existing facilities that are encountered during trench excavating shall be protected in a manner suitable to the facility operator in consultation with the Resident Engineer. Tight sheeting shall be used, as required, based on field conditions and/or when the depth of excavation is equal to or greater than five feet. Skeleton type sheeting will not be permitted. The sheeting required shall be furnished and installed in full compliance with the State of New York and Federal Safety Code requirements and in compliance with applicable specifications and/or as directed by the facility operator in consultation with the Resident Engineer. Care shall be taken that no existing gas facilities or other structures are broken or damaged. Contractor shall excavate all material encountered necessary to facilitate the installation of the new gas facilities, and as directed by the facility operator. Care should be taken to avoid damage to existing utility facilities and structures, and to pavements and their foundations, and to avoid caving or sliding banks within the excavation.

Maintenance of Trench Excavation - Excavated trenches shall be maintained free of debris and kept dry by the contractor. In order to accomplish this, contractor shall, upon completion of excavation and placement of sheeting (as required and/or if depth is equal to or greater than five feet), furnish and install adequate steel plates, as directed by the facility operator in consultation with the Resident Engineer, and posting over the excavated trenches and shall temporarily remove all equipment debris and workers, and relocate barricades in order to open the full width of street to traffic during non-working hours, as required based on DOT requirements. Con Edison forces will perform all live gas main connections, dead gas main cut-outs, and/or service work associated with disconnecting and reconnecting from old to new gas main. The Contractor shall then, at no additional cost, relocate such barricades barrels, cones and other warning devices and remove steel plates, as and when directed by the facility operator in consultation with the Resident Engineer to facilitate the installation of the new gas facilities. When work is being performed and the excavations are not covered with steel plates, the Contractor shall provide complete and safe access to the trench as may be required, and shall provide construction barricades and maintain traffic at all times as shown or as directed by the facility operator in consultation with the Resident Engineer. The contractor has the responsibility to maintain and set to grade all Con Edison hardware during backfill and pavement restoration. Upon completion of installation of the new gas facility, the trench excavation shall be backfilled by the contractor in accordance with Contract requirements and all backfill material shall conform to contract specifications for such purpose.

Pavement and Sidewalk Restoration - After backfilling is completed, the contractor shall install temporary pavement consisting of six inches (6") thick asphaltic concrete mixture in roadway areas or a two inches (2") thick asphaltic concrete mixture in sidewalk areas in order to maintain existing pedestrian and vehicular traffic. This temporary pavement shall be maintained until permanent replacement as specified in contract. Permanent pavement restoration shall be as required by the appropriate contract specifications and as directed by the Resident Engineer.

4. Method of Measurement:

The quantity to be measured for payment shall be the number of cubic yards (C.Y.) of trench actually excavated, including roadway pavement, base and/or sidewalk concrete removed within the limits of the trench as directed by the Resident Engineer in consultation with the facility operator. The volume occupied

by existing pipes or other structures will be deducted from the total volume measured as shown on contract drawing(s) Title: EP-7 SECT. 6.09 GAS SPECIALTY CONTRACTOR WORK, or as encountered based on existing field conditions.

5. Price to Cover:

The unit price bid per cubic yard for excavation shall include the cost of all supervision, labor, material, equipment, insurance and incidentals necessary to complete excavation trenches, including backfill, compaction testing and restoration of trenches and tie-ins pits as specified or shown on the contract, plans. The bid price shall also include the cost of coordinating the sewer and water main work to be performed by the contractor with the gas installation work to be performed by others. The price shall also include, associated maintenance of traffic, and traffic plates and openings and closings of plates as may be required in order to provide access to the facility operator during the new gas facility installation, and installing, removing and maintaining tight sheeting that may be required, cut, break and remove various thickness of surface and base pavement, excavate by hand, furnish, place and compact, in compliance with DOT requirements, clean sand backfill following installation of the gas facility. Any required removing, trucking, storing, and disposing of material shall be deemed included in the unit price. The price shall also include the cost of providing temporary pavement restoration. Permanent pavement restoration shall be deemed included in this item, as required and as directed by the Resident Engineer.

GAS COST SHARING STANDARD SPECIFICATIONS
SCHEDULE GCS-A

Average rate charged by utility companies to Disconnect and Reconnect Gas Services:

1. National Grid - \$586.90 per Service/and Visit
2. Con Edison - \$524.00 per Service/and Visit

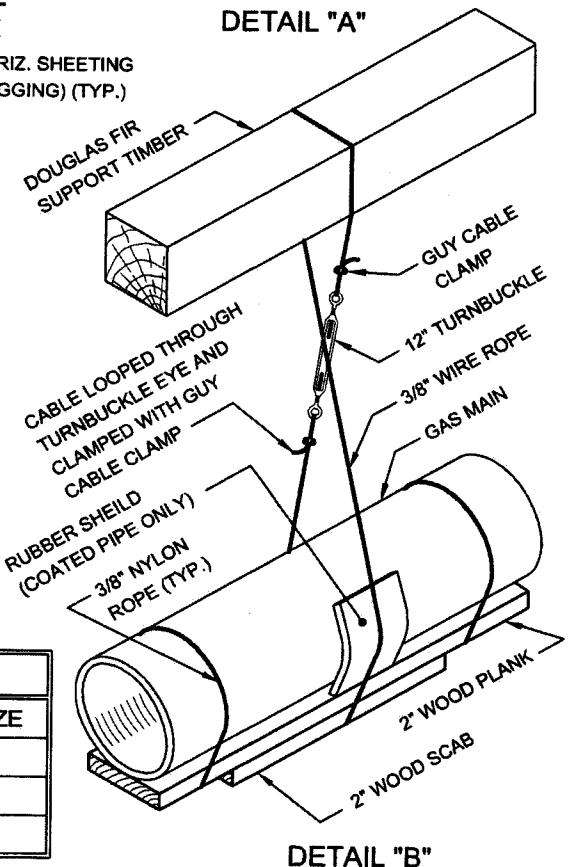
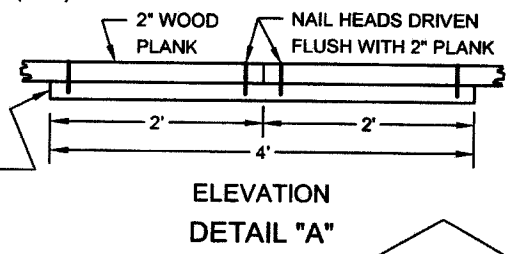
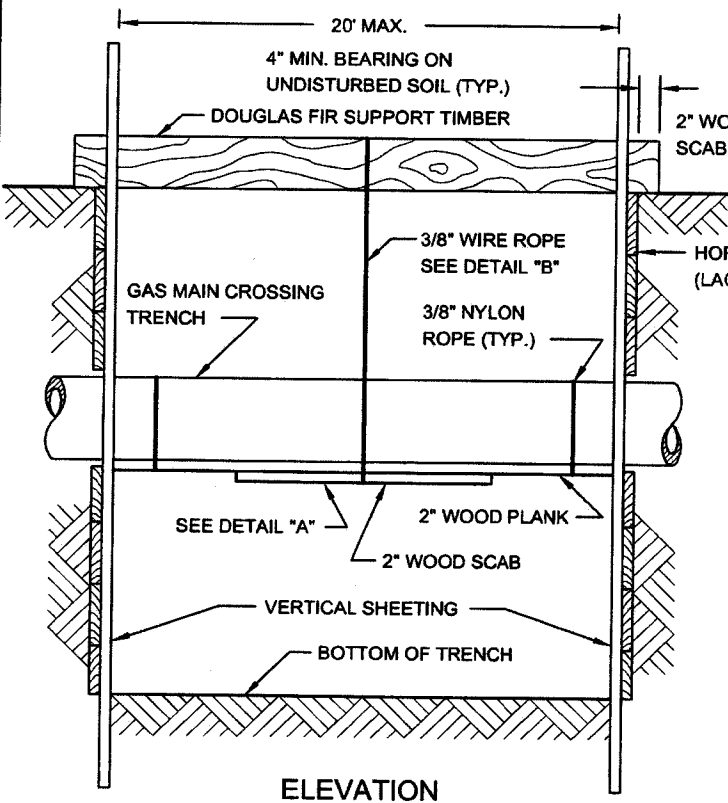
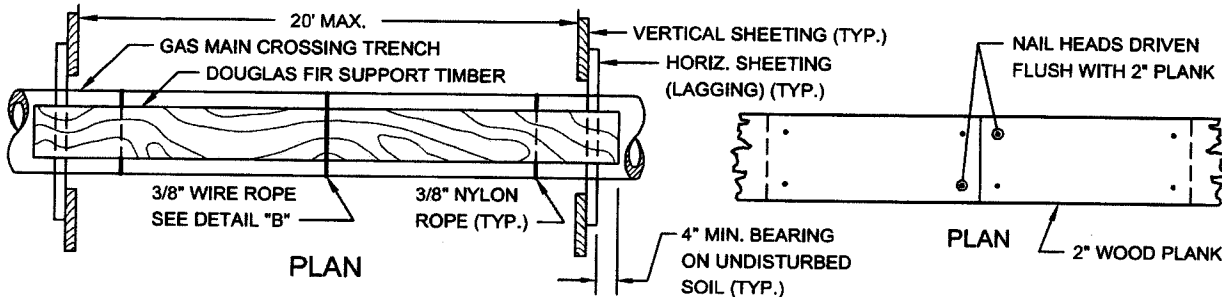
IV - STANDARD SKETCHES; GAS COST SHARING WORK

Hereinafter attached are the following Standard Sketches for Gas Cost Sharing Work:

- Sketch No. 1 - Support Requirements For Gas Mains And Services Crossing Excavation Greater Than 4' - 0" Wide At Any Angle
- Sketch No. 1A - Support Requirements For Gas Mains Over 16" Diameter Up To And Including 48" Diameter Crossing Excavation At Any Angle
- Sketch No. 2 - Typical Methods Of Measurement For Gas Crossings
- Sketch No. 3 - Utility Crossings During Catch Basin Chute Connection Pipe Installation
- Sketch No. 4 - Utility Crossings During Catch Basin Chute Connection Pipe Installation (Extra Depth)
- Sketch No. 5 - Gas Main Encroachment On And/Or Parallel To Excavation Of Unsheeted Trench

GAS COST SHARING WORK (SKETCH NO. 1)

SUPPORT REQUIREMENTS FOR GAS MAINS AND SERVICES CROSSING EXCAVATION GREATER THAN 4'-0" WIDE AT ANY ANGLE

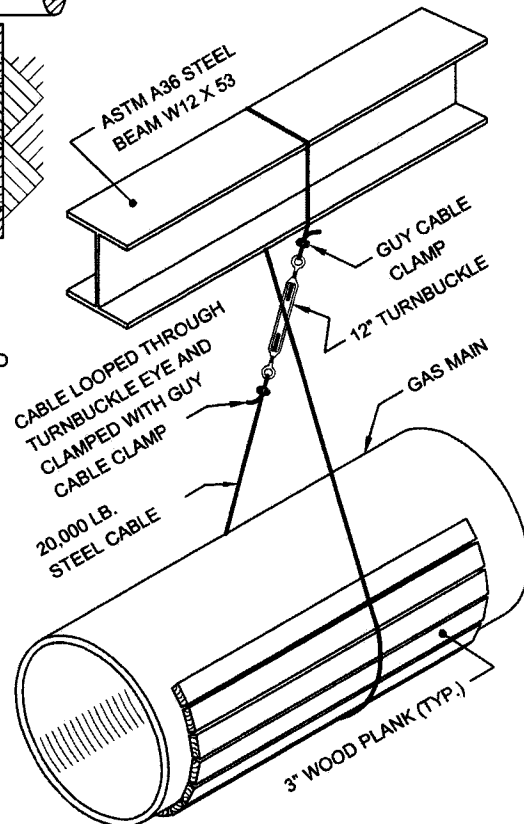
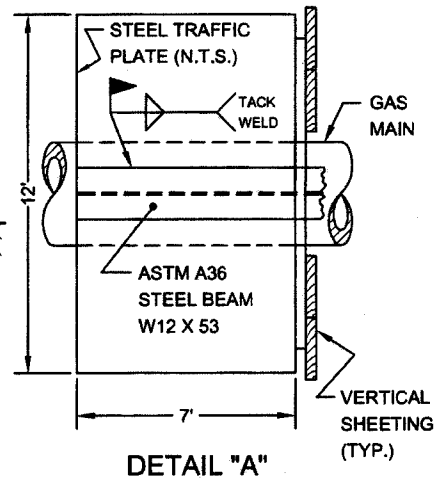
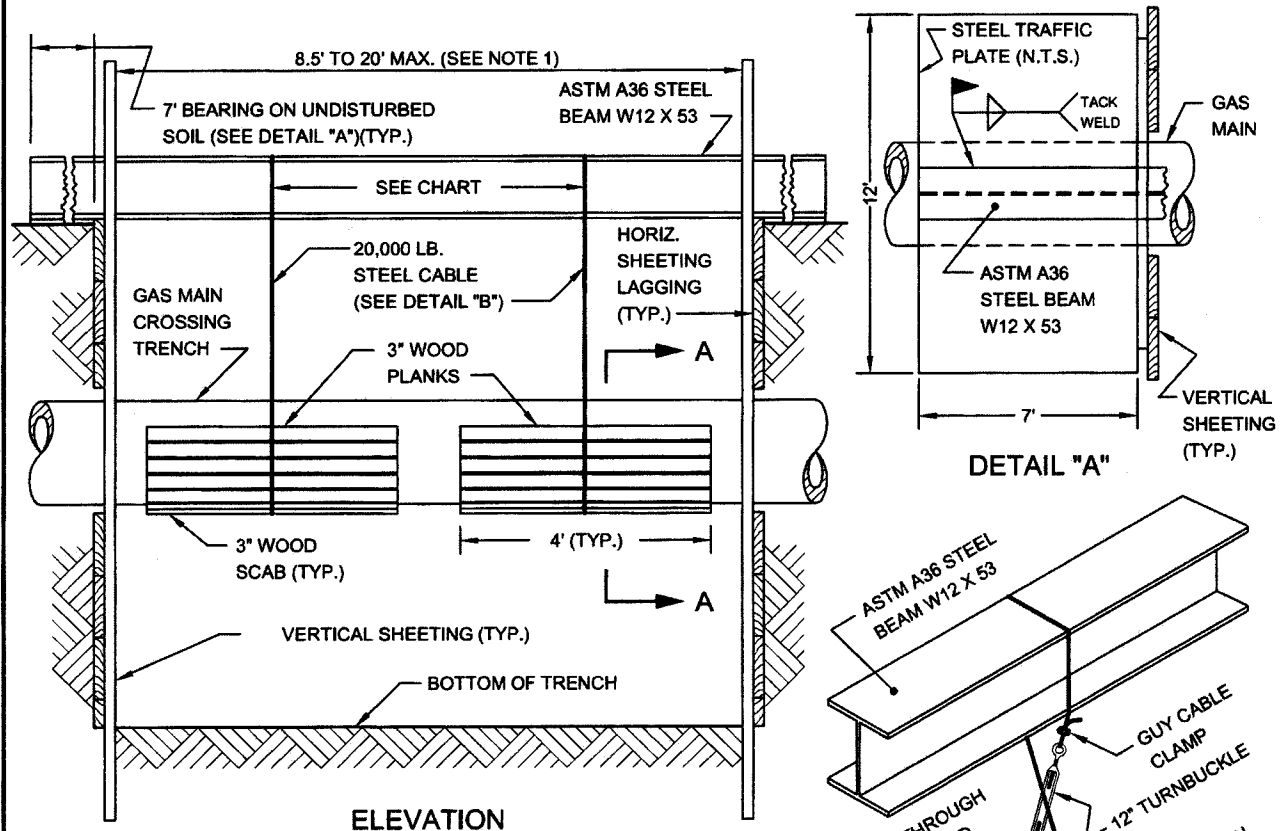


CABLE SUPPORT		TIMBER SUPPORT	
MAIN TYPE	SPACING	MAIN SIZE	TIMBER SIZE
CAST IRON	4' O.C. MAX.	UP TO 6"	6" X 6"
STEEL	10' O.C. MAX.	8" TO 10"	8" X 8"
PLASTIC	10' O.C. MAX.	12" TO 16"	10" X 10"

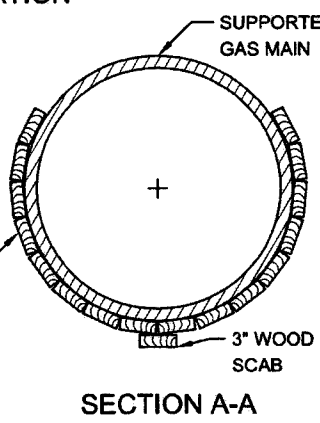
REVISED OCT. 2004-L. ADRIEN
REVISED JUNE 1988-C. J. WONG/W. PATALANOP, MOY

GAS COST SHARING WORK (SKETCH NO. 1A)

SUPPORT REQUIREMENTS FOR GAS MAINS OVER 16" DIAMETER UP TO AND INCLUDING 48" DIAMETER CROSSING EXCAVATION AT ANY ANGLE



CABLE SUPPORT	
MAIN TYPE	SPACING
CAST IRON	4' O.C. MAX.
STEEL	10' O.C. MAX.



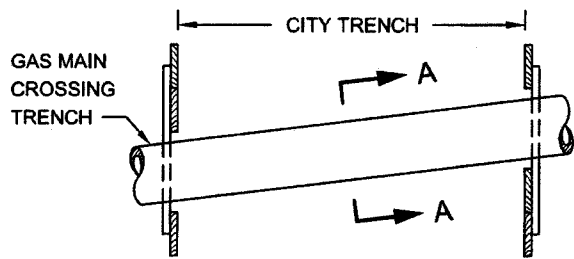
NOTES:

- (1) NO SUPPORT IS REQUIRED FOR GAS MAINS OVER 16" DIA. UP TO AND INCLUDING 48" DIA. CROSSING TRENCHES LESS THAN 8.5' WIDE.
- (2) UNDERMINE A MAXIMUM OF 8.5 L.F. OF CAST IRON GAS MAIN AT A TIME.
- (3) SET STEEL CABLE OVER 3" WOOD PROTECTIVE PLANKS AND PLACE AN ADDITIONAL 3" SCAB ON THE BOTTOM OF THE GAS MAIN.
- (4) ADJUST STEEL CABLE UNTIL DEAD WEIGHT OF THE UNDERMINED GAS MAIN HAS BEEN TAKEN UP BY THE OVERHEAD STEEL BEAM SUPPORT.
- (5) ALL SUPPORTS AND STEEL CABLES CAN BE REMOVED ONLY AFTER THE REQUIRED BACKFILL (AROUND AND BELOW GAS MAIN) HAS BEEN COMPACTED IN ACCORDANCE WITH NEW YORK CITY STANDARDS AND AT THE DIRECTIONS OF THE ENGINEER.

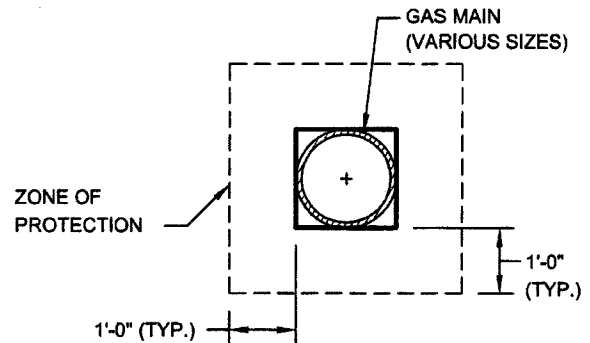
REVISED OCT. 2004 - L. ADRIEN
 REVISED JUNE 1988 - J. WONG / W. PATAJANOP / MCO

GAS COST SHARING WORK (SKETCH NO. 2)

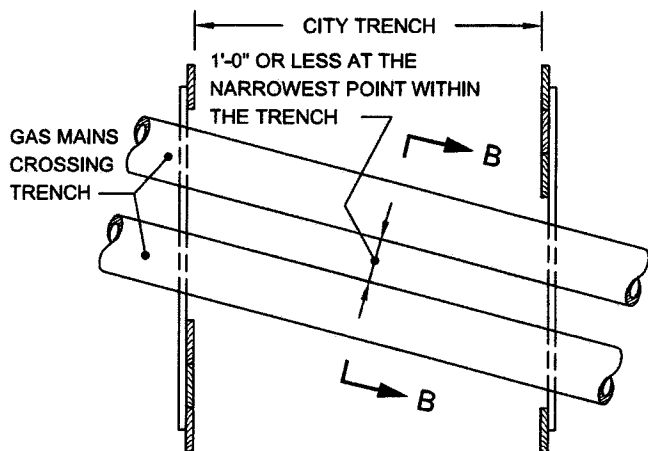
TYPICAL METHODS OF MEASUREMENT FOR GAS CROSSINGS



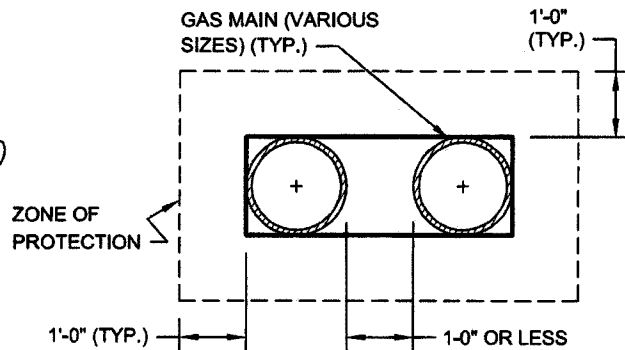
SINGLE FACILITY CROSSING



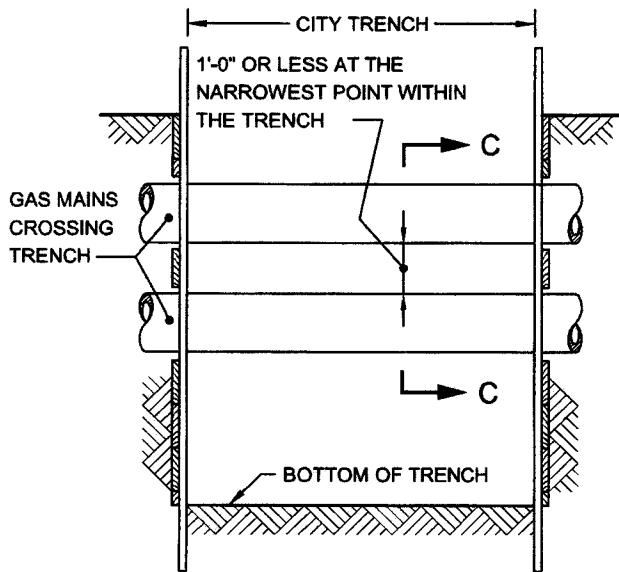
SECTION A-A



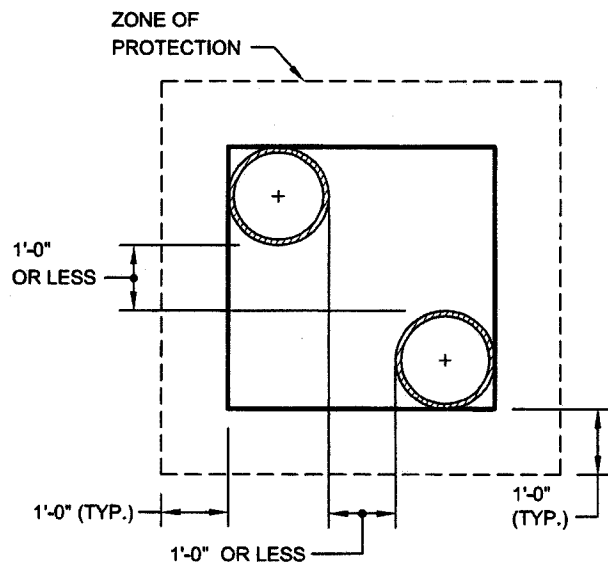
**MULTIPLE FACILITIES
(GAS MAINS AT SAME ELEVATION)**



SECTION B-B



**MULTIPLE FACILITIES
(ONE CROSSING AT DIFFERENT ELEVATIONS)**



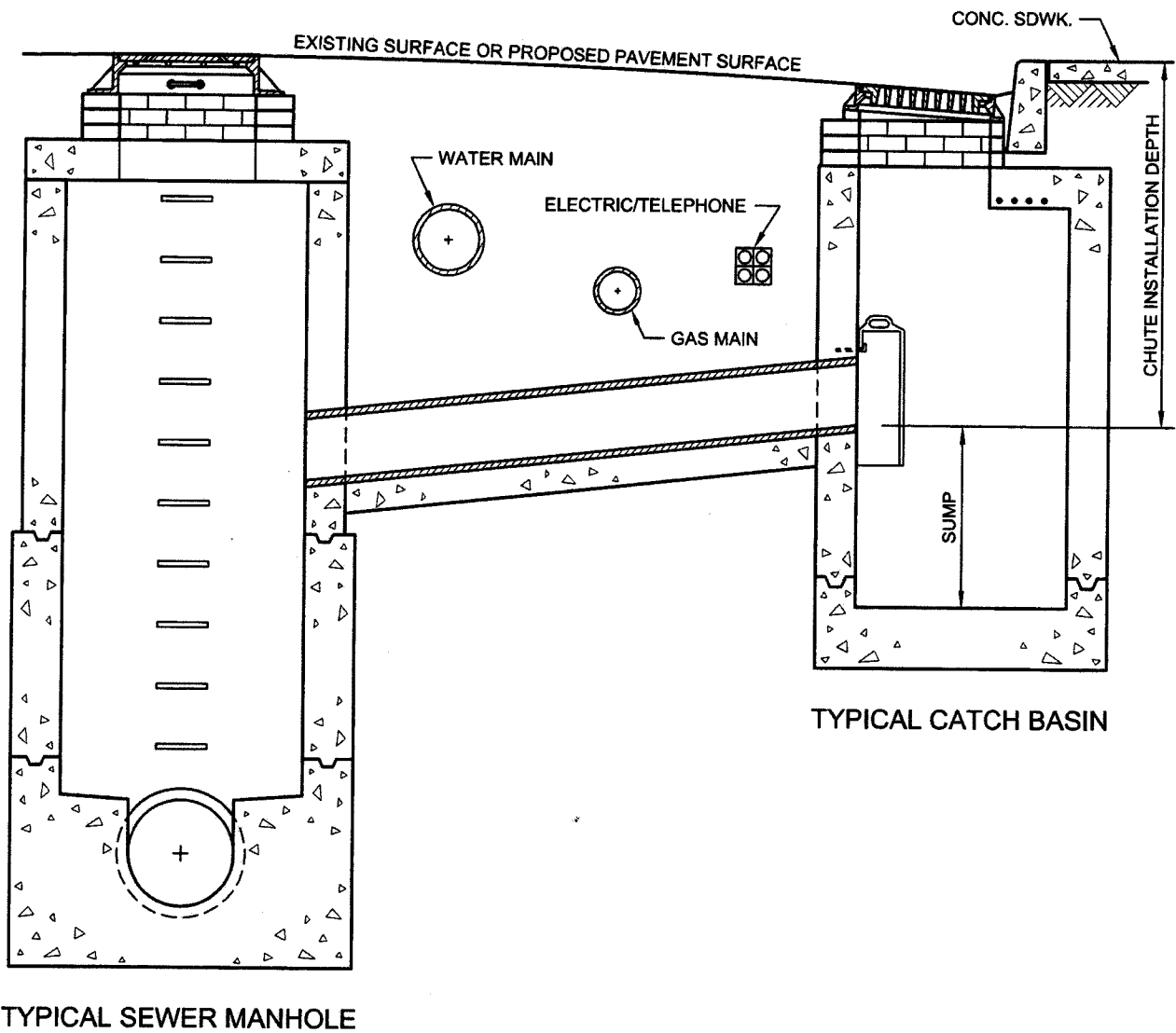
SECTION C-C

NOTE:

GAS MAINS MAY OR MAY NOT BE PARALLEL TO EACH OTHER.

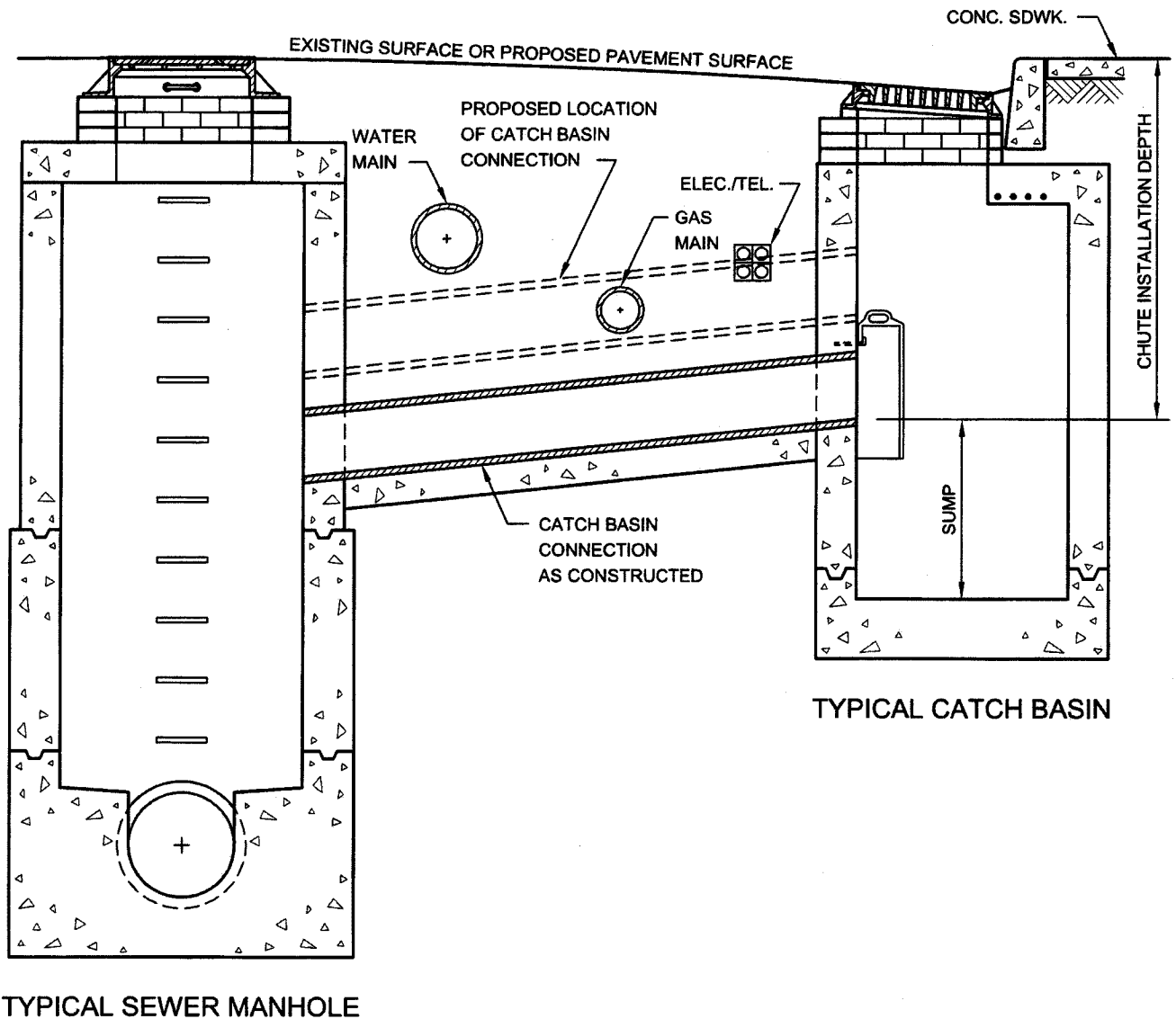
REVISED SEPT. 2004 - J. ADRIEN
REVISED SEPT. 2004 - J. WONGW. PATALANOP. MOY

GAS COST SHARING WORK (SKETCH NO. 3)
UTILITY CROSSINGS DURING CATCH BASIN CHUTE
CONNECTION PIPE INSTALLATION



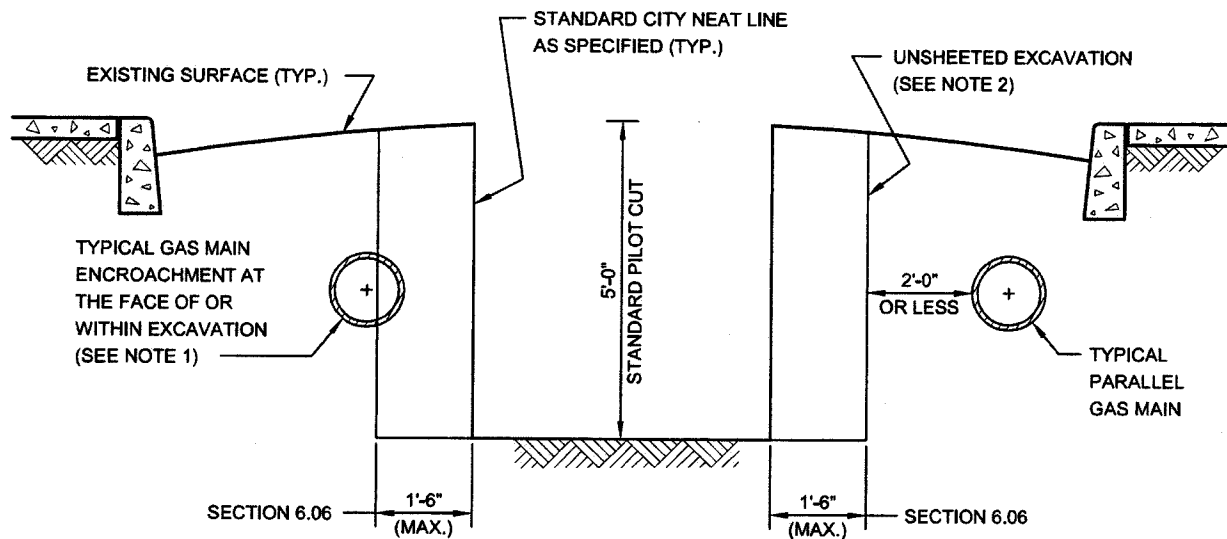
REVISED OCT. 2004 - J. ADRIEN
REVISED OCT. 1998 - J. WONGRW. PATALANOP. MOY

GAS COST SHARING WORK (SKETCH NO. 4)
UTILITY CROSSINGS DURING CATCH BASIN CHUTE
CONNECTION PIPE INSTALLATION (EXTRA DEPTH)



REVISED OCT. 2004 - L. ADRIEN
 REVISED OCT. 1998 - J. WONGW. PATALANOP. MOY

GAS COST SHARING WORK (SKETCH NO. 5)
GAS MAIN ENCROACHMENT ON AND/OR PARALLEL
TO EXCAVATION OF UNSHEETED TRENCH



NOTES:

- (1) GAS MAIN LOCATED AS SHOWN MAY HAVE TO BE REMOVED BY THE FACILITY OPERATOR PRIOR TO THE START OF CITY EXCAVATION, OTHERWISE, THE CONTRACTOR WILL BE PAID UNDER SECTION 6.06 FOR THE SAID WORK. IF GAS MAIN IS ABANDONED THEN SECTION 6.03 SHALL APPLY.
- (2) EIGHTEEN (18) INCHES FROM STANDARD NEAT LINE IS THE MAXIMUM ALLOWABLE WIDTH OF AREA THAT MAY BE DISTURBED OR EXCAVATED DURING INSTALLATION OF CERTAIN TYPES OF SHEETING SYSTEMS THAT MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS OF THE DEPARTMENT OF DESIGN AND CONSTRUCTION OF THE CITY OF NEW YORK.

V - PRELIMINARY GAS WORK TO BE PERFORMED BY FACILITY OPERATOR

APPLICABLE TO ALL GAS DRAWINGS:

- ALL RELOCATION WORK SHOWN IN THIS SECTION IS TO BE PERFORMED BY FACILITY OPERATOR.
- ALL SUPPORT AND PROTECTION WORK IS TO BE PERFORMED BY CITY CONTRACTOR.
- IF ADDITIONAL INFORMATION IS NEEDED REGARDING THE FACILITY OPERATOR RELOCATION WORK, THE CONTRACTOR IS ADVISED TO CONTACT THE GAS COMPANY REPRESENTATIVE:

MR. GERARD LUNDQUIST
NATIONAL GRID
287 MASPETH AVENUE
BROOKLYN, NY 11211
TEL.: 718-963-5506

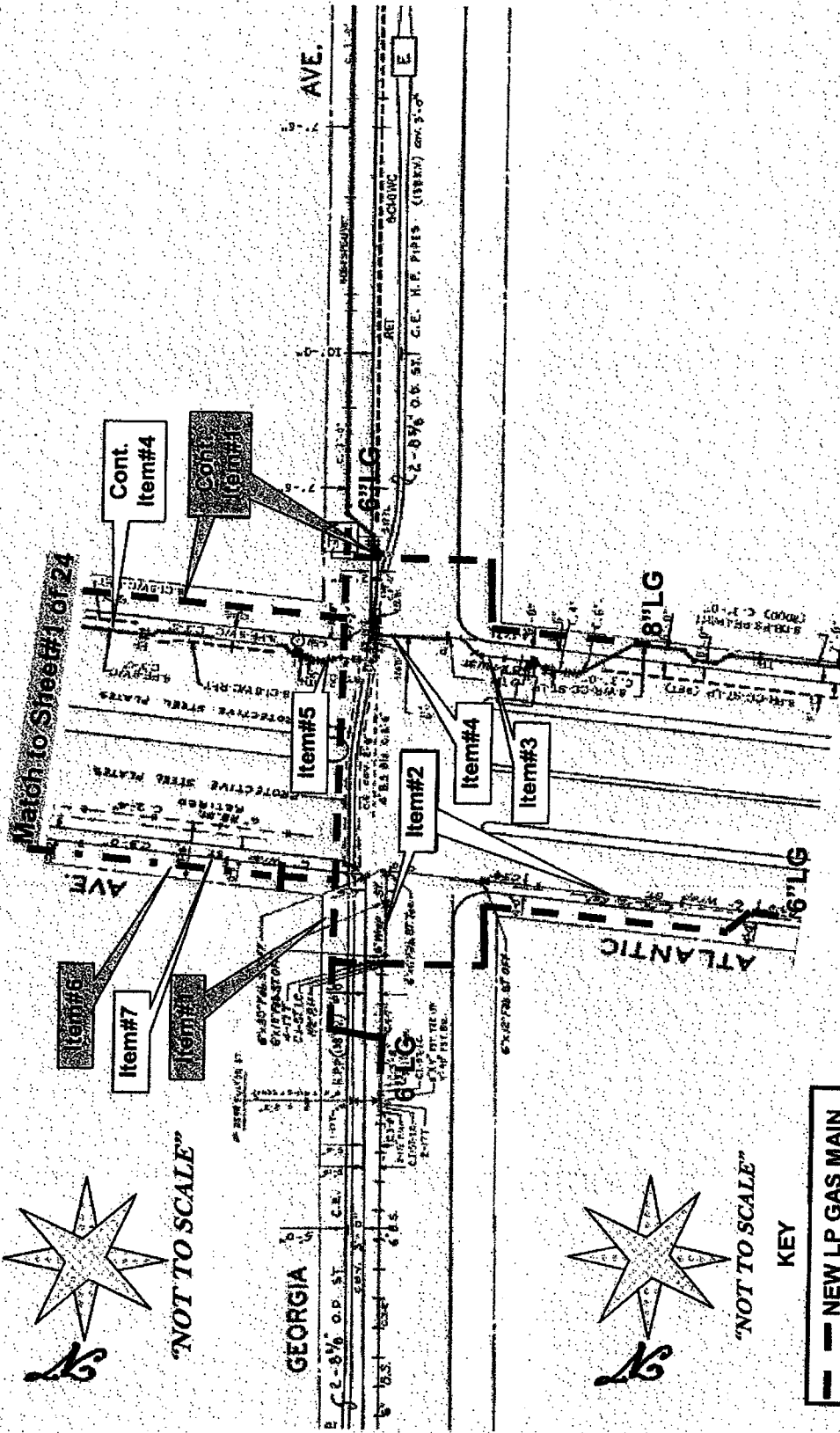
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nationalgrid

HWD10105 GAS MAIN INSTALLATION								
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6	ATLANTIC AVE	GEORGIA AVE	PENNSYLVANIA AVE	8"	PL	200	LP	NO
10	GEORGIA AVE	ATLANTIC AVE	INTERSECTION	20"	WS	150	HP	NO
17	ASHFORD ST	ATLANTIC AVE	INTERSECTION	12"	WS	300	LP	YES

HWD10105 GAS MAIN RETIREMENT								
ITEM#:	ON STREET:	1ST X-STREET:	2ND X-STREET:	SIZE:	MAT'L:	FOOTAGE:	PRESSURE:	REMB:
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4	ATLANTIC AVE	GEORGIA AVE	PENNSYLVANIA AVE	8"	PL	1425	LP	YES
5	ATLANTIC AVE	GEORGIA AVE	PENNSYLVANIA AVE	8"	CI	1680	LP	YES
7	ATLANTIC AVE	GEORGIA AVE	PENNSYLVANIA AVE	6"	WS	200	LP	NO
8	ATLANTIC AVE	SHEFFIELD AVE	PENNSYLVANIA AVE	6"	CI	1430	LP	YES
9	ATLANTIC AVE	SHEFFIELD AVE	PENNSYLVANIA AVE	6"	PL	900	LP	YES
11	GEORGIA AVE	ATLANTIC AVE	INTERSECTION	20"	BS	150	HP	NO
12	WYONA ST	ATLANTIC AVE	INTERSECTION	6"	BS	100	LP	YES
13	WYONA ST	ATLANTIC AVE	INTERSECTION	4"	CI	50	LP	YES
14	BARBEY ST	ATLANTIC AVE	INTERSECTION	4"	WS	190	LP	YES
15	BARBEY ST	ATLANTIC AVE	INTERSECTION	4"	PL	175	LP	YES
16	BARBEY ST	ATLANTIC AVE	INTERSECTION	12"	WS	50	LP	YES
18	ASHFORD ST	ATLANTIC AVE	INTERSECTION	12"	WS	200	LP	YES

EP-27A



EP-27B

nationalgrid

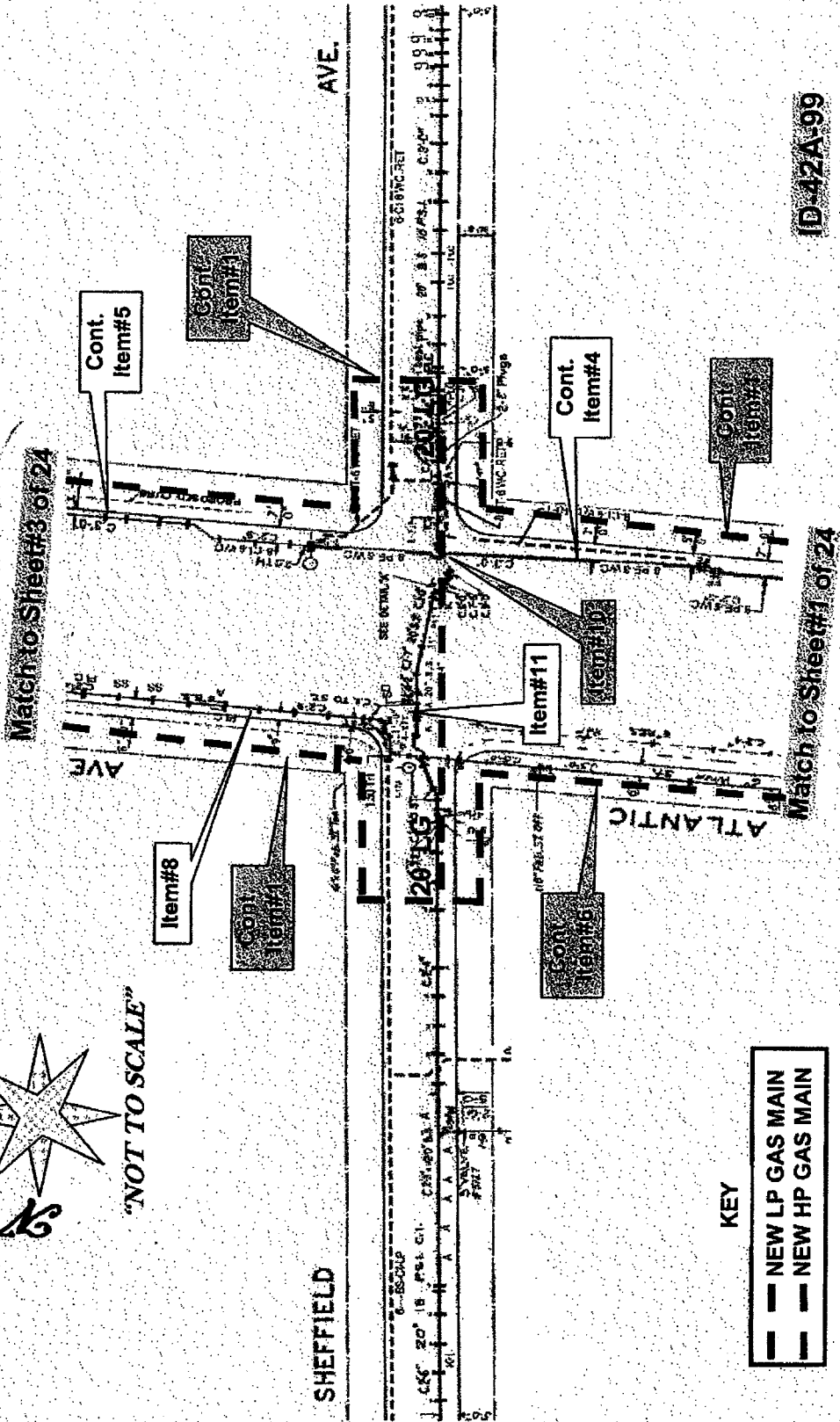
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Sheet#2 of 24



"NOT TO SCALE"

EP-27C



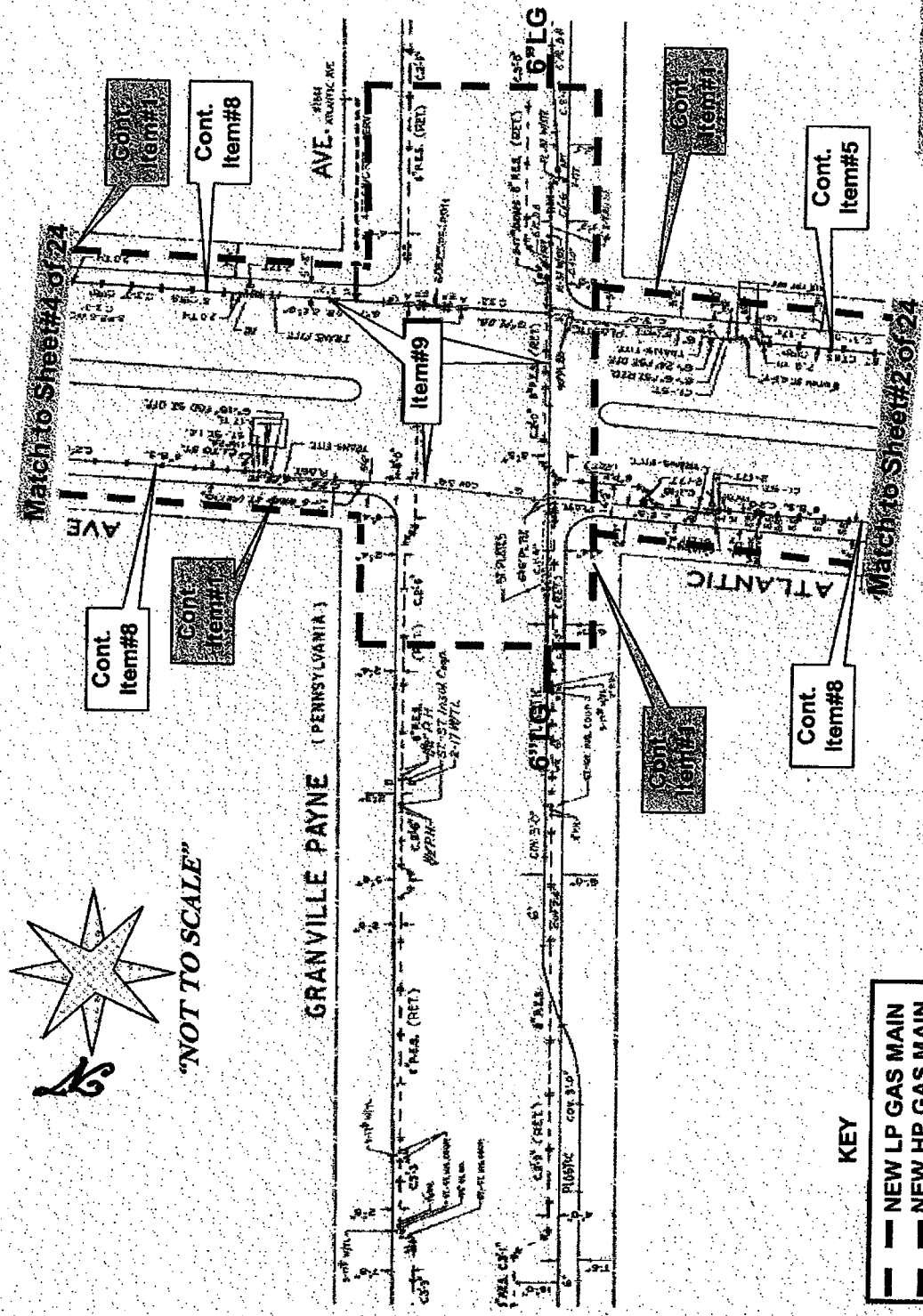
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Sheet#3 of 24

HWD10105

ID: 42A-100

nationalgrid



KEY

- NEW LP GAS MAIN
- NEW HP GAS MAIN

EP-27D

HWD10105

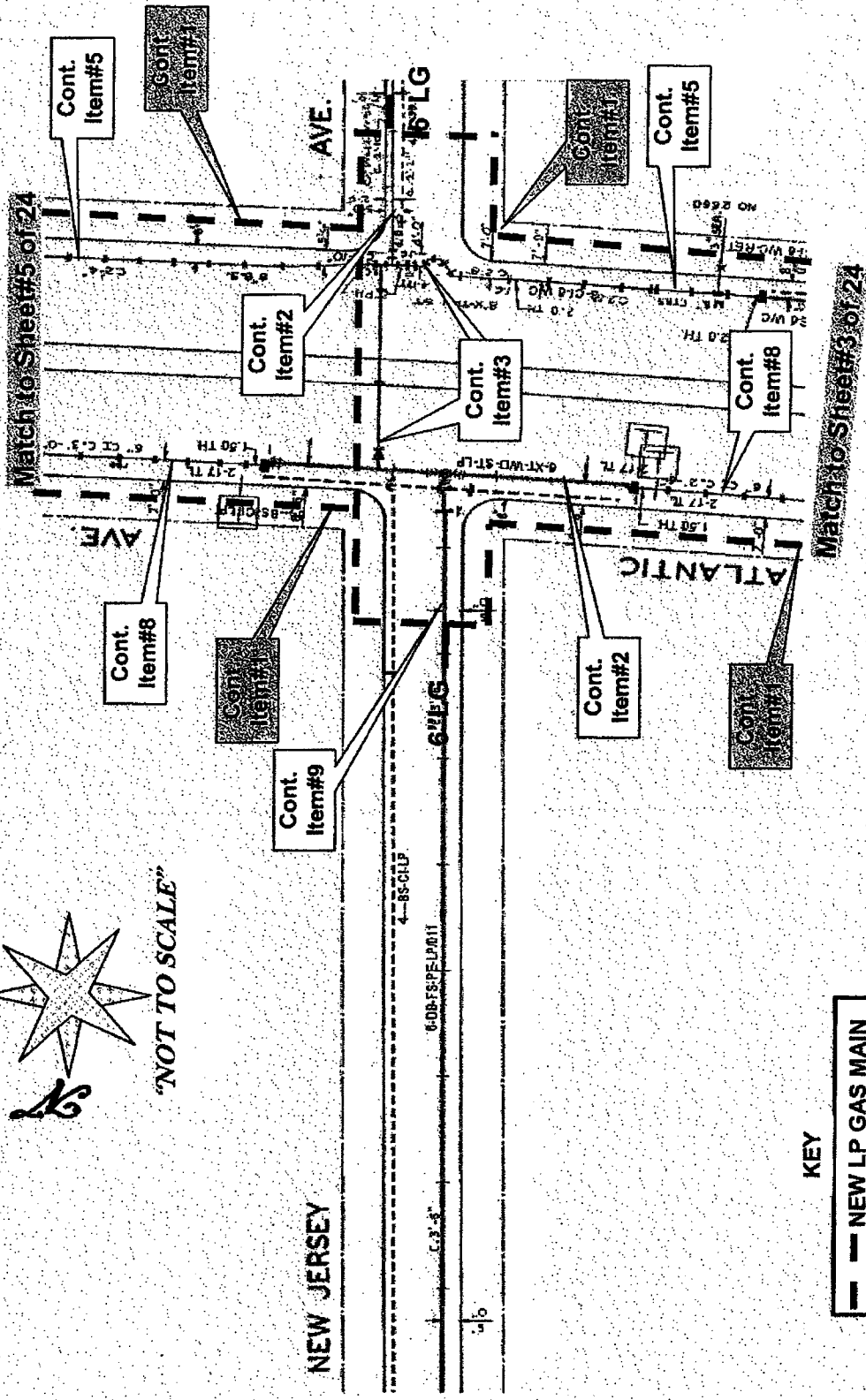
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Sheet#4 of 24



"NOT TO SCALE"

NEW JERSEY



ID-42A-101

KEY

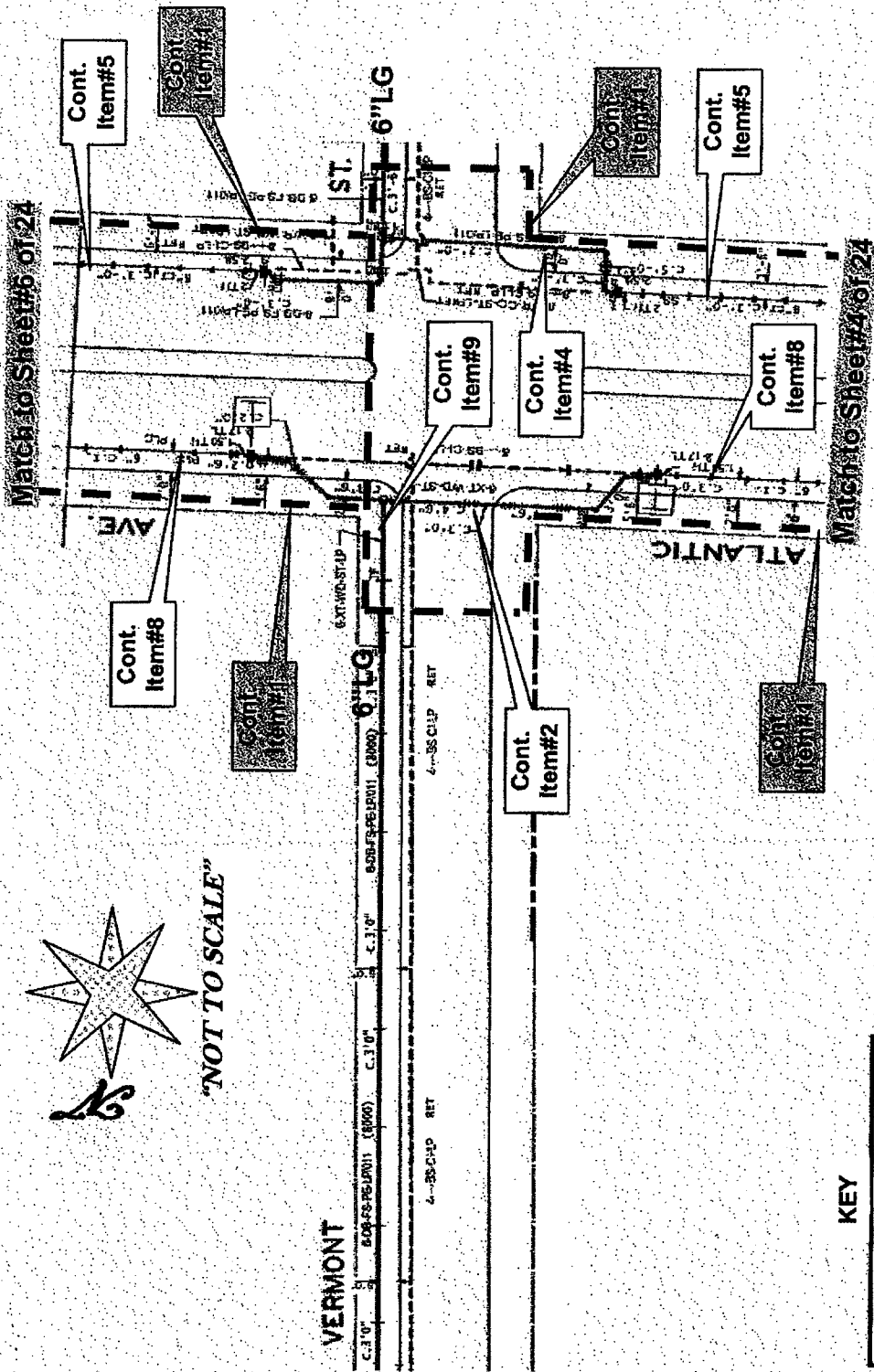
- NEW LP GAS MAIN
- NEW HP GAS MAIN

EP-27E

nationalgrid
HWD10105

Sheet#5 of 24

ID-42A-102



"NOT TO SCALE"

- KEY
- NEW LP GAS MAIN
 - NEW HP GAS MAIN

EP-27F

HWD10105

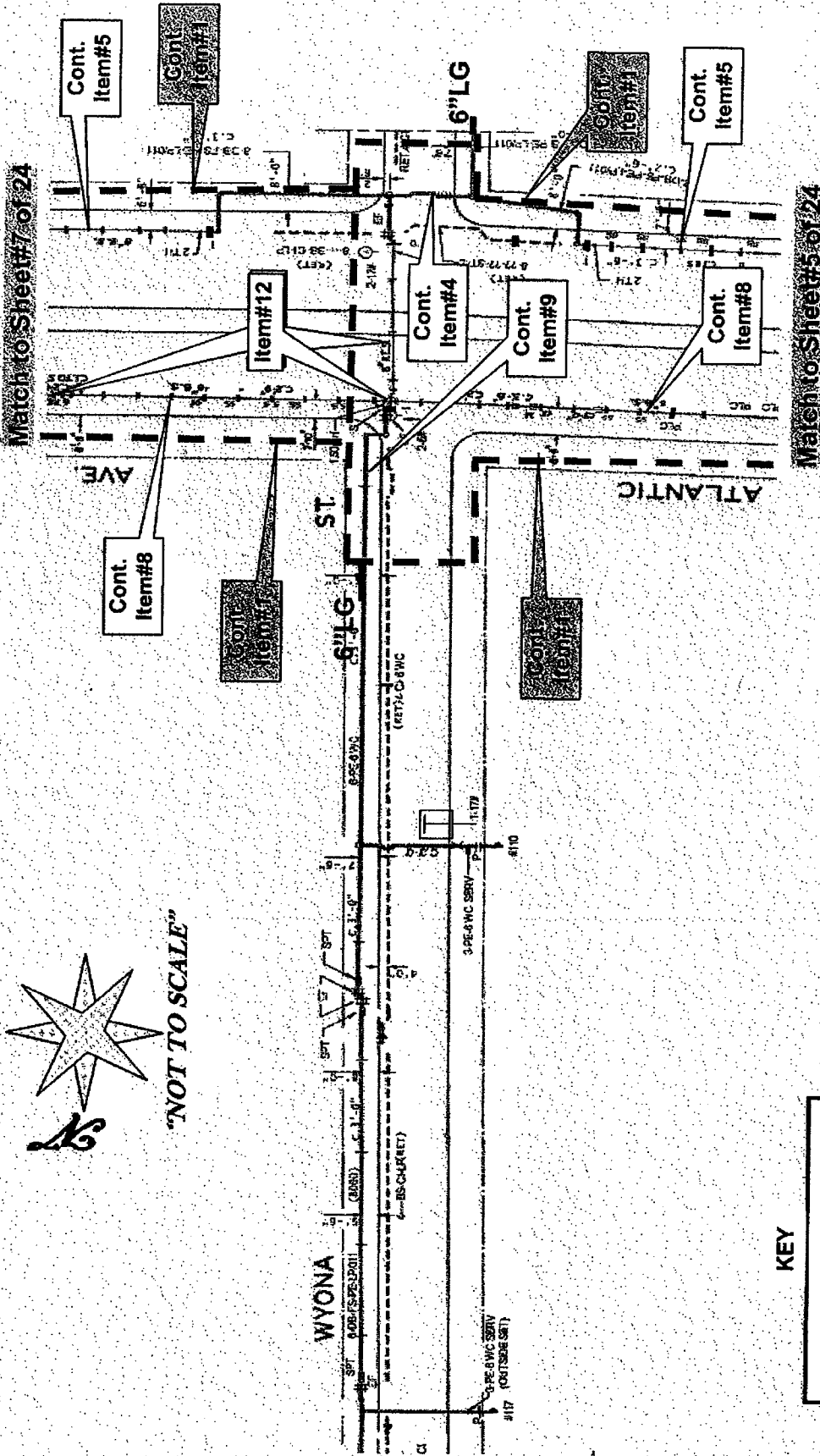
Sheet#6 of 24

nationalgrid



"NOT TO SCALE"

EP-276



KEY

- NEW LP GAS MAIN
- NEW HP GAS MAIN

ID-42-16

HWD10105

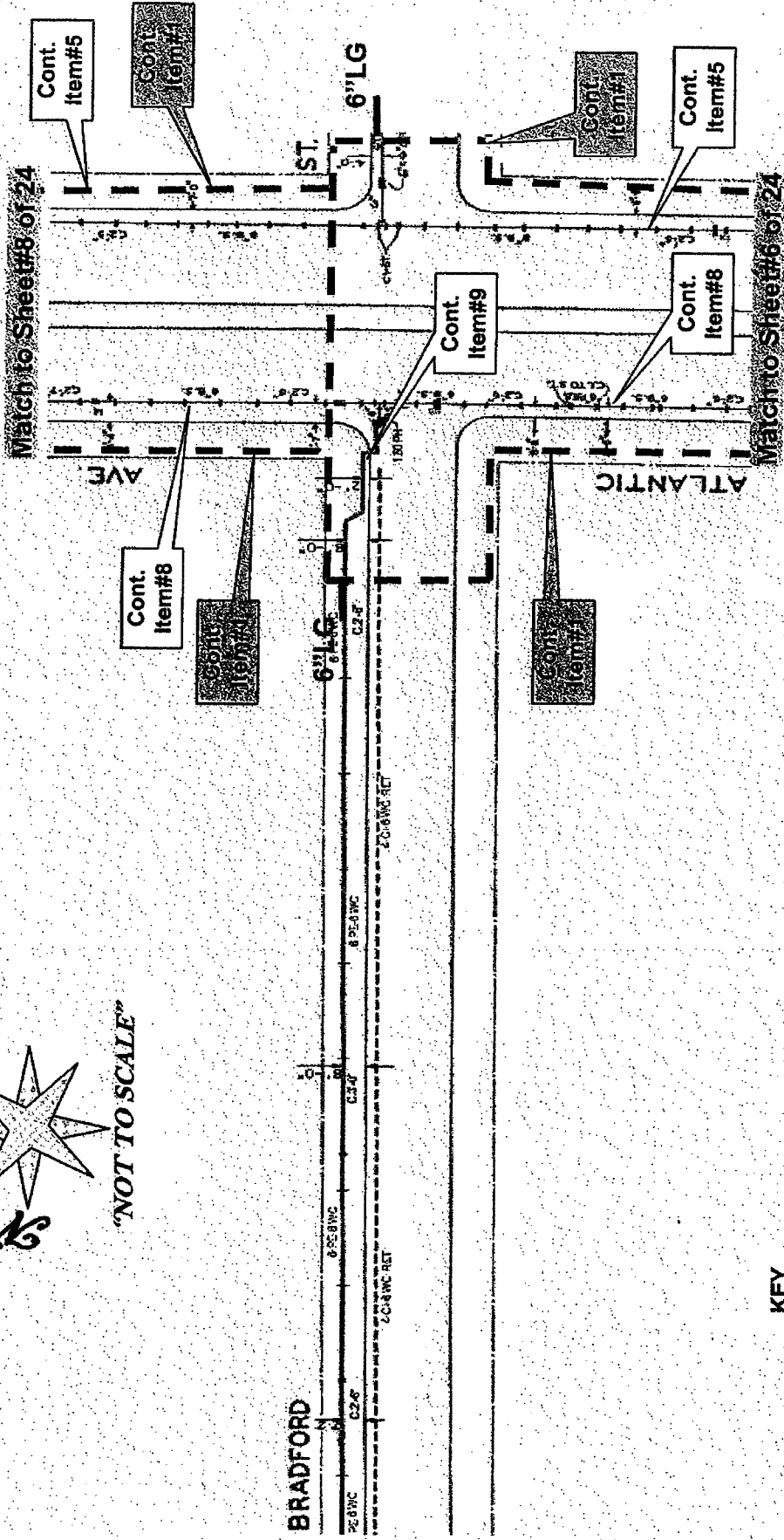
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NOT TO SCALE

EP-27H



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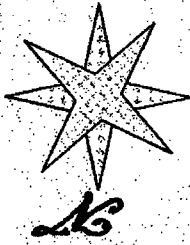
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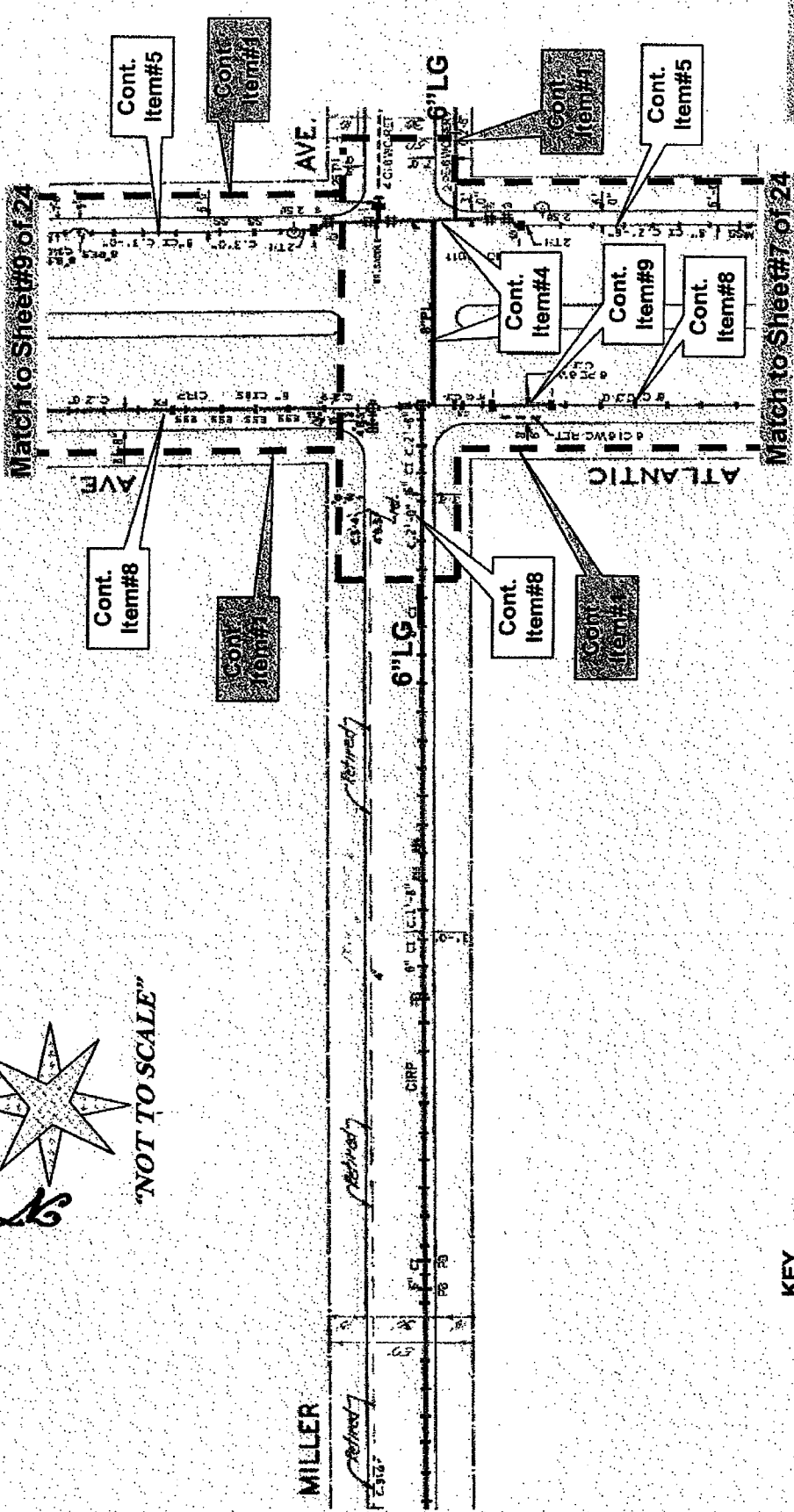
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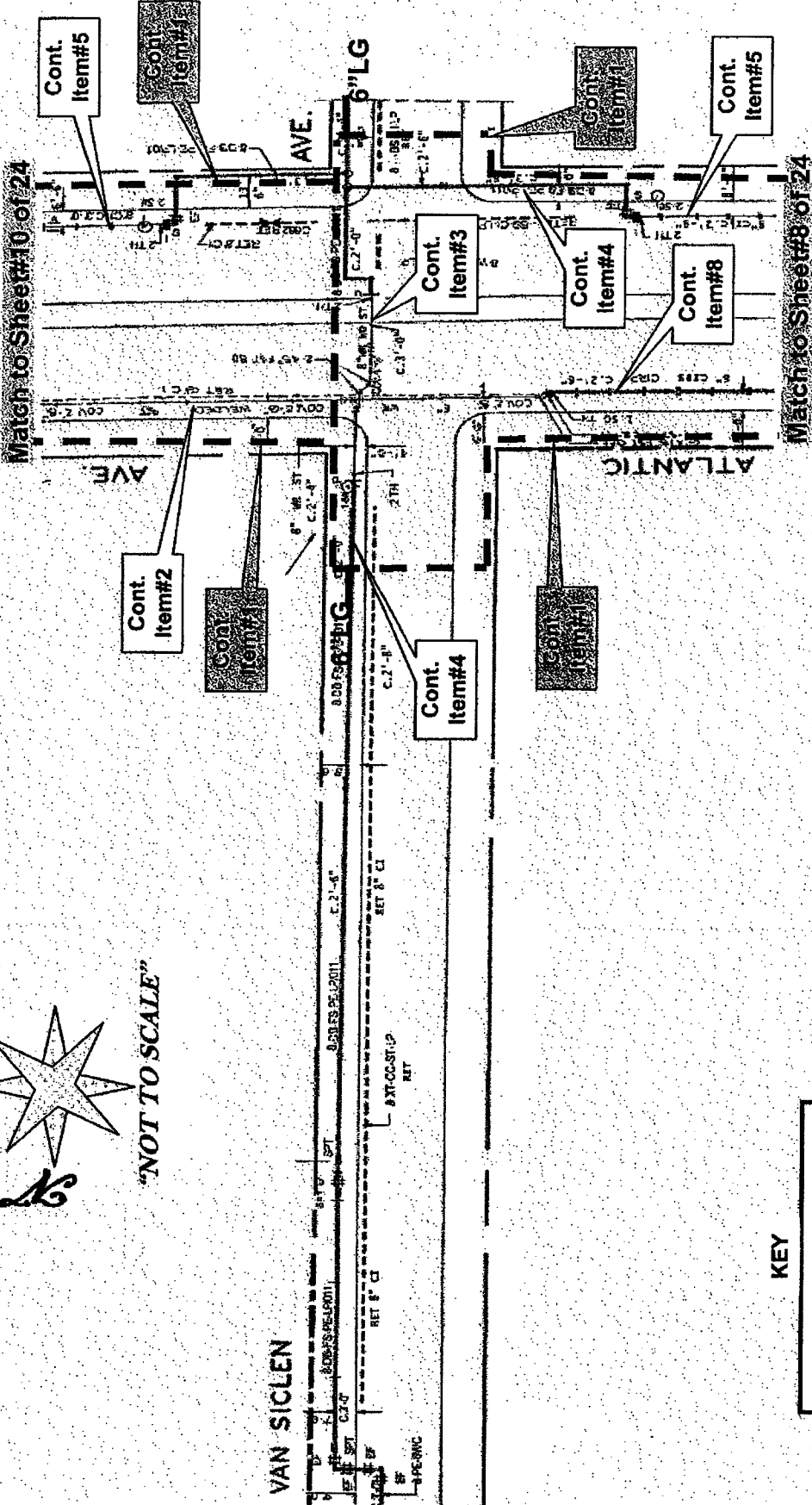
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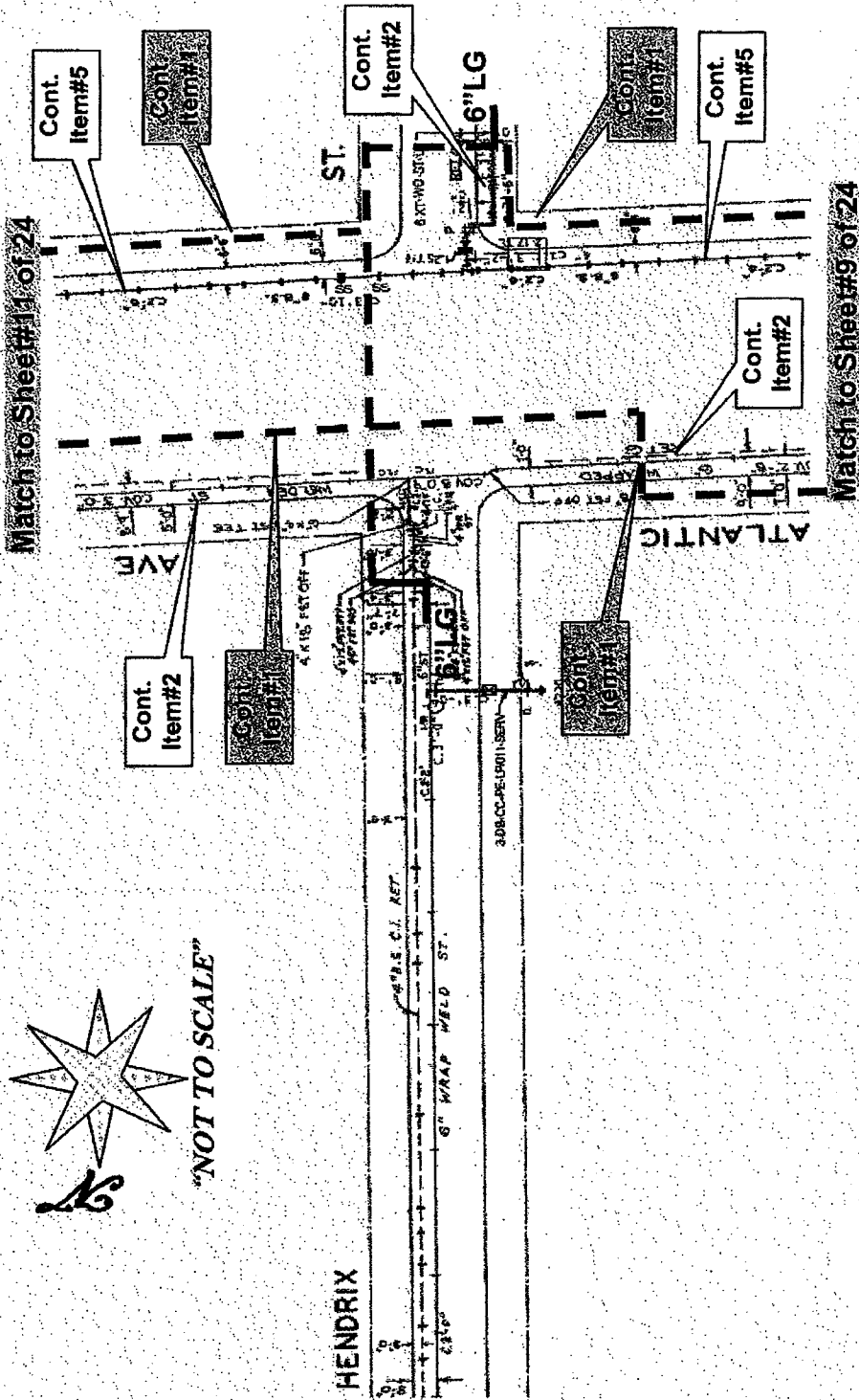
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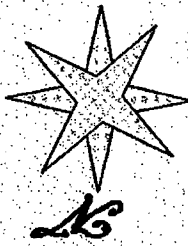
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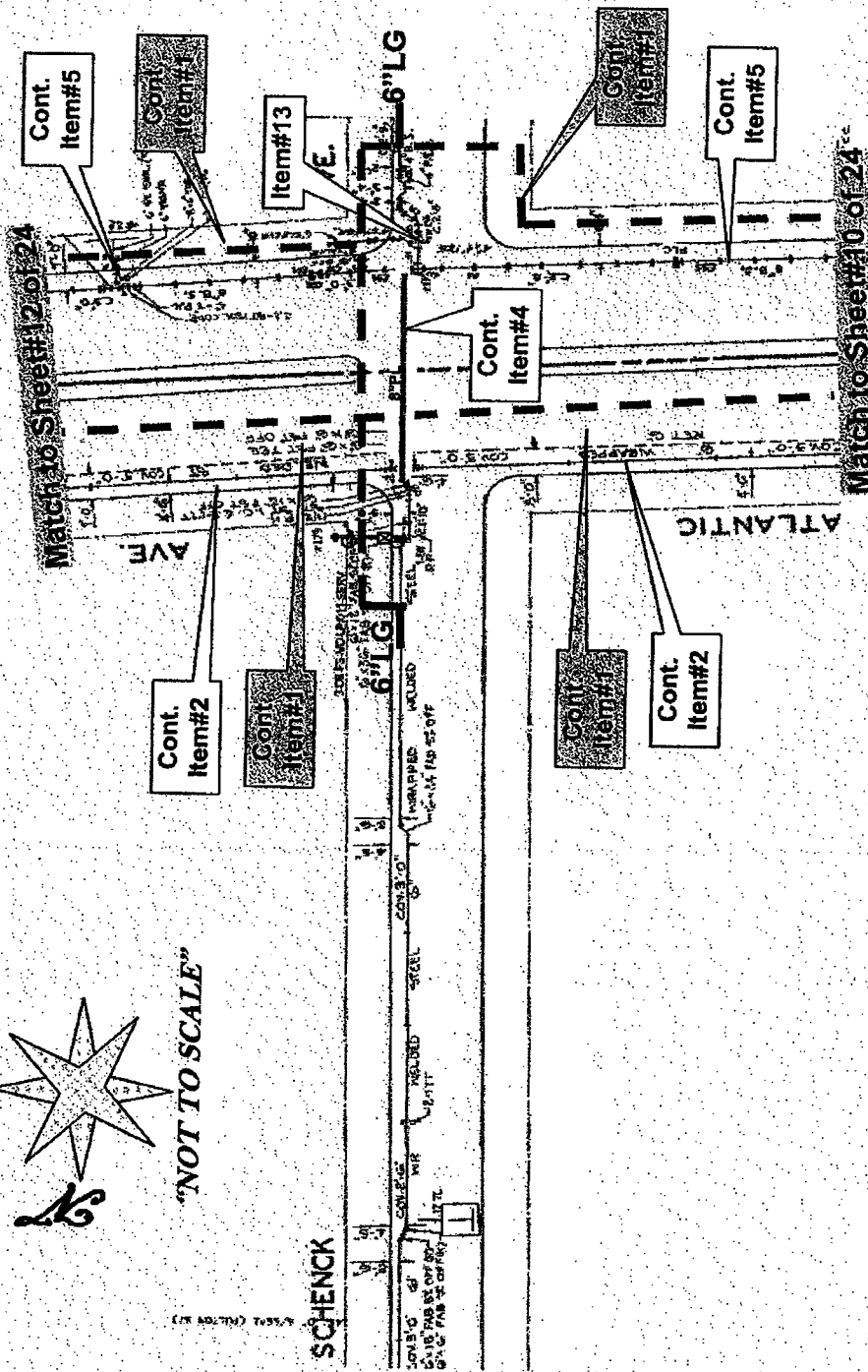
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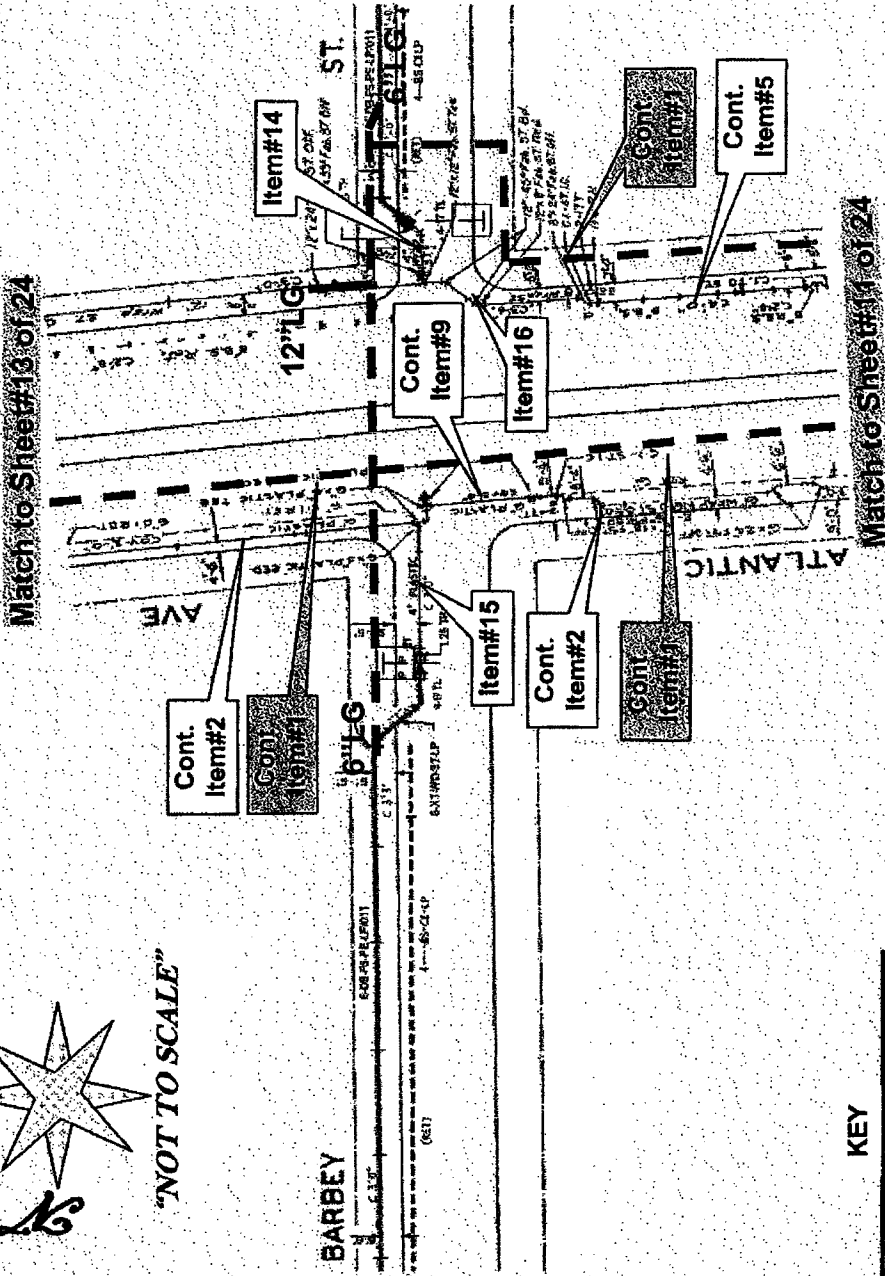
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EP-27M



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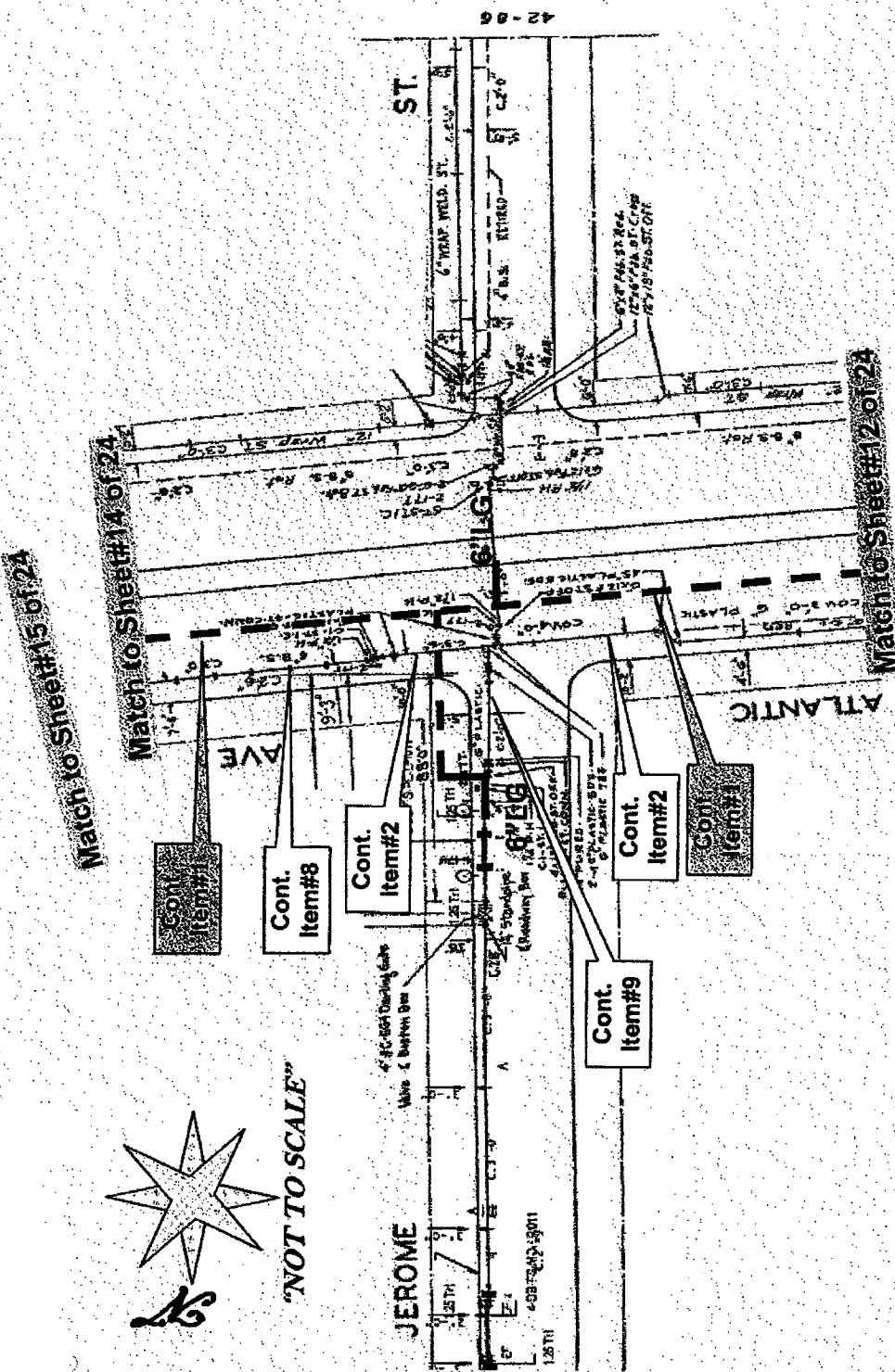
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EP-27N



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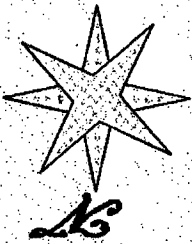
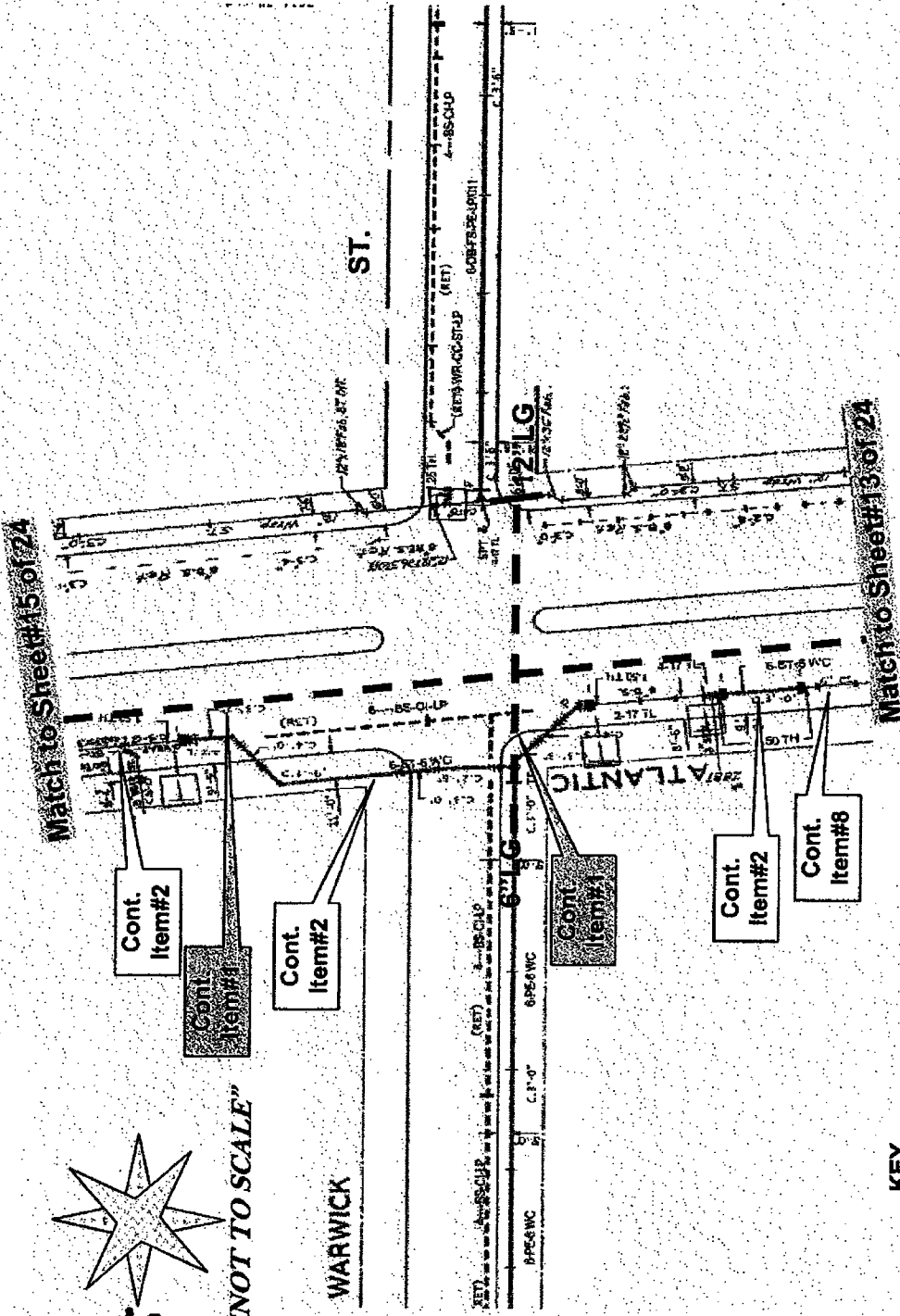
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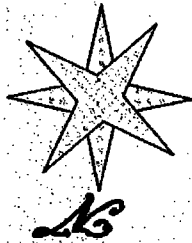
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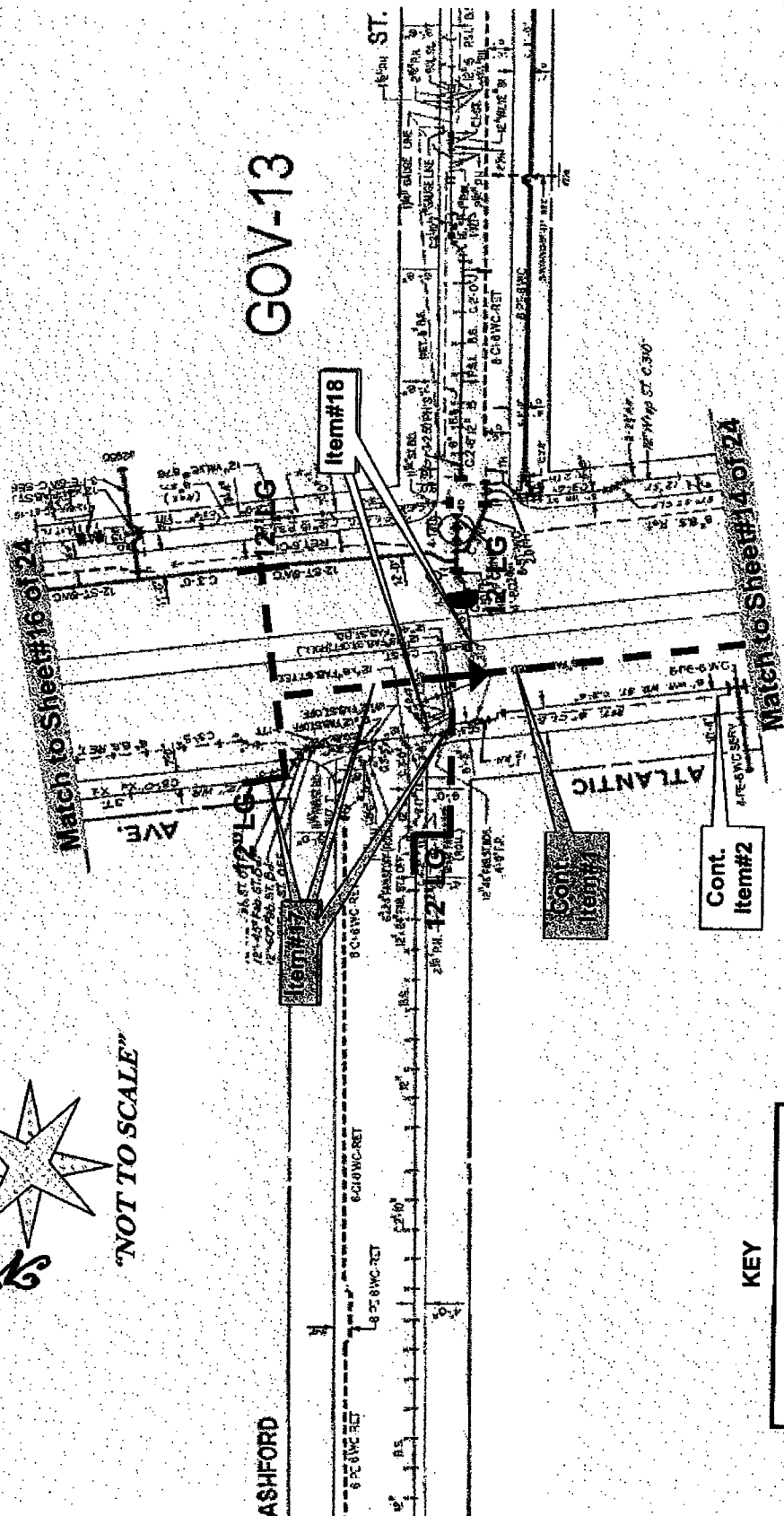


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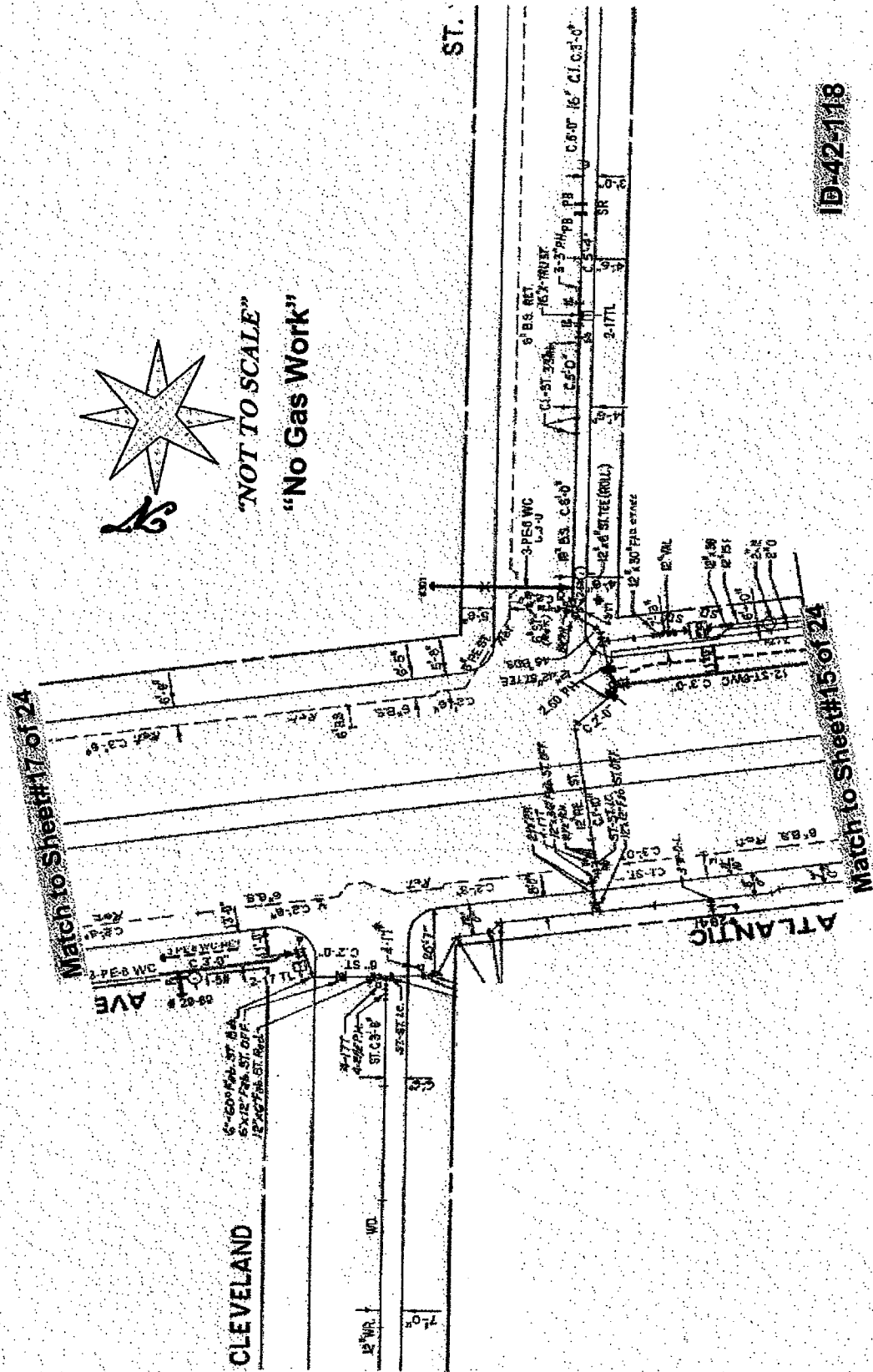


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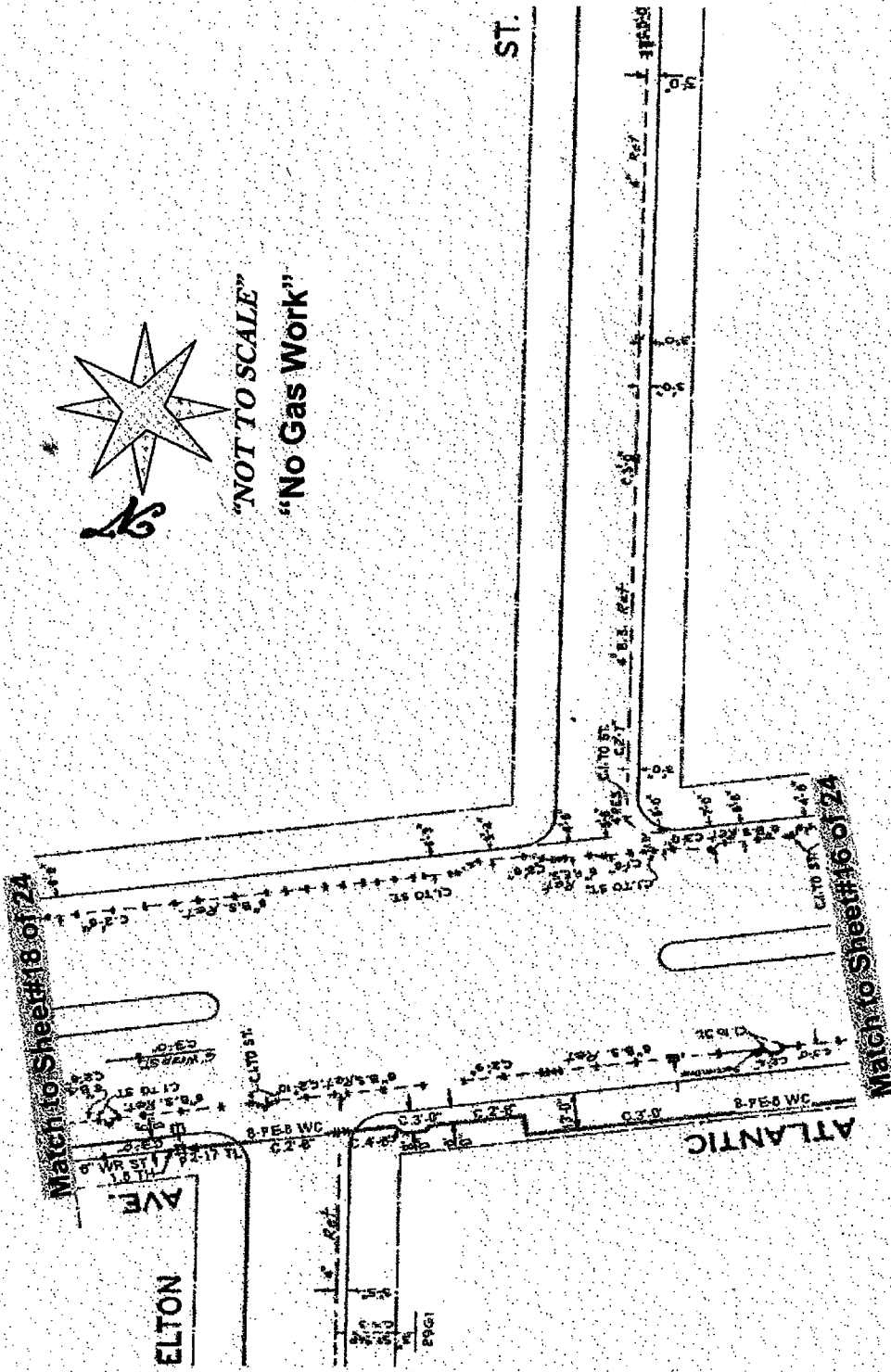
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EP-27R

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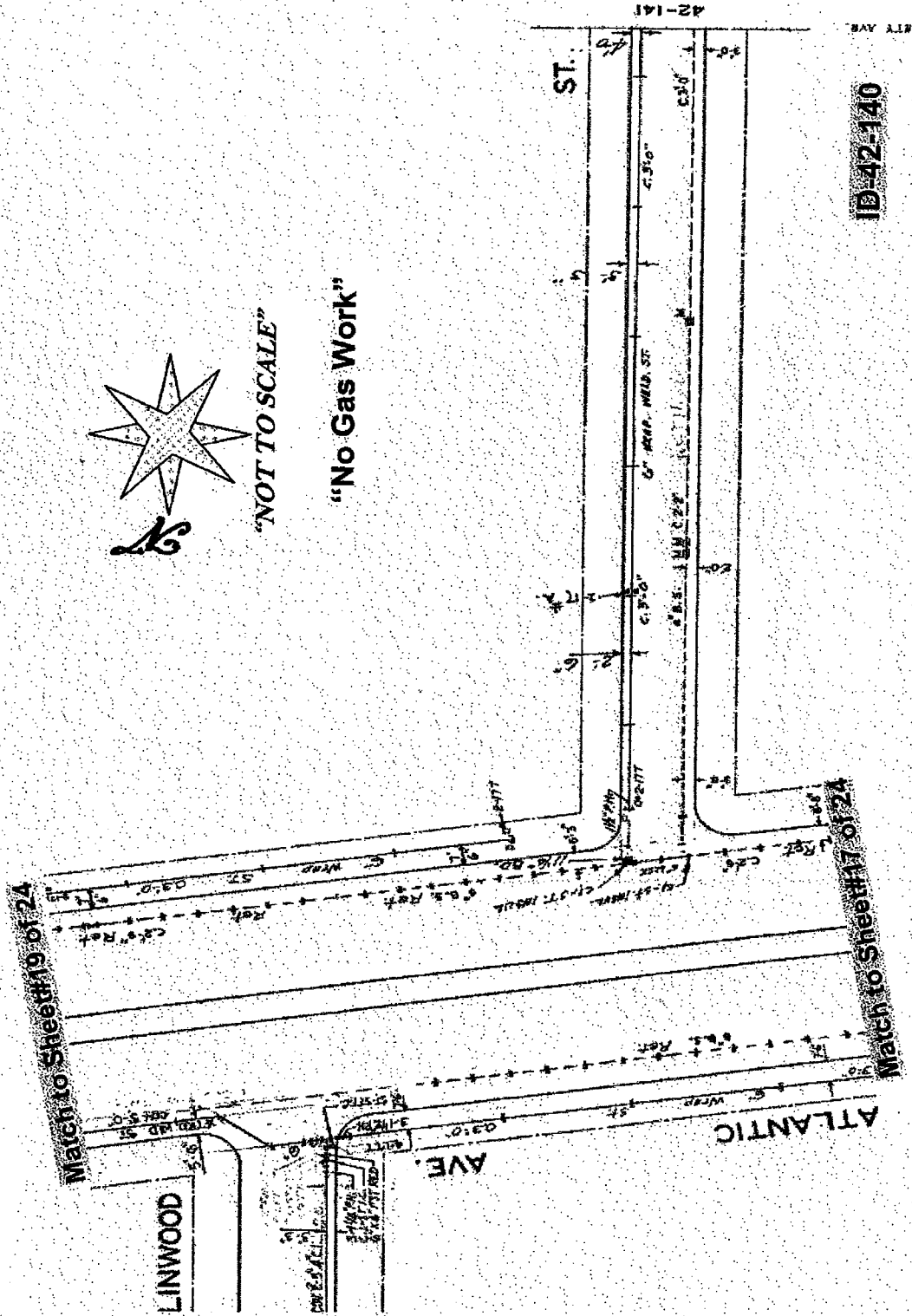
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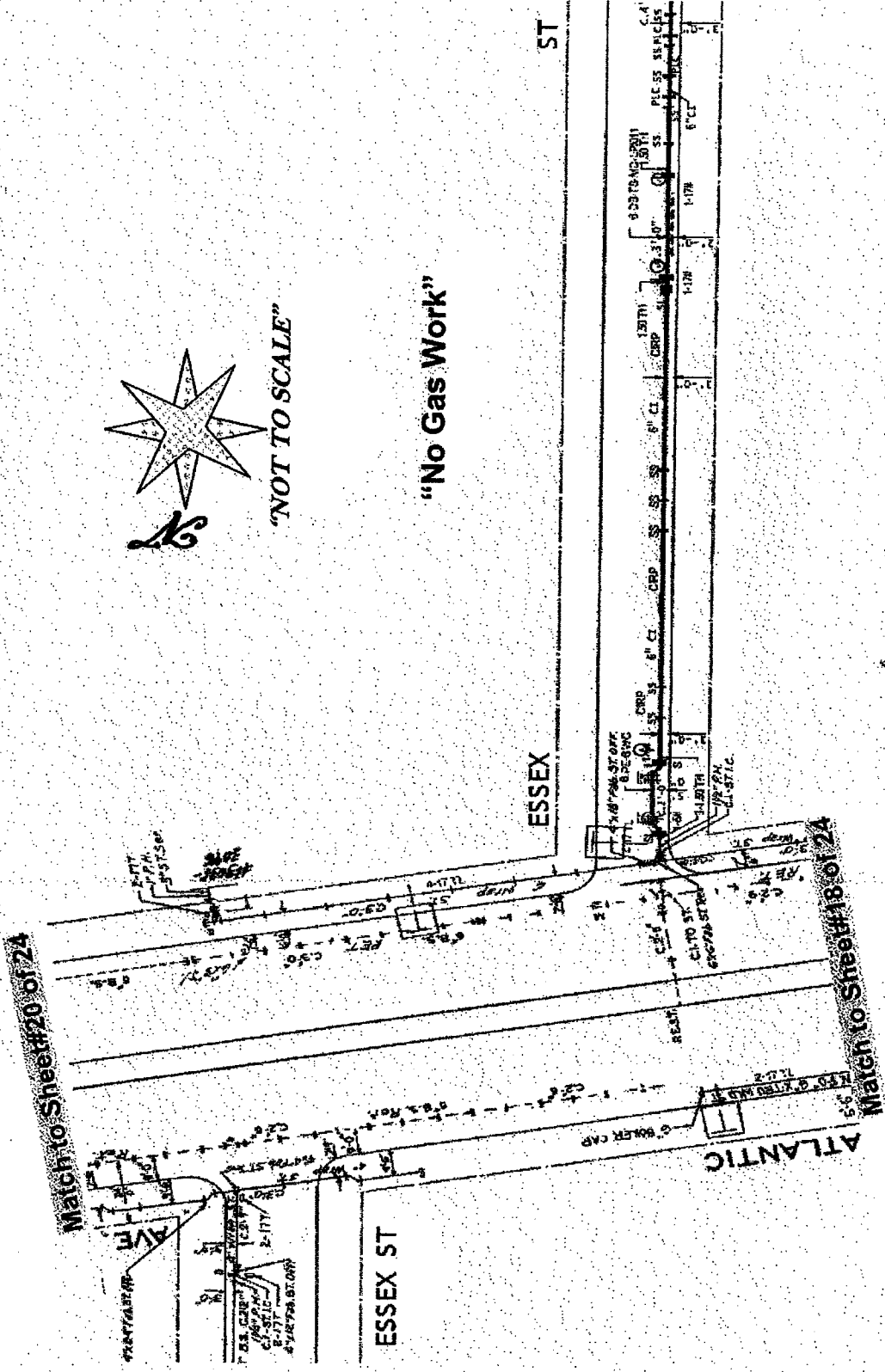
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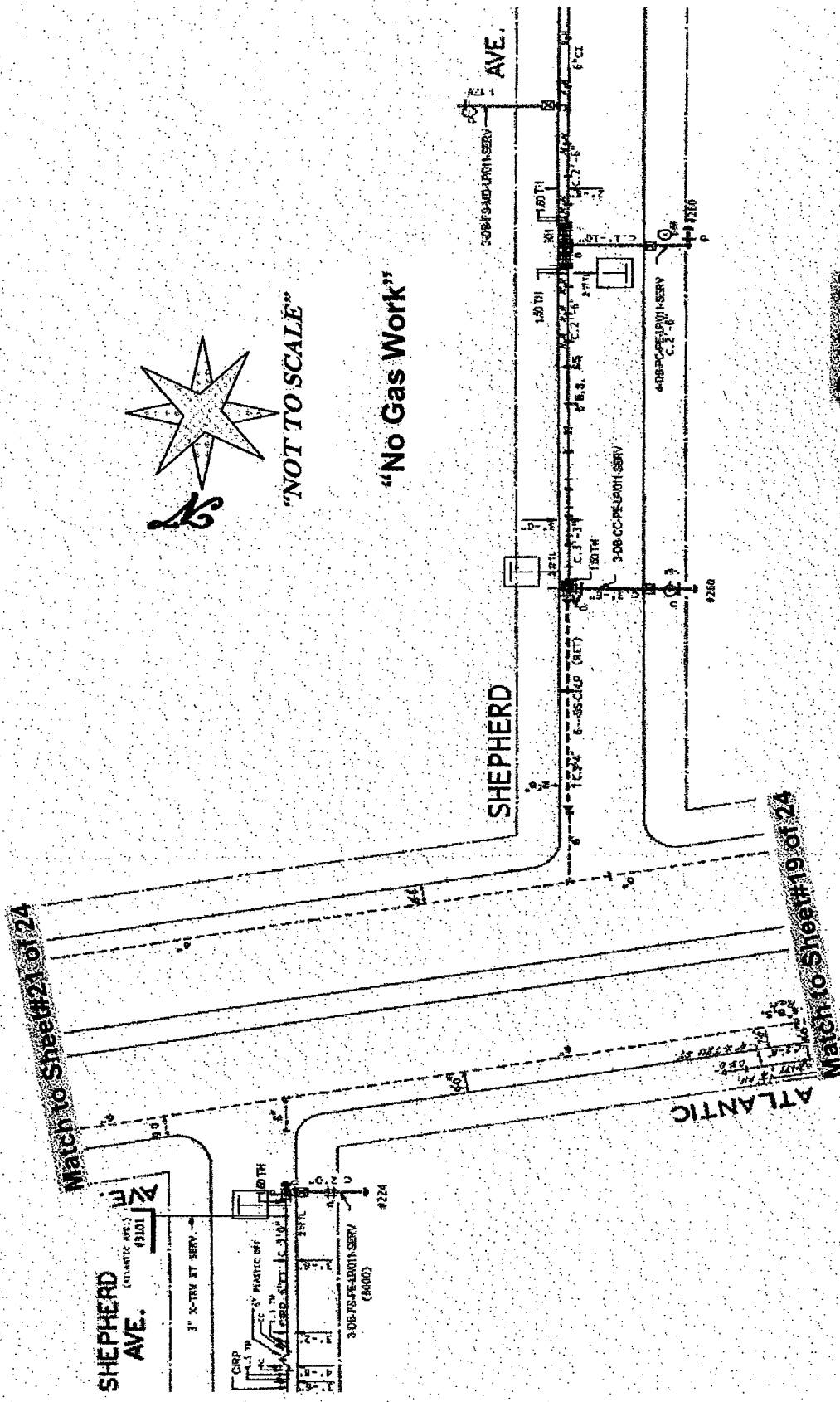
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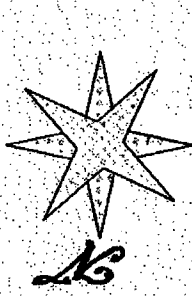
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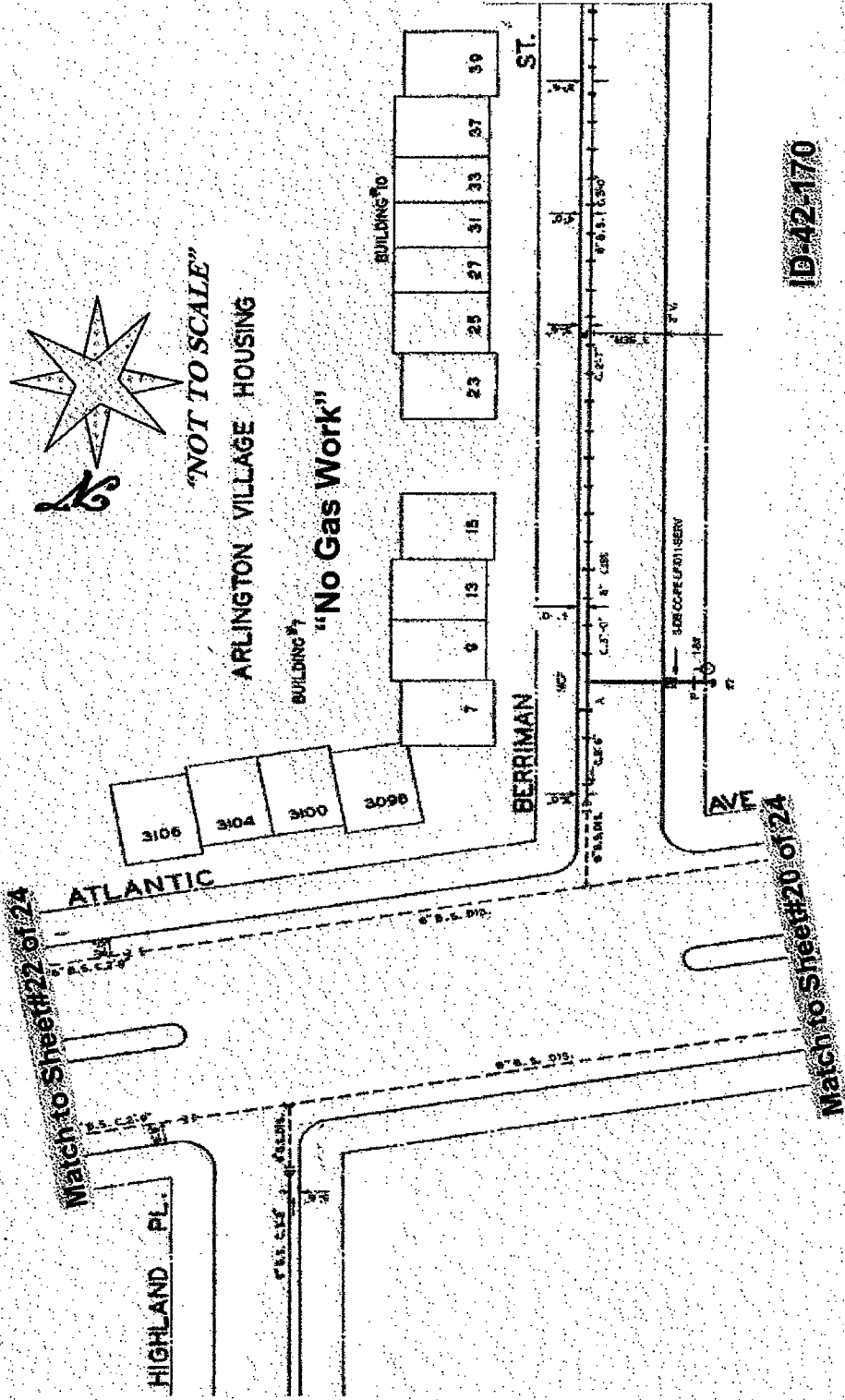
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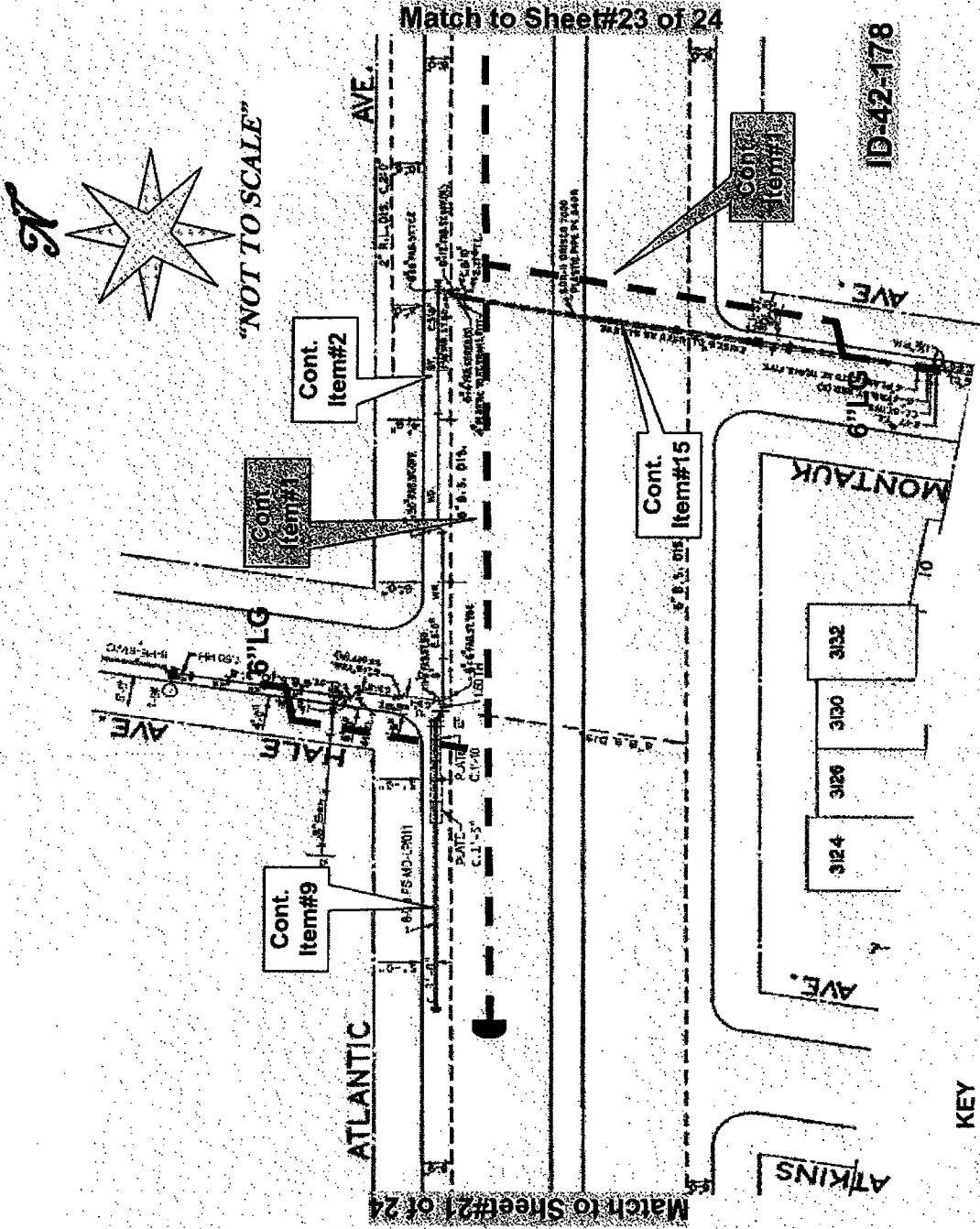
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EP-27W



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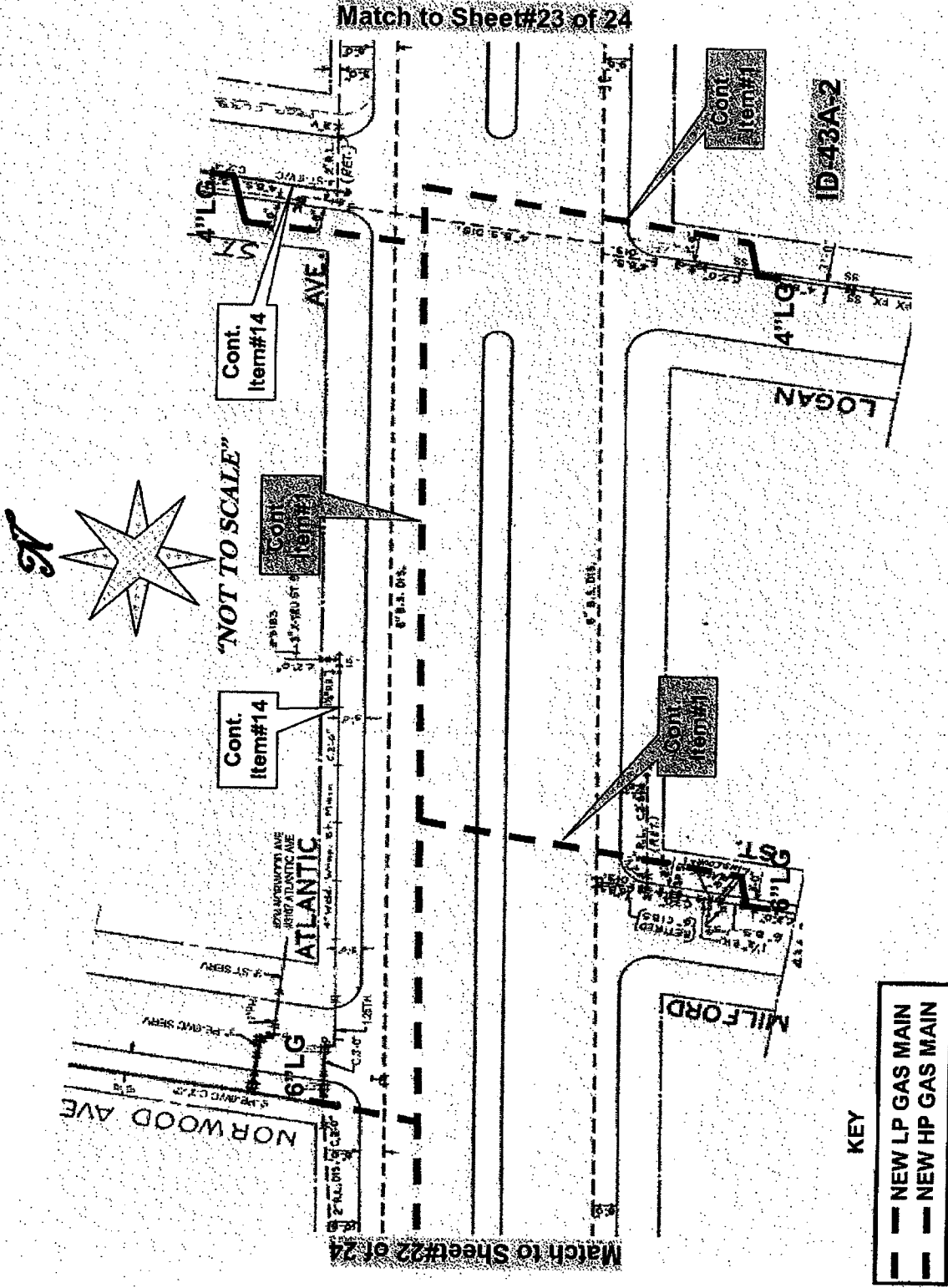
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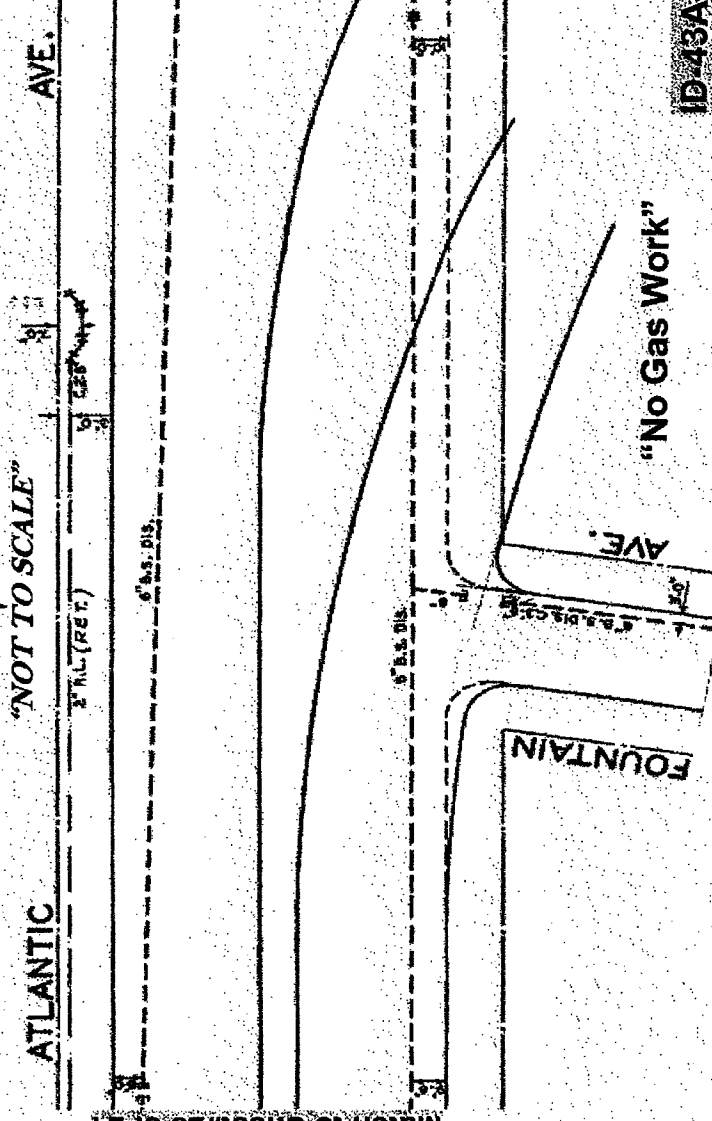
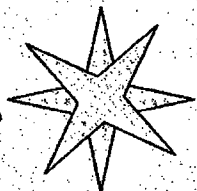
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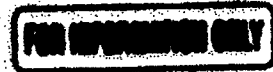
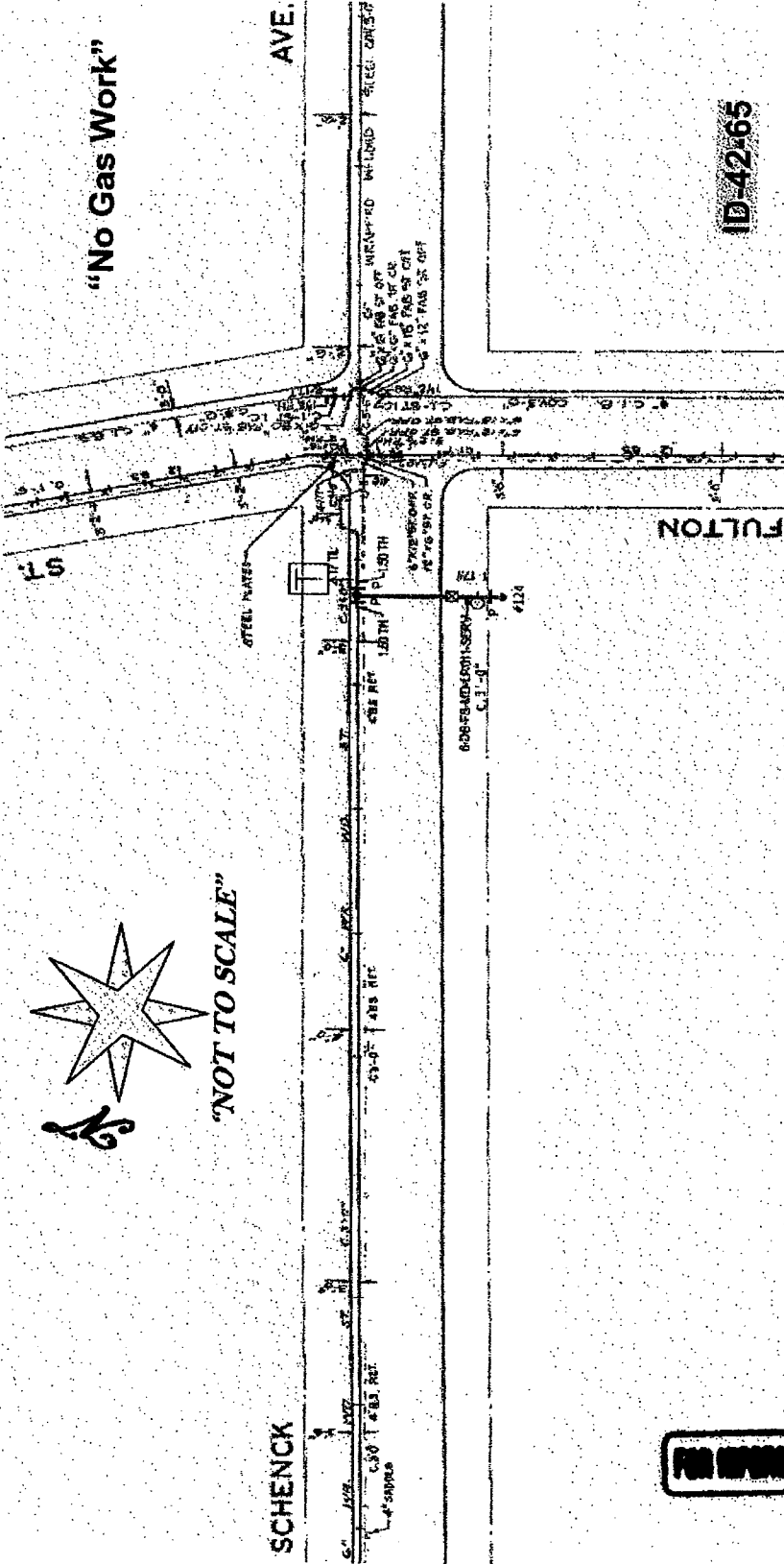


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EP-27Z

**VI - LISTING OF APPROXIMATE LOCATIONS OF EP-7 BID
ITEMS QUANTITIES**

(NO TEXT IN THIS AREA, TURN PAGE)

**SCOPE OF WORK
SUPPORT AND PROTECTION
FOR CONTRACT NUMBER HWD-10105**

The City of New York Department of Design and Construction is planning to install sewers and/or water mains and all appurtenances in various locations in The City of New York along with all work incidental thereto.

6.01.8 - Support & Protect Gas Services Crossing Trenches And/Or Excavations (Ea.)

5 in Atlantic Ave. between Hendrix St. & Schenck Ave.
4 in Atlantic Ave. between Schenck Ave. & Barbey St.
5 in Atlantic Ave. between Barbey St. & Jerome St.
1 in Atlantic Ave. between Jerome St. & Warwick St.
3 in Atlantic Ave. between Warwick St. & Ashford St.

6.01.9 - Support & Protect Gas Main Crossing Water Main Up To 20" In Diameter (Ea.)

2 in New Jersey Ave. @ Atlantic Ave.
1 in Logan St. @ Atlantic Ave.
1 in Milford St. @ Atlantic Ave.
1 Norwood Ave. @ Atlantic Ave.
1 in Montauk Ave. @ Atlantic Ave.
1 in Ashford Ave. @ Atlantic Ave.
2 in Warwick St. @ Atlantic Ave.
1 Jerome St. @ Atlantic Ave.
2 in Gerogia Ave. @ Atlantic Ave.
2 in Schenck Ave. @ Atlantic Ave.
2 in Van Siclen Ave. @ Atlantic Ave.
4 in Miller Ave. @ Atlantic Ave.
4 in Bradford St. @ Atlantic Ave.
4 in Hendrix St. @ Atlantic Ave.
2 in Vermont St. @ Atlantic Ave.
3 in Pennsylvania Ave. @ Atlantic Ave.
2 in Sheffield Ave. @ Atlantic Ave.
1 in Barbey St. @ Atlantic Ave.
2 in Wyona St. @ Atlantic Ave.

6.02 - Extra Excavation For The Installation Of Catch Basin Sewer Drain Pipes With Gas Interferences (Ea.)

1 in Vermont St. @ Atlantic Ave.
1 in Bradford St. @ Atlantic Ave.

6.03 - Removal Of Abandoned Gas Facilities. All Sizes (L.F.)

4,100 in Various Locations As Required

6.03.1 - Removal Of Abandoned Gas Facilities With Possible Coal Tar Wrap. All Sizes. (For National Grid Work Only) (L.F.)

**SCOPE OF WORK
SUPPORT AND PROTECTION
FOR CONTRACT NUMBER HWD-10105**

The City of New York Department of Design and Construction is planning to install sewers and/or water mains and all appurtenances in various locations in The City of New York along with all work incidental thereto.

2,600 in Various Locations As Required

6.04 - Adjust Hardware To Grade Using Spacer Rings / Adaptor (Street Repaving) (Ea.)

100 in Various Locations As Required

6.05 - Adjust Hardware To Grade By Resetting (Road Reconstruction) (Ea.)

100 in Various Locations As Required

6.06 - Special Care Excavation & Backfilling (C.Y.)

1,500 CY In Various Locations As Required, Including But Not Limited To All Gas Services Crossing Unsheeted Water Main Trenches.

6.07 - Test Pits For Gas Facilities (C.Y.)

100 in Various Locations As Required.

HAZ - PAGES

**SPECIFICATIONS FOR HANDLING,
TRANSPORTATION AND DISPOSAL
OF NONHAZARDOUS AND POTENTIALLY
HAZARDOUS CONTAMINATED MATERIALS**

NOTICE

THE PAGES CONTAINED IN THIS SECTION ARE ISSUED FOR THE PURPOSE OF SPECIFYING THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND HEREBY MADE PART OF SAID CONTRACT DOCUMENTS.

(NO TEXT ON THIS PAGE)

Table of Contents

ITEM 8.01 C1	<u>HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOILS</u>	HAZ-2
ITEM 8.01 C2	<u>SAMPLING AND TESTING OF CONTAMINATED/POTENTIALLY HAZARDOUS SOILS FOR DISPOSAL PARAMETERS</u>	HAZ-8
ITEM 8.01 H	<u>HANDLING, TRANSPORTING AND DISPOSAL OF HAZARDOUS SOILS</u>	HAZ-10
ITEM 8.01 S	<u>HEALTH AND SAFETY</u>	HAZ-16
ITEM 8.01 W1	<u>REMOVAL, TREATMENT AND DISCHARGE/DISPOSAL OF CONTAMINATED WATER</u>	HAZ-21
ITEM 8.01 W2	<u>SAMPLING AND TESTING OF CONTAMINATED WATER</u>	HAZ-28

Attachments

1. New York City Department of Environmental Protection Limitations for Effluent to Storm-Sanitary or Combined Sewers Parameters
2. Applicable Regulations
3. Definitions
4. Phase II Subsurface Corridor Investigation Report

ITEM 8.01 C1 HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOILS

8.01 C1.1 WORK TO INCLUDE

General: This work shall consist of the handling, transportation and disposal of non-hazardous contaminated soils. The materials covered by this specification are soils that are contaminated with petroleum or chemical products but cannot be classified as hazardous waste. For the purpose of this specification, soil shall be defined as any material excavated below the pavement and base for pavement.

Non-hazardous contaminated soils are defined as soils exhibiting one or more of the following characteristics:

- ◆ Elevated Photo-Ionization Detector (PID) readings, subsequently confirmed by lab analysis
- ◆ Visual evidence of contamination
- ◆ Petroleum and/or chemical odors
- ◆ Soils that have been documented as contaminated in previous environmental reports

Non-hazardous contaminated soils must be stockpiled at an off-site approved location or secured on-site by the Contractor, meeting all required Federal, State and Local stipulations. Sampling and laboratory analysis must be conducted to determine if the soils are hazardous, unless the alternative procedure as defined under subsection 8.01 C1.1 A.5 has been agreed upon by treatment facilities. Contaminated soils determined to be non-hazardous shall be handled in accordance with the specifications herein for Item 8.01 C1. Contaminated soils determined to be hazardous shall be handled in accordance with the specifications for Item 8.01 H – Handling, Transporting and Disposal of Hazardous Soils.

The Contractor shall retain the services of an independent Environmental Consultant, as specified under Item 8.01 S – Health and Safety, to oversee the work required under this Item.

Non-hazardous soils shall be delivered to the disposal or treatment facility within thirty (30) calendar days after excavation.

The Contractor shall conduct sampling and analysis of the impacted soils as specified under Item 8.01 C2 – Sampling and Testing of Contaminated/Potentially Hazardous Soils for Disposal Parameters. The laboratory results shall be forwarded to DDC Program Management, Office of Environmental and Geotechnical Services (OEGS), for review to determine if the soils will be handled and disposed of as contaminated regulated soils or hazardous waste. No other soils shall be sampled or tested without the DDC's approval or direction.

The Contractor shall ensure that all operations associated with the handling, sampling, loading, transportation, and disposal of non-hazardous contaminated soils are in compliance with all applicable Federal, State, and City statutes and regulations.

The Contractor shall document the excavation, handling, transportation and disposal of non-hazardous contaminated soils. The Contractor shall supply all equipment, material and labor required to conduct the specified work of this Item.

A. Material Handling Plan: Within forty-five (45) calendar days after award of Contract, the Contractor shall submit to DDC Program Management OEGS, for review, a Material Handling Plan (MHP). The MHP must be approved by DDC Program Management OEGS, prior to the Contractor's commencement of work. The MHP shall, at a minimum, consist of:

1. The Contractor's procedures for identifying non-hazardous contaminated soils during excavation, including the specific model and manufacturer of intended organic vapor

monitoring equipment and calibration procedures to be used. It should also include the training and experience of the personnel who will operate the equipment.

1. The Contractor's procedures for safely handling non-hazardous contaminated soils. The procedures must include personnel safety and health as well as environmental protection considerations.
3. Name, address, New York State Department of Health's (DOH) Environmental Laboratories Accreditation Program (ELAP) status and telephone number of the proposed laboratory for analysis of representative soil samples. The ELAP for the intended analysis must approve the laboratory.
4. Identification of the Contractor's proposed waste transporter(s). This information shall include:
 - a. Name and Waste Transporter Permit Number
 - b. Address
 - c. Name of responsible contact for the hauler
 - d. Telephone number for the contact
 - e. Any and all necessary permit authorizations for each type of waste transported
 - f. Previous experience in performing the type of work specified herein
5. All staging/stockpiling areas (if stockpiling areas are intended and available), or alternate procedures that will be used. Alternate procedures may include, but are not limited to, agreements from the intended disposal or treatment facilities to accept boring data and/or analytical data previously obtained during the site characterization so that materials may be directly loaded into vehicles for shipment to the disposal facility.
6. A backup facility should the staging/stockpile areas become unavailable, insufficient in area or not be present by some other unforeseen difficulty.
7. Identification of the Contractor's two proposed Treatment Storage or Disposal (TSD) facilities for non-hazardous contaminated soils (primary and back-up) for final disposal of the soils. The primary TSD shall be an approved soil recycling/treatment facility. The backup facility may be a recycling/treatment facility or a New York State Department of Environmental Conservation (DEC) approved lined landfill or other facility approved by DEC to accept this material. The information required for each facility shall include:
 - a. Facility name and the State identification number
 - (1) Facility location
 - (2) Name of responsible contact for the facility
 - (3) Telephone number for contact
 - (4) Signed letter of agreement to accept waste as specified in this contract
 - (5) Unit of measure utilized at facility for costing purposes
 - b. A listing of all permits, licenses, letters of approval, and other authorizations to operate, which are currently held and valid for the proposed facility.
 - c. A listing of all permits, licenses, letters of approval, and other authorizations to operate which have been applied for by the proposed facility but not yet granted or issued.

- d. The Contractor shall specify and describe the disposal/containment unit(s) that the proposed facility will use to manage the waste. The Contractor shall identify the capacity available in the units and the capacity reserved for the subject waste.
 - e. The Contractor shall provide the date of the proposed facility's last compliance inspection.
 - f. A list of all active (unresolved) compliance orders (or agreements), enforcement notices, or notices of violations issued to the proposed facility shall be provided. The source and nature of the cause of violation shall be stated, if known.
8. Description of all sampling and field/laboratory analyses that will be needed to obtain disposal facility approval.

8.01 C1.2 MATERIALS

- A. Containers shall be as required in the United State Department of Transportation (DOT) regulations.
- B. Polyethylene to be placed under (20 mil. thickness minimum) and over (10 mil. thickness minimum) soil piles.
- C. The Contractor shall assure that the waste hauler's appropriate choice of vehicles and operating practices shall prevent spillage or leakage of contaminated material from occurring en route.
- D. The Contractor shall provide, install and maintain any temporary loading facilities on site as required until completion of material handling activities. The location and design of any facilities shall be included in the MHP and be approved by DDC Program Management OEGS, ESS.

8.01 C1.3 CONSTRUCTION DETAILS

A. Material Handling

- 1. Immediately after excavation of non-hazardous contaminated soil the Contractor shall:
 - a. Load material directly onto trucks/tankers/roll offs for disposal off site; or
 - b. If interim stockpiling is required, place on a minimum of 20 mil. or equivalent plastic ground cloth and cover by minimum of 10 mil. polyethylene sheeting or equivalent to protect against leaching or runoff of contaminants into groundwater or stormwater. Weight or secure the sheeting by appropriate means and seal seams as approved by the DDC to prevent tearing or removal by weather. Grade surrounding surface to provide for positive drainage away from pile. Stockpile shall not exceed 100 cubic yards.
- 2. Institute appropriate procedures and security measures to ensure the protection of site personnel and the public from contaminated materials as described in the approved MHP and Item 8.01 S - Health and Safety.
- 3. Any soil encountered that appears to contain unknown contaminants (based on visual, odor, or other observation), or that vary substantially from the material originally identified must be segregated in stockpiles and the independent Environmental

Consultant promptly notified. Construct stockpiles to the same requirements as stated in subsection A.1.b above.

4. Provide any dewatering that is necessary to complete the work. Contaminated water shall be disposed of in accordance with Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.
5. Provide and operate field organic vapor test equipment, a PID or a flame ionization detector (FID), to detect general organic vapor levels at intervals of approximately fifty (50) cubic yards of soil excavated, when visual or odor observations indicate the material may substantially differ from the soil previously excavated and/or as directed by the independent Environmental Consultant.

B. Off-Site Transportation to Disposal or Treatment Facility

1. General

- a. The Contractor shall furnish all labor, equipment, supplies and incidental costs required to transport contaminated material from the work area to the off-site disposal or treatment facility, and any other items and services required for transporting contaminated material for disposal at an off-site facility.
- b. The Contractor shall submit the name and location of the facility where an off-site scale is located. The Contractor shall also submit a plan to the DDC for review outlining procedures on controlling trucks leaving the work site and en-route to the off-site scale. The Contractor shall be responsible for tracking all material/vehicles from the site to the off-site scale.
- c. The Contractor shall provide to the DDC certified tare and gross weight slips for each load received at the accepted facility which shall be attached to each returned manifest.
- d. The Contractor shall coordinate the schedule for truck arrival and material deliveries at the job site to meet the approved project schedule.
- e. The Contractor shall inspect all vehicles leaving the project site to ensure that contaminated soils adhering to the wheels or undercarriage are removed prior to the vehicle leaving the site.
- f. The Contractor shall obtain letters of commitment from the waste haulers and the treatment, disposal or recovery facility to haul and accept shipments. The letter shall indicate agreement to handle and accept the specified estimated quantities and types of material during the time period specified in the project schedule and any time extension as deemed necessary.
- g. The Program Management OEGS shall review and approve waste profiles before transportation to the TSD facility.

2. Hauling

- a. The Contractor shall coordinate manifesting, placarding of shipments, and vehicle decontamination. All quantities shall also be measured and recorded upon arrival at the disposal or treatment facility. If any deviation between the two records occurs, the matter is to be reported immediately to the DDC and to be resolved by the Contractor to the satisfaction of the DDC.
- b. The Contractor shall be held responsible, at its own cost for any and all actions necessary to remedy situations involving material spilled in transit or mud and dust tracked off-site.

- c. The Contractor shall ensure that trucks are protected against contamination by properly covering and lining them with compatible material (such as polyethylene) or by decontaminating them prior to and between acceptances of loads.
 - d. The Contractor shall be responsible for inspecting the access routes for road conditions, overhead clearance, and weight restrictions.
 - e. The Contractor shall only use the transporter(s) identified in the MHP for the performance of work. Any use of substitute or additional transporters must have previous written approval from DDC Program Management OEGS, at no additional cost to the City.
 - f. The Contractor shall develop, document, and implement a policy for accident prevention.
 - g. The Contractor shall not combine contaminated materials from other projects with material from this project.
 - h. No material shall be transported until approved by the DDC.
3. Off-Site Disposal
- a. The Contractor shall use only the facility(ies) identified in the MPH for the performance of the work. Substitutions or additions shall not be permitted without prior written approval from DDC Program Management OEGS, and if approved shall be at no extra cost to the City.
 - b. The Contractor shall be responsible for acceptance of the materials at an approved facility, for ensuring that the facility is properly permitted to accept the stated materials, and that the facility provides the stated treatment and/or disposal services.
 - c. The DDC reserves the right to contact and visit the disposal or treatment facility and regulatory agencies to verify the agreement to accept the stated materials and to verify any other information provided.
 - d. In the event that the identified and approved facility ceases to accept the stated materials or the facility ceases operations, it is the Contractor's responsibility to locate an alternate approved and permitted facility(ies) for accepting materials. The alternate facility(ies) must be approved in writing by the DDC in the same manner and with the same requirements as for the original facility(ies). This shall be done at no extra cost or delay to the City.
 - e. The Contractor shall obtain manifest forms, and complete the shipment manifest records required by the appropriate regulatory agencies for verifying the material and quantity of each load in unit of volume and weight. Copies of each manifest shall be submitted to the DDC within four (4) business days following shipment, and within three (3) business days after notification of receipt of the facility. Any manifest discrepancies shall be reported immediately to the DDC and be resolved by the Contractor to the satisfaction of the DDC.
4. Equipment and Vehicle Decontamination
- a. The Contractor shall design and construct a portable decontamination station to be used to decontaminate equipment and vehicles exiting from the exclusion zone. The cost for this work will be paid under Item 8.01 S - Health and Safety.

- b. Water generated during the decontamination process shall be disposed of in accordance with Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.

8.01 C1.4 METHOD OF MEASUREMENT

Quantities for non-hazardous contaminated soils shall be measured in tons. The tonnage will be determined by off-site truck scales, as per Subsection 8.01 C1.3.B1, that are capable of generating load tickets.

8.01 C1.5 PRICE TO COVER

- A. The unit bid price bid per ton for Item 8.01 C1 shall include the cost of furnishing all labor, materials, equipment, plan, and insurance for excavation, handling, transportation, disposal, documentation, fees, permits, loading, stockpiling, hauling, and any other incidentals necessary to complete all the work as specified herein for handling, transporting, and disposal of non-hazardous contaminated soil.
- B. Final disposal of hazardous soil shall be paid for under Item 8.01 H – Handling, Transporting and Disposal of Hazardous Soils. Disposal of decontamination water shall be paid for under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.
- C. Backfill will be paid for under its respective item as specified in the contract document.
- D. The independent Environmental Consultant shall be paid under Item 8.01 S – Health and Safety.

Payment will be made under:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>PAYMENT UNIT</u>
8.01 C1	Handling, Transporting, and Disposal of Non-Hazardous Contaminated Soil	Tons

ITEM 8.01 C2 SAMPLING AND TESTING OF CONTAMINATED/ POTENTIALLY HAZARDOUS SOIL FOR DISPOSAL PARAMETERS**8.01 C2.1 WORK TO INCLUDE****A. Description**

The work shall consist of collecting and analyzing representative soil samples for parameters typically requested by the disposal facilities.

B. Sampling and Laboratory Analysis

1. At least thirty (30) days prior to the commencement of work, the Contractor's independent Environmental Consultant must submit a Soil Sampling Plan/Field Sampling Plan (SSP/FSP) to DDC Program Management OEGS for review and approval. The plan shall include the name, address, DOH's ELAP status, and telephone numbers of the proposed laboratory. The plan shall also include training and experience of the personnel who will collect the samples.
2. The Contractor shall sample and analyze representative samples of the contaminated/potentially hazardous soils. For stockpiled soils, the Contractor shall collect and analyze one (1) composite sample per 500 cubic yards or fraction thereof. Each composite sample shall consist of a minimum of five (5) grab samples collected from greater than two (2) feet below the soil surface. For drummed soil, the Contractor shall collect one (1) composite sample per (ten) 10 drums or fraction thereof. Each composite sample shall consist of a grab sample from each of the ten (10) drums or fraction thereof. Each composite sample shall be analyzed for Resource Conservation and Recovery Act (RCRA) hazardous waste characteristics (Ignitability, Reactivity, Corrosivity), Full Toxicity Characteristic Leaching Procedure (TCLP) (including RCRA metals, volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), pesticides, herbicides), Total Petroleum Hydrocarbons (TPH) and Polychlorinated Biphenyls (PCBs). All samples collected should be analyzed on a five (5) calendar days turn around time and analytical results must be submitted to DDC Program Management OEGS upon receipt of the analytical results.
3. All sampling shall be conducted by a person trained in sampling protocols using standard accepted practices for obtaining representative samples.
4. The Contractor must also contact the disposal facility where the waste will be sent for permanent disposal, and arrange to collect any additional samples required by the facility. The cost associated with additional sampling and testing shall be included in the bid price of this Item.
5. The quality of the data from the sampling program is the Contractor's responsibility. The Contractor must furnish all qualified personnel, equipment and instruments necessary to carry out the sampling. Unless directed otherwise, all sampling procedures must follow the DEC sampling guidelines and protocols.
6. All sample containers shall be marked and identified with legible sample labels which shall indicate the project name, sample location and/or container, the sample number, the date and time of sampling, preservatives utilized and other information that may be useful in determining the character of the sample. Chain-of-custody shall be tracked from laboratory issuance of sample containers through laboratory receipt of the samples.

7. The Contractor shall maintain a bound sample logbook. The Contractor shall provide DDC access to it at all times and shall turn it over to the DDC in good condition at the completion of the work. The following information, as a minimum shall be recorded to the log:
 1. Sample identification number
 2. Sample location
 3. Field observation
 4. Sample type
 5. Analyses
 6. Date/time of collection
 7. Collector's name
 8. Sample procedures and equipment utilized
 9. Date sent to laboratory and name of laboratory
8. The City reserves the right to direct the Contractor to conduct alternative sampling in lieu of the parameters described in subsection B2, if the situation warrants. The substitute sampling parameters shall be of equal or lesser monetary value than those described in subsection B2, as determined by industry laboratory pricing standards.
9. Only dedicated sampling equipment may be used to collect these samples. All equipment involved in field sampling must be decontaminated before being brought to the sampling location, and must be properly disposed after use.
10. Soils exceeding any of the hazardous characteristic criteria meet the legal definition of hazardous soils (rather than non-hazardous contaminated soils) and shall be transported or disposed of under Item 8.01 H – Handling, Transporting and Disposal of Hazardous Soils. All analyses must be done by a laboratory that has received approval from the ELAP for the methods to be used. The Contractor must specify the laboratory in the MHP.

8.01 C2.2 METHOD OF MEASUREMENT

Quantities for samples shall be measured as the number of sets of samples that are tested. A set shall be defined as one (1) composite sample analyzed for the full range of parameters as specified in subsection B2.

8.01 C2.3 PRICE TO COVER

The unit price bid per set for Item 8.01 C2 shall include the cost of furnishing all labor, materials, equipment, plan, and insurance necessary for sampling, handling, transporting, testing, documentation, fees, permits and any other incidentals necessary to complete the work as specified herein for sampling and testing of contaminated/potentially hazardous soil.

Payment will be made under:

ITEM NUMBER	ITEM	PAYMENT UNIT
8.01 C2	Sampling and Testing of Contaminated/ Potentially Hazardous Soil for Disposal Parameters	Set

ITEM 8.01 H HANDLING, TRANSPORTING, AND DISPOSAL OF HAZARDOUS SOILS

8.01 H.1 WORK TO INCLUDE

General: This work shall consist of the handling, transportation and disposal of soils or materials that are listed as hazardous wastes or exhibit any of the characteristics of a hazardous waste, namely ignitability, corrosivity, reactivity, and toxicity, as defined in 6 NYCRR Part 371, Section 371.3 and 40 CFR Section 261. For the purpose of this specification, soils shall be defined as any materials excavated below the pavement and base for pavement.

Contaminated soils determined to be hazardous under Item 8.01 C2 shall be handled, transported, and disposed of under Item 8.01 H in accordance with the specifications herein.

The independent Environmental Consultant retained by the Contractor, as specified under Item 8.01 S – Health and Safety, shall conduct sampling and analysis of above soils to determine which soils are hazardous.

All work under Item 8.01 H shall be performed under the direct supervision of the Contractor's Environmental Consultant, as approved by DDC Program Management OEGS.

The Contractor shall ensure that all operations associated with the handling, sampling, loading, transportation, and disposal of hazardous materials are in compliance with the applicable Federal, State, and Local statutes and regulations.

The Contractor shall document the excavation, handling, sampling, and testing, transportation and disposal of hazardous soils. The City shall be listed in the disposal documents as the waste generator.

The Contractor shall supply all equipment, material and labor required to conduct the specified work of this section.

The Contractor shall ensure that all operations associated with the handling, sampling, loading, transportation and disposal of hazardous soils are conducted in a manner to protect site personnel, the public and the environment, in accordance with all applicable Federal, State, and Local laws and regulations.

The Contractor shall decontaminate all equipment prior to its removal from the exclusion zone and/or following contact with hazardous materials, as detailed in Item 8.01 S - Health and Safety. Water generated during the decontamination process shall be disposed of under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.

A. Material Handling Plan: Within forty-five (45) calendar days after award of Contract, the Contractor shall submit to DDC Program Management OEGS for review, a Material Handling Plan (MHP). The MHP must be approved by DDC Program Administration, ESS, prior to the Contractor's commencement of work. The MHP shall, at a minimum, consist of:

1. The Contractor's procedures for identifying contaminated/potentially hazardous soils during excavation, including instrumentation and calibration procedures to be used.
2. The Contractor's procedures for safely handling hazardous soils or soils which have not yet been tested but are believed to be potentially hazardous.
3. Identification of the Contractor's proposed waste transporter(s). This information shall include:
 - a. Name and waste transporter permit number
 - b. Address
 - c. Name of responsible contact for the hauler

- d. Telephone number for the contact
 - e. Any and all necessary permit authorizations for each type of waste transported
 - f. Previous experience in performing the type of work specified herein
4. All staging/stockpiling areas (if stockpiling areas are intended and available), or alternate procedures that will be used. Alternate procedures could include, but are not limited to, agreements from the intended disposal or treatment facilities to accept boring data and/or analytical data previously obtained during the site characterization so that materials may be directly loaded into vehicles for shipment to the disposal facility or the use of off-site stockpiling locations approved by the DEC.
 5. A backup facility, should the staging/stockpile areas become unavailable, insufficient in area or not be present by some other unforeseen difficulty.
 6. Identification of the Contractor's two proposed United State Environmental Protection Agency (EPA) or DEC approved RCRA TSD facilities for hazardous soils.
 7. The Contractor shall submit the following information prior to any transportation of soils regarding the temporary and final off-site TSD or facilities where it is proposing to take hazardous soils. The expense of furnishing all information will be included in the Contractor's bid price:
 - a. General Information
 - (1) Facility name and the EPA identification number
 - (2) Facility location
 - (3) Name of responsible contact for the facility
 - (4) Telephone number for contact
 - (5) Signed letter of agreement to accept waste as specified in this contract
 - (6) Signed letter of agreement with a TSD for disposal of waste that may not be land-disposed
 - (7) Unit of measure utilized at each facility for costing purposes
 - b. A listing of all permits, licenses, letters of approval, and other authorizations to operate, which are currently held and valid for the proposed facility as they pertain to receipt and management of wastes derived from this Contract.
 - c. A listing of all permits, licenses, letters of approval, and other authorizations to operate which have been applied for by the proposed facility.
 - d. The Contractor shall specify and describe the disposal/containment unit(s) that the proposed facility will use to manage the waste. The Contractor shall identify the capacity available in the units and the capacity reserved for the subject waste.
 - e. The Contractor shall provide the date of the proposed facility(ies) last compliance inspection under RCRA.
 - f. A list of all active (unresolved) compliance orders, agreements, enforcement notices or notices of violations issued to the proposed facility shall be approved. The source and nature of the cause of violation shall be stated, if known.
 8. Description of all sampling and analyses that will be needed to obtain disposal facility approval.

8.01 H.2 MATERIALS

- A. Containers shall be watertight as required in the DOT regulations and must meet all applicable regulations including but not limited to those in Attachment 2.
- B. Polyethylene (20 mil. thickness minimum) to be placed under and (10 mil. thickness minimum) over soil piles. If soils are placed in drums, polyethylene must be placed over the drums.

8.01 H1.3 CONSTRUCTION DETAILS**A. Material Handling**

- 1. The Contractor shall institute procedures to protect site personnel and the public from the non-hazardous and hazardous materials as described in Section 8.01 S - Health and Safety.
- 2. The Contractor shall handle hazardous soil as approved in the MHP.
- 3. Stockpiled materials at the temporary TSD facility shall be handled according to the facility requirements but at a minimum: shall be drummed or placed on and covered with polyethylene to protect against erosion and leaching into surrounding soils, the stockpile area shall be graded for positive drainage away from the pile, and shall be labeled while being held for sampling prior to permanent disposal.
- 4. Provide any dewatering that is necessary to complete the work. Water shall be disposed of in accordance with Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.

B. Off-Site Transportation and Disposal

- 1. The Contractor shall furnish all labor, equipment and supplies required to transport hazardous materials from the work area to the off-site TSD facility(ies) and to acquire any other items and services required for transporting hazardous materials for storage and/or disposal at an approved off-site facility.
- 2. **Weight Measurement**
 - a. The Contractor shall submit the name and location of the facility where an off-site scale is located. The Contractor shall also submit a plan to the DDC for review outlining procedures on controlling trucks leaving the work site and on-route to the off-site scale. The Contractor shall be responsible for tracking all materials/vehicles from the site to the off-site scale.
 - b. The Contractor shall provide to the DDC certified tare and gross weight slips for each load received at the accepted facility which shall be attached to each returned manifest.
- 3. **General**
 - a. Manifests: The Contractor shall organize and maintain the material shipment records/manifests required by law.
 - b. The Contractor shall coordinate the schedule for truck arrival and material deliveries at the job site to meet the approved project schedule. The schedule shall be compatible with the availability of equipment and personnel for material handling at the job site.

- c. The Contractor shall inspect all vehicles leaving the project site to ensure that hazardous soils adhering to the wheels or under carriage are removed prior to the vehicle leaving the site.
 - d. The Contractor shall obtain letters of commitment from the waste haulers and the TSD facility to haul and accept shipments. The letter shall indicate agreement to handle and accept the specified estimated quantities and types of material during the time period specified in the project schedule and any time extension as deemed as necessary.
4. Hauling
- a. The Contractor shall not deliver waste to any facility other than the TSD facility(ies) listed on the shipping manifest.
 - b. The Contractor shall coordinate manifesting, placarding, of shipments, and vehicle decontamination. All quantities shall also be measured and recorded upon arrival at the TSD facility. If any deviation between the two records occurs, the matter is to be reported immediately to the DDC and to be resolved by the Contractor to the satisfaction of the DDC.
 - c. The Contractor shall be held responsible, at its own expense, for any and all actions necessary to remedy situations involving material spilled in transit or mud and dust tracked off-site.
 - d. The Contractor shall ensure that trucks are protected against contamination by properly covering and lining them with compatible material (such as polyethylene) or by decontaminating them prior to any use other than hauling hazardous materials.
 - e. The Contractor shall be responsible for inspecting the access routes for road conditions, overhead clearance, and weight restrictions.
 - f. The Contractor shall only use the transporter(s) identified in the MHP for the performance of work. Only a transporter with a current Part 364 Waste Transporter Permit from the DEC may transport this material. Any use of substitute or additional transporters must have previous written approval from the DDC at no additional cost to the City.
 - g. The Contractor shall develop, document, and implement a policy for accident prevention.
 - h. The Contractor shall not combine hazardous materials from other projects with material from this project.
 - i. The Contractor shall obtain for the City an EPA hazardous waste generator identification number and a representative of DDC Program Management OEGS will review and sign the manifest as the generator.
 - j. No materials shall be transported until approved by the DDC.
5. Off-Site Disposal
- a. The Contractor shall be responsible for acceptance of the materials at an approved TSD facility, for ensuring that the facility is properly permitted to accept the stated materials, and that the facility provides the stated storage and/or disposal services.
 - b. In the event that the identified and approved facility ceases to accept the stated materials or the facility ceases operations, it is the Contractor's responsibility to locate an alternate approved and permitted facility(ies) for accepting materials.

The Contractor is responsible for making the necessary arrangements to utilize the facility(ies), and the alternate facility(ies) must be approved in writing by the DDC in the same manner and with the same requirements as for the original facility(ies). This shall be done with no extra cost or delay to the City.

- c. The Contractor shall submit all results and weights to the DDC.
 - d. The Contractor is responsible to pay all fees associated with the generation and disposal of all excavated hazardous waste. These fees include, but are not limited to, the New York State Department of Finance and Taxation (DFT) quarterly fees for hazardous waste and the New York State DEC annual hazardous waste regulatory fee program. The Contractor shall submit a copy of proof of payment to the DDC and DDC Program Management OEGS.
6. Equipment and Vehicle Decontamination
- The Contractor shall design and construct a portable decontamination station to be used to decontaminate equipment and vehicles exiting from the exclusion zone. The cost for this work shall be paid under Item 8.01 S - Health and Safety. Disposal of decontamination liquids is described under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.
7. Record Keeping
- The Contractor shall obtain manifest forms, and complete the shipment manifest records required by the appropriate regulatory agencies for verifying the material and quantity of each load in unit of volume and weight. Copies of each manifest shall be submitted to the DDC within four (4) business days following shipment, and within three (3) business days after notification of receipt of the facility. Any manifest discrepancies shall be reported immediately to the DDC and be resolved by the Contractor to the satisfaction of the DDC.

8.01 H.4 METHOD MEASUREMENT

Quantities for hazardous soil shall be measured in tons satisfactorily delivered to the treatment, storage or disposal facility. The tonnage will be determined by off-site truck scales, as per subsection 8.01 H1.3.B.2, that are capable of generating load tickets.

8.01 H.5 PRICE TO COVER

- A. The unit price bid per ton for Item 8.01 H shall include the cost of furnishing all labor, materials, equipment, plan, and insurance for excavation, handling, transportation, disposal, documentation, permits, fees, taxes, stockpiling, hauling, and any other incidentals necessary to complete the work as specified herein for handling, transporting and disposal of hazardous soils.
- B. Final disposal of non-hazardous materials shall be paid for under Item 8.01 C1 – Handling, Transporting and Disposal of Non-Hazardous Soils. Disposal of decontamination water shall be paid under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.
- C. The independent Environmental Consultant shall be paid under Item 8.01 S – Health and Safety.
- D. Backfill will be paid for under its respective item.

Payment will be made under:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>PAYMENT UNIT</u>
8.01 H	Handling, Transporting, and Disposal of Hazardous Soils	Tons

ITEM 8.01 S HEALTH AND SAFETY**8.01 S.1 WORK TO INCLUDE**Health and Safety Requirements**A. Scope of Work**

It is the Contractor's responsibility to stage and conduct his work in a safe manner. The Contractor shall implement a Health and Safety Plan (HASP) for contaminated/hazardous soil intrusive activities as set forth in Occupational Safety and Health Administration (OSHA) Standards 1910.120 and 1926.650-652. The Contractor shall ensure that all workers have at a minimum hazard awareness training. The Contractor shall segregate contaminated work area in secured exclusion zones. These zones shall limit access to Contractor personnel specifically trained to enter the work area. The exclusion zone shall be set up to secure the area from the public and untrained personnel. The project health and safety program shall apply to all construction personnel including persons entering the work area. In addition, the Contractor shall protect the public from on-site hazards, including subsurface contaminants associated with on-site activities. The HASP shall be signed off by a Certified Industrial Hygienist and reviewed by DDC Program Management OEGS.

Work shall include, but not be limited to:

1. Implementation of a baseline medical program.
2. Providing safety equipment and protective clothing for site personnel, including maintenance of equipment on a daily basis; replacement of disposable equipment as required; decontamination of clothing, equipment and personnel; and providing all other health and safety measures.
3. Providing, installing, operating and maintaining on-site emergency medical first aid equipment as specified in this section for which payment is not provided under other pay items in this Contract.
4. Providing, installing, operating, maintaining and decommissioning all equipment and personnel decontamination facilities specified within this section, including, but not limited to, the decontamination pad, decontamination water supply, decontamination water collection equipment and all other items and services required for the implementation of the health and safety requirements for which pay items are not provided elsewhere in this Contract.
5. Provide the minimum health and safety requirements for excavation activities within the limits of this Contract.
6. Implement and enforce a HASP: The HASP as presented in these specifications is dynamic with provisions for change to reflect new information, new practices or procedures, changing site environmental conditions or other situations which may affect site workers and the public. The HASP will also address measures for community protection, accident prevention, personnel protection, emergency response/contingency planning, air monitoring, odor control and hazardous chemicals expected on site. Providing a Confined Space Entry Program as defined in the Occupational Safety and Health Act, Confined Space Entry Standard, 29 CFR 1910.146.

B. Environmental Consulting Services

The Contractor shall retain an independent Environmental Consultant to obtain all permits and perform all field screening, air monitoring, community air monitoring, soil sampling, and health and safety services. The independent Environmental Consultant shall at a minimum provide documentation to DDC Program Management OEGS demonstrating the minimum requirements as set forth below:

1. The independent Environmental Consultant project supervisor on site and other designated key personnel shall have a minimum of three (3) years experience in the environmental field dealing with issues associated with contaminated soils. Such experience shall include oversight on environmental, specifically volatile organic compound and dust monitoring services as a routine part of its daily operations.
2. The independent Environmental Consultant must be experienced in work of this nature, size, and complexity and must have previous experience in working with the DEC.
3. The independent Environmental Consultant shall furnish a project listing identifying the location, nature of services provided, owner, owner's contact, contact's telephone number, project duration and value for at least five (5) projects within the last three (3) years.
4. If conditions within the exclusion zone are deemed hazardous, then the Contractor and its independent Environmental Consultant shall ensure that all personnel working within identified exclusion zones and/or involved (direct contact) with the handling, storage or transport of hazardous and contaminated materials shall have completed a minimum of forty (40) hours of Health and Safety Training on Hazardous Waste Sites in accordance with 29 CFR 1910.120(e). The training program shall be conducted by a qualified safety instructor. If conditions in the exclusion zone are deemed to be non-hazardous, the independent Environmental Consultant shall provide site specific training.
5. The Contractor shall ensure that on-site management and supervisors directly responsible for or who supervise employees engaged in hazardous waste operations shall receive the training specified in above and at least eight (8) additional hours of specialized training on managing such operations at the time of job assignment.

C. Submittals

1. The Contractor shall submit, within forty-five (45) calendar days after the contract award, a written HASP as specified herein, to DDC Program Management OEGS for review and comment. The Contractor shall make all necessary revisions required by DDC Program Management OEGS and resubmit the HASP to DDC Program Management OEGS for acceptance. Start-up work for the project will not be permitted until written acceptance has been issued by DDC Program Management OEGS.
2. Daily safety logs shall be maintained by the Contractor and shall be submitted to the DDC either on request or on completion of the work. Training logs shall be maintained by the Contractor and submitted to the DDC either on request or on completion of the work. Daily logs on air monitoring during excavation activities shall be prepared and maintained by the Contractor and submitted to the DDC either on request or upon completion of the work.
3. A closeout report shall be submitted by the Contractor to the DDC upon completion of the work within the defined exclusion zones. This report shall summarize the daily safety and monitoring logs and provides an overview of the Contractor's performance regarding environmental and safety issues. The report shall carefully document all areas

where contamination has been found including pictures, addresses of locations, and potential sources.

4. Medical Surveillance Examinations: The Contractor shall submit to the DDC the name, office address and telephone number of the medical consultant utilized. Evidence of baseline medical examinations together with the evidence of the ability to wear National Institute for Occupational Safety and Health (NIOSH) approved respirators (as specified in American National Standards Institute (ANSI) Z88.6) shall be provided to the DDC for all construction personnel who are to enter the exclusion zones.
5. Accident Reports: All accidents, spills, or other health and safety incidents shall be reported to the DDC.

D. Health and Safety Plan

The HASP shall comply with OSHA regulations 29 CFR 1910.120/1926.65. This document shall at a minimum contain the following:

1. Description of work to be performed
2. Site description
3. Key personnel
4. Worker training procedures
5. Work practices and segregation of work area
6. Hazardous substance evaluation
7. Hazard assessment
8. Personal and community air monitoring procedures and action levels
9. Personal protective equipment
10. Decontamination procedures
11. Safety rules
12. Emergency procedures
13. Spill control, dust control, vapor/odor suppression procedures
14. Identification of the nearest hospital and route
15. Confined space procedures
16. Excavation safety procedures

8.01 S.2 MEASUREMENT

Health and Safety Requirements

- A. 25% of the lump sum price will be paid when the following items are implemented or mobilized:

- Medical surveillance program
- Health and safety training
- Health and safety plan
- Environmental and personnel monitoring
- Instrumentation
- Spill control
- Dust control
- Personnel and equipment decontamination facilities
- Personnel protective clothing
- Communications
- Mobilization

- B. 50% will be paid in proportional monthly amounts over the period of work.
- C. 25% will be paid when the operation is demobilized and removed from the project site.

8.01 S.3 PRICE TO COVER**Health and Safety Requirements**

The lump sum price bid for the health and safety requirements shall include all labor, materials, equipment, and insurance necessary to complete the work in accordance with these specifications. The price bid shall include, but not be limited to, the following:

- A. Providing training, safety personnel, air monitoring and medical examinations as specified.
- B. Providing safety equipment and protective clothing for site personnel, including maintenance of equipment on a daily basis; replacement of disposable equipment as required; decontamination of clothing, equipment and personnel; and all other health and safety activities or costs not paid for under other pay items in this Contract.
- C. Providing, installing, operating and maintaining on-site emergency medical and first aid equipment. This includes all furnishings, equipment, supplies and maintenance of all medical equipment, and all other health and safety items and services for which payment is not provided under other pay items in this Contract.
- D. Providing, installing, operating, maintaining, and decommissioning all personnel and equipment decontamination facilities, including decontamination pad, decontamination water supply, and all other items and services required for the implementation of the health and safety requirements for which pay items are not provided elsewhere in this Contract. Vehicle decontamination pads shall be included in the price of this item. Disposal of decontamination fluid shall be paid for under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.
- E. **Spill Control**
 - 1. Payment shall account for furnishing, installing, and maintaining all spill control equipment and facilities. Payment will include equipment and personnel to perform emergency measures required to contain any spillage and to remove spilled materials and soils or liquids that become contaminated due to spillage during work within the exclusion zones and handling of excavated soils and liquids from these areas. This collected spill material will be properly disposed of.
 - 2. Payment under this item shall not include testing, handling, transportation or disposal of contaminated/potentially hazardous soils excavated during construction. The price for this work will be paid for under Items 8.01 C1 – Handling, Transporting and Disposal of Non-Hazardous Contaminated Soils, 8.01 C2 – Sampling and Testing of Contaminated/Potentially Hazardous Soil for Disposal Parameters or 8.01 H – Handling, Transporting and Disposal of Hazardous Soils, as appropriate.
- F. **Dust Control**

Payment shall account for furnishing, installing, and maintaining dust control equipment and facilities to be used whenever applicable dust levels are exceeded. Payment will include all necessary labor, equipment, clean water, foam, and all other materials required by the Dust Control Plan. The DOH Community Air Monitoring Plan (CAMP) may be used as guidance.
- G. **Vapor/Odor Suppression**

Payment shall account for furnishing, installing and maintaining vapor/odor control equipment and facilities to be used whenever organic vapor monitoring or the presence of odors indicates that vapor suppression is required to protect workers or the public. Payment will include all

necessary labor, equipment, clean water, foam and all other materials required by the Vapor/Odor Suppression Plan.

H. Mobilization/Demobilization

1. Mobilization

Payment shall include but not be limited to:

- a. All work required to furnish, install and maintain all signs, fencing, support zone facilities, parking areas and all temporary utilities;
- b. All work required to furnish, install, and maintain an office space with phone and utilities for health and safety personnel;
- c. All work required for complete preparation of lay down area for roll-off containers, including sampling, and any required fencing;
- d. All direct invoiced cost from bonding companies and government agencies for permits and costs of insurance; and
- e. All other items and services required for mobilization and site preparation.

2. Demobilization

Payment shall include but not be limited to: All work required to sample the area; remove from the site all equipment, temporary utilities and supporting facilities; performance of necessary decontamination and repairs; disposal of disposable equipment and protective gear and other items and services required for complete demobilization.

Payment will be made under:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>PAYMENT UNIT</u>
8.01 S	Health and Safety	Lump Sum

**ITEM 8.01 W1 REMOVAL, TREATMENT AND DISCHARGE/DISPOSAL OF
CONTAMINATED WATER****8.01 W1.1 WORK TO INCLUDE**

General: This work shall consist of the proper removal and disposal of all contaminated groundwater and decontamination water generated during construction operations. The Contractor shall be solely responsible for the proper disposal or discharge of all contaminated water generated at the job site. The Contractor will have the option of treating water on-site for discharge to the combined sanitary/storm sewer system or removing contaminated water for off-site disposal. The Contractor shall be responsible to choose a method compatible to the construction work and shall be compensated on a per day basis regardless of method employed. The Contractor will be compensated for only those days where the system is in full operation.

The Contractor shall retain a dewatering/water treatment Specialist (hereinafter the "Specialist") and laboratory as specified under Item 8.01 W2 – Sampling and Testing of Contaminated Water, to conduct any testing that may be required for disposal of impacted water.

The dewatering/water treatment Specialist is responsible to obtain all permits; perform all water sampling, testing; and provide ancillary services related to dewatering and water treatment. The Specialist shall at a minimum provide documentation to DDC Program Management OEGS demonstrating the minimum requirements as set forth below:

1. The Specialist shall demonstrate that it has, at a minimum, three (3) years experience in the design of dewatering plans. The Specialist should demonstrate expertise dealing with issues associated with contaminated water. During that three (3) year period, the Specialist shall demonstrate that it provided dewatering and water treatment systems as a routine part of its daily operations.
2. The Specialist must be experienced in work of this nature, size, and complexity and must have previous experience in working with the DEC.
3. The Specialist shall furnish a project listing identifying the location, nature of services provided, owner, owner's contact, contact's telephone number, project duration and value for at least five (5) projects within the last three (3) years of a similar nature, size, and complexity to this one.
4. If conditions within the exclusion zone are deemed hazardous, then the Contractor and its independent Environmental Consultant shall ensure that all personnel working within identified exclusion zones and/or involved (direct contact) with the handling, storage or transport of hazardous and contaminated material shall have completed a minimum of forty (40) hours of Health and Safety Training on Hazardous Waste Sites in accordance with 29 CFR 1910.120(e). The training program shall be conducted by a qualified safety instructor. If conditions in the exclusion zone are deemed to be non-hazardous, the Specialist shall be responsible to provide site-specific training to its employees and other affected personnel.
5. The Contractor shall ensure that on-site management and supervisors directly responsible for or who supervise employees engaged in hazardous waste operations shall receive the training specified in above and at least eight (8) additional hours of specialized training on managing such operations at the time of job assignment.

The Contractor shall document all operations associated with the handling, sampling and disposal of contaminated water, and ensure that they are in compliance with applicable Federal, State and Local statutes and regulations.

The Contractor shall supply all labor, equipment, transport, plant, material, treatment, and other incidentals required to conduct the specified work of this section.

If water will be disposed of into the combined sanitary/storm sewer system, the Contractor shall ensure the Specialist treats the water to comply with the New York City Department of Environmental Protection (DEP) Sanitary/Combined and Storm Sewer Effluent Limit concentrations prior to discharge. The Contractor is responsible for providing settling or filtering tanks and any other apparatus required by DEP. Alternatively, the Contractor can provide a plan for transport and disposal at an off-site waste disposal facility.

Within forty-five (45) calendar days after award of Contract, the Contractor shall submit to DDC Program Management OEGS for review, a Water Handling Plan (WHP). The WHP must be approved by DDC Program Management OEGS, prior to the Contractor's commencement of work. The minimum requirements for the WHP are specified herein Item 8.01W 1.2, for each type of disposal (disposal into the combined sanitary/storm sewer or off-site disposal). The Contractor shall maintain a complete, up to date copy of the WHP on the job site at all times.

8.01 W1.2 CONSTRUCTION DETAILS

For each disposal method the Contractor proposes to utilize (disposal to combined sanitary/storm sewer or off-site disposal), the WHP shall include the information required in paragraphs A and B below, as appropriate.

A. On-site treatment and discharge into New York City combined sanitary/storm sewers.

1. Regulations: The Contractor shall comply with all applicable regulations. This includes but may not be limited to:
 - Title 15-New DEP Sewer Use Regulations.
2. Permits: The Contractor is solely responsible to obtain all necessary and appropriate Federal, State and Local permits and approvals. The Contractor will be responsible for performing all and any system pilot tests required for permit approval. This includes but may not be limited to:
 - a. Industrial waste approval for the New York City sewer system.
 - b. Groundwater discharge permit for the New York City sewer system (DEP Division of Sewer Regulation and Control), if discharge to sewer exceeds 10,000 gallons per day.
 - c. The Contractor shall comply with DEC State Pollutant Discharge Elimination System (SPDES) Permit Number GP-0-10-001, General Permit for Stormwater Discharges.
 - d. Long Island well point permit for Brooklyn and Queens sites, if well points are used for dewatering.
 - e. Wastewater quality control application, DEP.

3. The WHP for this portion of the work shall include at a minimum:
 - a. Identification and design of Contractor's proposed treatment to assure that the water meets the DEP sewer use guidelines prior to discharge to the sewer, including identification of all materials, procedures, settling or filtering tanks, filters and other appurtenances proposed for treatment and disposal of contaminated water.
 - b. The name, address and telephone number of the contact for the Contractor's proposed chemical laboratory, as well as the laboratory's certifications under Federal, State or non-governmental bodies.
 - c. The name, address and telephone number of the contact for the Contractor's proposed independent Environmental Consultant.
 - d. Copies of all submitted permit applications and approved permits the Contractor have received.

4. Materials

The Contractor shall supply all settling or filtering tanks, pumps, filters, treatment devices and other appurtenances for treatment, temporary storage and disposal of contaminated water. All equipment shall be suitable for the work described herein.

5. Execution

- a. The Contractor is solely responsible for disposal of all water, in accordance with all Federal, State and Local regulations.
- b. The Contractor is solely responsible for any treatment required to assure that water discharged into the sewer is in compliance with all permits and Federal, State and Local statutes and regulations.
- c. The Contractor is solely responsible for the quality of the water disposed of into the sewers.
- d. The Contractor is responsible for sampling and testing of water for the DEP Sanitary/Combined and Storm sewer Effluent Limit concentrations. The quality of the data is the Contractor's responsibility. Any sampling and testing shall be conducted and paid in accordance with Item 8.01 W2 – Sampling and Testing of Contaminated Water.
- e. The Contractor shall be responsible to maintain the discharge rate to the sewer such that all permit requirements are met, the capacity of the sewer is not exceeded and no surcharging occurs downstream due to the Contractor's actions. Dewatering by means of well points or deep wells will not be allowed in the Boroughs of Brooklyn or Queens where the rate of pumping exceeds forty-five (45) gallons per minute unless the appropriate permit has been secured from the DEC.
- f. Disposal of Treatment Media
 - (1) The Contractor shall be responsible for disposal or recycling of treatment media in accordance with all Federal, State and Local regulations.

- (2) The Contractor shall provide the DDC with all relevant documentation concerning the disposal of treatment media, including manifests, bills of lading, certificates of recycling or destruction and other applicable documentation.
- (3) Disposal of treatment media shall not be considered as a separate pay item; instead it shall be considered as incidental work thereto and included in the unit price bid.

B. Off-Site Disposal

1. Regulations: The Contractor shall conform to all applicable Federal, State and Local regulations pertaining to the transportation, storage and disposal of any hazardous and/or non-hazardous materials as listed in Attachment 2.
2. The following shall be submitted to the DDC prior to initiating any off-site disposal:
 - a.
 - (1) Name and waste transporter permit number
 - (2) Address
 - (3) Name of responsible contact for the hauler
 - (4) Any and all necessary permit authorizations for each type of waste transported
 - (5) Previous experience in performing the type of work specified herein
 - b. General information for each proposed treatment/disposal facility and at least one backup treatment/disposal facility
 - (1) Facility name and EPA identification number
 - (2) Facility location
 - (3) Name of responsible contact for the facility
 - (4) Telephone number for contact
 - (5) Unit of measure utilized at facility for costing purposes
 - c. A listing of all permits, licenses, letters of approval and other authorizations to operate, which are currently held and valid for the proposed facility as they pertain to receipt and management of the wastes derived from this Contract.
 - d. A listing of all permits, licenses, letters of approval and other authorizations to operate which have been applied for by the proposed facility but not yet granted or issued. Provide dates of application(s) submitted. Planned submittals shall also be noted.
 - e. The Contractor shall specify and describe the disposal/containment unit(s) that the proposed facility will use to manage the waste and provide dates of construction and beginning of use, if applicable. Drawings may be provided. The Contractor shall identify the capacity available in the units and the capacity reserved for the subject waste.

- f. The Contractor shall provide the date of the proposed facility's last compliance inspection.
- g. A list of all active (unresolved) compliance orders, agreements, enforcement notices or notices of violations issued to the proposed facility shall be submitted. The source and nature of the cause of violation shall be stated, if known. If groundwater contamination is noted, details of the facility's groundwater monitoring program shall be provided.
- h. Description of all sampling and field/laboratory analyses that will be needed to obtain disposal facility approval.

3. Materials

All vessels for temporary storage and transport to an off-site disposal facility shall be as required in DOT regulations.

4. Execution

a. General

- (1) The Contractor shall organize and maintain the material shipment records/manifests required by Federal, State and Local law. The Contractor shall include all bills of lading, certificates of destruction, recycling or treatment and other applicable documents.
- (2) The Contractor shall coordinate the schedule for truck arrival and material deliveries at the job site to meet the approved project schedule. The schedule shall be compatible with the availability of equipment and personnel for material handling at the job site.
- (3) The Contractor shall inspect all vehicles leaving the project site to ensure that contaminated liquids are not spilling and are contained for transport.
- (4) The Contractor shall obtain letters of commitment from the waste haulers and the treatment, disposal or recovery facility to haul and accept shipment. The letter shall indicate agreement to handle and accept the specified estimated quantities and types of material during the time period specified in the project schedule and any time extension as deemed as necessary.
- (5) The Contractor shall verify the volume of each shipment of water from the site.
- (6) The Contractor is responsible for sampling and testing of water for off-site disposal. The quality of the data is the Contractor's responsibility. Any sampling and testing shall be conducted and paid in accordance with Item 8.01 W2 – Sampling and Testing of Contaminated Water.
- (7) The Contractor shall be responsible for any additional analyses required by the TSD facility, and for the acceptance of the water at an approved TSD facility.

b. Hauling

- (1) The Contractor shall not deliver waste to any facility other than the TSD facility(ies) listed on the shipping manifest.
- (2) The Contractor shall coordinate manifesting, placarding of shipments, and vehicle decontamination. All quantities shall also be measured and recorded upon arrival at the TSD facility(ies). If any deviation between the two records occurs, the matter is to be reported immediately to the DDC and shall be resolved by the Contractor to the satisfaction of the DDC.
- (3) The Contractor shall be held responsible for any and all actions necessary to remedy situations involving material spilled in transit or mud and dust tracked off-site. This cleanup shall be accomplished at the Contractor's expense.
- (4) The Contractor shall be responsible for inspecting the access routes for road conditions, overhead clearance and weight restrictions.
- (5) The Contractor shall only use the transporter(s) identified in the WHP for the performance of work. Only a transporter with a current Part 364 Waste Transporter Permit from DEC may transport this material. Any use of substitute or additional transporters must have previous written approval from the DDC at no additional cost to the City.
- (6) The Contractor shall develop, document, and implement a policy for accident prevention.
- (7) The Contractor shall not combine waste materials from other projects with material from this project.
- (8) The Contractor shall obtain for the City a hazardous waste generator identification number and will sign the manifest as the generator, if necessary.
- (9) No material shall be transported until approved by the DDC.

c. Disposal Facilities

- (1) The Contractor shall use only the TSD facility(ies) identified in the WHP for the performance of the work. Substitutions or additions shall not be permitted without prior written approval from DDC Program Management OEGS, and, if approved, shall be at no extra cost to the City.
- (2) The Contractor shall be responsible for acceptance of the material at an approved TSD facility, for ensuring that the facility is properly permitted to accept the stated material, and that the facility provides the stated storage and/or disposal services.
- (3) The DDC reserves the right to contact and visit the disposal facility and regulatory agencies to verify the agreement to accept the stated material and to verify any other information provided. This does not in any way relieve the Contractor of his responsibilities under this Contract.

- (4) In the event that the identified and approved facility ceases to accept the stated materials or the facility ceases operations, it is the Contractor's responsibility to locate an alternate approved and permitted facility(ies) for accepting materials. The Contractor is responsible for making the necessary arrangements to utilize the facility(ies), and the alternate facility(ies) must be approved in writing by the DDC in the same manner and with the same requirements as for the original facility(ies). This shall be done with no extra cost or delay to the City.

d. Equipment and Vehicle Decontamination

- (1) The Contractor shall design and construct a portable decontamination station to be used to decontaminate equipment and vehicles exiting the exclusion zone. The cost for this work shall be paid under Item 8.01 S – Health and Safety.

8.01 W1.3 METHOD OF MEASUREMENT

The quantity for on-site treatment and discharge or off-site disposal shall be on a per day basis.

8.01 W1.4 PRICE TO COVER

- A. The per day price bid for Item 8.01 W1 shall include the cost of furnishing all labor, materials, equipment, plan, and insurance for handling, transportation, disposal, documentation, permits, hauling, mobilization and demobilization, and any other incidentals thereto to complete the work.
- B. The Contractor will not be paid for water that is within the DEP Sewer Discharge Limits.

Payment will be made under:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>PAYMENT UNIT</u>
8.01 W1	Removal, Treatment and Disposal/Discharge of Contaminated Water	Day

ITEM 8.01 W2 SAMPLING AND TESTING OF CONTAMINATED WATER**8.01 W2.1 WORK TO INCLUDE****A. Description**

The work shall consist of sampling and testing of potentially contaminated groundwater, surface runoff within the excavated area and all contaminated water generated during the decontamination process.

B. Sampling and Testing

1. The Contractor is responsible, at a minimum, for sampling and testing of contaminated water for the DEP Sanitary/Combined and Storm Sewer Effluent Limit concentrations as listed in Attachment 1. The quality of the data is the Contractor's responsibility. Any additional testing required by the Federal, State and/or disposal facilities shall be included in the bid price of this Item.
2. All sampling and testing shall be conducted by a person trained in sampling protocols using accepted standard practices and/or the DEC sampling guidelines and protocols.
3. All sample containers shall be marked with legible sample labels which shall indicate the project name, sample location and/or container, the sample number, the date and time of sampling, preservatives utilized, how the sample was chilled to 4 degrees Celsius, and other information that may be useful in determining the character of the sample.
4. Chain-of-custody shall be tracked from laboratory issuance of sample containers through receipt of the samples.
5. The Contractor shall maintain a bound sample log book. The Contractor shall provide the DDC access to it at all times and shall turn it over to the DDC in good condition at the completion of the work. The following information, as a minimum, shall be recorded to the log:
 - a. Sample identification number
 - b. Sample location
 - c. Field observation
 - d. Sample type
 - e. Analyses
 - f. Date/time of collection
 - g. Collector's name
 - h. Sample procedures and equipment used
 - i. Date sent to laboratory/name of laboratory
6. Only dedicated sampling equipment may be used to collect these samples. All equipment involved in field sampling must be decontaminated before being brought to the site, and must be properly disposed of after use.

7. Samples shall be submitted to the Contractor's laboratory within the holding times for the parameters analyzed.
8. All analyses must be done by a laboratory that has received approval from the DOH's ELAP for the methods to be done. The Contractor must specify the laboratory in the WHP.
9. Analytical results for water discharged to the sewer and for off-site disposal must be submitted to the DDC no later than five (5) days after sample collection.
10. The City reserves the right to direct the Contractor to conduct alternative sampling in lieu of the parameters described above, if the situation warrants. The substitute sampling parameters shall be of equal or lesser monetary value than those described above, as determined by industry laboratory pricing standards.

8.01 W2.2 METHOD OF MEASUREMENT

Quantities for samples shall be measured as the number of sets of samples that are tested for the DEP Sanitary/Combined and Storm Sewer Effluent Limit concentrations. A set shall be defined as one (1) representative sample analyzed for the full range of DEP parameters as specified in attachment 1.

8.01 W2.3 PRICE TO COVER

The unit price bid per set for Item 8.01 W2 shall include the cost of furnishing all labor, materials, equipment, plan, and insurance for handling, transport, sampling, testing, documentation, permits, other incidentals necessary to complete the work of sampling and testing of contaminated water. Any additional costs incurred by the Contractor for sampling and testing of contaminated water shall be included in the bid price of this Item.

Payment will be made under:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>PAYMENT UNIT</u>
8.01 W2	Sampling and Testing of Contaminated Water	Set

ATTACHMENT 1

New York City Department of Environmental Protection Limitations for Discharge to Storm, Sanitary/Combined Sewer

**NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTEWATER TREATMENT**

Limitations for Effluent to Sanitary or Combined Sewers

Parameter ¹	Daily Limit	Units	Sample Type	Monthly Limit
Non-polar material ²	50	mg/l	Instantaneous	---
pH	5-11	SU's	Instantaneous	---
Temperature	< 150	Degree F	Instantaneous	---
Flash Point	> 140	Degree F	Instantaneous	---
Cadmium	2 0.69	mg/l mg/l	Instantaneous Composite	---
Chromium (VI)	5	mg/l	Instantaneous	---
Copper	5	mg/l	Instantaneous	---
Lead	2	mg/l	Instantaneous	---
Mercury	0.05	mg/l	Instantaneous	---
Nickel	3	mg/l	Instantaneous	---
Zinc	5	mg/l	Instantaneous	---
Benzene	134	ppb	Instantaneous	57
Carbontetrachloride	---	---	Composite	---
Chloroform	---	---	Composite	---
1,4 Dichlorobenzene	---	---	Composite	---
Ethylbenzene	380	ppb	Instantaneous	142
MTBE (Methyl-Tert-Butyl-Ether)	50	ppb	Instantaneous	---
Naphthalene	47	ppb	Composite	19
Phenol	---	---	Composite	---
Tetrachloroethylene (Perc)	20	ppb	Instantaneous	---
Toluene	74	ppb	Instantaneous	28
1,2,4 Trichlorobenzene	---	---	Composite	---
1,1,1 Trichloroethane	---	---	Composite	---
Xylenes (Total)	74	ppb	Instantaneous	28
PCB's (Total) ³	1	ppb	Composite	---
Total Suspended Solids (TSS)	350 ⁴	mg/l	Instantaneous	---
CBOD ⁵	---	---	Composite	---
Chloride ⁵	---	---	Instantaneous	---
Total Nitrogen ⁵	---	---	Composite	---
Total Solids ⁵	---	---	Instantaneous	---
Other				

- 1 All handling and preservation of collected samples and laboratory analyses of samples shall be performed in accordance with 40 C.F.R. pt. 136. If 40 C.F.R. pt. 136 does not cover the pollutant in question, the handling, preservation, and analysis must be performed in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater." All analyses shall be performed using a detection level less than the lowest applicable regulatory discharge limit. If a parameter does not have a limit, then the detection level is defined as the least of the Practical Quantitation Limits identified in NYSDEC's Analytical Detectability and Quantitation Guidelines for Selected Environmental Parameters, December 1988
- 2 Analysis for *non-polar materials* must be done by EPA method 1664 Rev. A. Non-Polar Material shall mean that portion of the oil and grease that is not eliminated from a solution containing N-Hexane, or any other extraction solvent the EPA shall prescribe, by silica gel absorption.
- 3 Analysis for PCB=s is required if *both* conditions listed below are met:
 - 1) if proposed discharge $\geq 10,000$ gpd;
 - 2) if duration of a discharge > 10 days.Analysis for PCB=s must be done by EPA method 608 with MDL= ≤ 65 ppt. PCB's (total) is the sum of PCB-1242 (Arochlor 1242), PCB-1254 (Arochlor 1254), PCB-1221 (Arochlor 1221), PCB-1232 (Arochlor 1232), PCB-1248 (Arochlor 1248), PCB-1260 (Arochlor 1260) and PCB-1016 (Arochlor 1016).
- 4 For discharge $\geq 10,000$ gpd, the TSS limit is 350 mg/l. For discharge $< 10,000$ gpd, the limit is determined on a case by case basis.
- 5 Analysis for Carbonaceous Biochemical Oxygen Demand (CBOD), Chloride, Total Solids and Total Nitrogen are required if proposed discharge $\geq 10,000$ gpd.

ATTACHMENT 2
Applicable Regulations

Applicable regulations include, but are not limited to:

1. 49 CFR 100 to 179 - DOT Hazardous Materials Transport and Manifest System Requirements
2. New York State Department of Environmental Conservation (DEC), Spills Technology and Remediation Series (STARS) Memo #1
3. 6 NYCRR 360-1 DEC Solid Waste Management Facilities
4. 6 NYCRR 364- Waste Transporter permits
5. Local restrictions on transportation of waste/debris
6. 40 CFR 260 to 272 - Hazardous Waste Management (RCRA)
7. 6 NYCRR 371 - Identification and Listing of Hazardous Wastes
8. 6 NYCRR 372 - Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities
9. 6 NYCRR 373-1 - Hazardous Waste Treatment, Storage and Disposal Facility Permitting Requirements
10. 6 NYCRR 376 - Land Disposal Restrictions
11. Posted weight limitations on roads or bridges
12. Transportation Skills Programs, Inc. 1985 - Hazardous Materials and Waste Shipping Papers and Manifests
13. Other local restrictions on transportation of waste/debris
14. Occupational Safety and Health Administration (OSHA), Standards and Regulations, 29 CFR 1910 (General Industry)
15. OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response
16. OSHA Safety and Health Standards 29 CFR 1926 (Construction Industry)
17. OSHA 29 CFR 1910.146 Confined Space Entry Standard
18. Standard Operating Safety Guidelines, EPA Office of Emergency and Remedial Response Publication, 9285.1-03
19. NIOSH / OSHA / USCG / EPA Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1986)
20. U.S. Department of Health and Human Services (DHHS) "NIOSH Sampling and Analytical Methods," DHHS (NIOSH) Publication 84-100
21. ANSI, Practice for Respiratory Protection, Z88.2 (1980)
22. ANSI, Emergency Eyewash and Shower Equipment, Z41.1 (1983)
23. ANSI, Protective Footwear, Z358.1 (1981)
24. ANSI, Physical Qualifications for Respirator Use, Z88.6 (1984)
25. ANSI, Practice for Occupational and Educational Eye and Face Protection, Z87.1 (1968)
26. Water Pollution Control Federation "Manual of Practice No. 1, Safety in Wastewater Works"

27. NFPA No. 327 "Standard Procedures for Cleaning and Safeguarding Small Tanks and Containers"
28. Occupational Safety and Health Act Confined Space Entry Standard 29 CFR 1910.146.87
29. Department of Transportation 49 CFR 100 through 179
30. Department of Transportation 49 CFR 387 (46 FR 30974, 47073)
31. Environmental Protection Agency 40 CFR 136 (41 FR 52779)
32. Environmental Protection Agency 40 CFR 262 and 761
33. Resource Conservation and Recovery Act (RCRA)
34. Any transporter of hazardous or non-hazardous materials shall be licensed in the State of New York and all other states traversed in accordance with all applicable regulations.

ATTACHMENT 3

Definitions

- Contaminated Groundwater and Decontamination Fluids:** Groundwater within the excavation trench or decontamination water that contains regulated compounds above the NYCDEP Discharge to Sanitary/Combined Sewer Effluent limits.
- Disposal or Treatment Facility:** A facility licensed to accept either non-hazardous regulated waste or hazardous waste for either treatment or disposal.
- Exclusion Zone:** Work area that will be limited to access by Contractor personnel specifically trained to enter the work area only. The exclusion zone will be set up to secure the area from the public and untrained personnel. The project health and safety program will apply to all construction personnel including persons entering the work area.
- Hazard Assessment:** An assessment of any physical hazards that may be encountered on a work site.
- Hazardous Soils:** Soils that exhibit any of the characteristics of a hazardous waste, namely ignitability, corrosivity, reactivity, and toxicity, as defined in 6 NYCRR Part 371, Section 371.3 and 40 CFR Section 261.
- Hazardous Substance Evaluation:** An evaluation of the possible or known presence of any hazardous substances that may be encountered on a job site. This evaluation is included in the Health and Safety Plan and will include the identification and description of any hazardous substances expected to be encountered. Material Safety Data Sheets (MSDS) will be included for each substance.
- Health and Safety Plan:** A plan employed at a work site that describes all the measures that will be taken to assure that all work is conducted in a safe manner, and that the health of the workers and the public will be insured.
- Material Handling Plan:** A plan outlining the methods that will be employed to handle, transport and dispose of contaminated materials.
- Non-Hazardous Contaminated Soils:** Soils which exhibit a distinct chemical or petroleum odor, or exhibit elevated photoionization detector readings but are not classified as hazardous waste under 6 NYCRR Part 371, Section 371.3 and 40 CFR Section 261.
- New York State Health Department's Environmental Laboratory Approval Program:** A program by which the state of New York approves and accredits environmental testing laboratories.
- PCBs:** Polychlorinated biphenyls are a group of toxic compounds commonly used as a coolant in transformers and other electrical components.
- Photoionization Detector:** A hand held instrument used to measure volatile organic compounds in air. The instrument ionizes the organic molecules through the use of an ultraviolet lamp.
- RCRA Hazardous Waste Characteristics:** Characteristics of a material which may indicate the material is hazardous. These include: ignitability corrosivity, reactivity, and toxicity.
- Total Petroleum Hydrocarbons:** An analytical procedure used to determine the total amount of petroleum compounds in a material.

ATTACHMENT 4

Phase II Subsurface Corridor Investigation Report

- Final -

Phase II Subsurface Corridor Investigation Report

For

Reconstruction of Water Mains

Atlantic Avenue between Georgia Avenue and Fountain Avenue

Brooklyn, New York

DDC PROJECT NO. HWD10105

WORK ORDER NO. 10569

CONTRACT REGISTRATION NO. 20151405569

Prepared for:



Office of Environmental and Geotechnical Services

30-30 Thomson Avenue, Third Floor

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PROJECT NO. 15-008-0265

December 29, 2015

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EXECUTIVE SUMMARY

On behalf of the New York City Department of Design and Construction (NYCDDC), LiRo Engineers, Inc. (LiRo) conducted a Phase II Subsurface Corridor Investigation (Phase II SCI) of the Atlantic Avenue Corridor located between Georgia Avenue and just east of Fountain Avenue (the "Corridor"). The Corridor is located in the East New York and Cypress Hills neighborhoods of Brooklyn, New York. Excavation for the reconstruction of water mains is proposed along the Corridor. The proposed depth of excavation for the work is approximately 15 to 18 feet below grade (ftbg). The Phase II SCI was conducted to determine if the Corridor's environmental condition will impact proposed construction activities.

The Corridor is approximately 6,893-foot long and consists of a portion of Atlantic Avenue between Georgia Avenue and just east of Fountain Avenue, near the entrances to Conduit Boulevard in the East New York and Cypress Hills sections in Brooklyn, New York.

LiRo prepared a Phase I Corridor Assessment Report (CAR) dated August 26, 2015, which presented the results of a survey conducted along the Corridor to assess the presence of potential sources of subsurface contamination within, and in the immediate vicinity of, the Corridor. The Phase I CAR identified 42 sites that had a potential "High" risk and 133 sites that had a potential "Moderate" risk to impact the subsurface (soil and/or groundwater) of the Corridor and recommended the performance of a Phase II SCI. The objective of the Phase II SCI was to assess the presence of subsurface contamination that might impact proposed construction activities. The proposed construction activities for the Corridor include infrastructure improvements consisting of the reconstruction of water mains. The Phase II SCI consisted of the following components:

- The advancement of 39 borings to a terminal depth of approximately 15 ftbg or refusal, whichever was encountered first and the field screening of soil samples, including photo-ionization detector (PID) readings and visual and olfactory indicators of contamination (staining, odors);
- The collection of 39 soil samples which were analyzed for the following parameters: (1) United States Environmental Protection Agency (USEPA) Target Compound List (TCL) volatile organic compounds (VOCs); (2) Polycyclic Aromatic Hydrocarbons (PAHs); (3) TCL polychlorinated biphenyls (PCBs); Total Petroleum Hydrocarbon Diesel Range Organics/Gasoline Range Organics (TPHC DRO/GRO); Resource Conservation and Recovery Act (RCRA) Characteristics; and, Toxicity Characteristic Leaching Procedure (TCLP) RCRA Metals; and,
- The preparation of this report, which includes tables summarizing the laboratory analytical results and figures depicting boring locations, significant site features and, if applicable, contamination occurrence and distribution.

In order to evaluate the subsurface soil quality, laboratory analytical results were compared with the regulatory standards identified in (1) New York State Department of Environmental Conservation (NYSDEC) Subpart 375-6: Remedial Program Unrestricted and Restricted Use (Track 1 and Track 2) Soil Cleanup Objectives (SCOs); (2) NYSDEC CP-51 Soil Cleanup Levels (SCLs) which include Supplemental Soil Cleanup Objectives (SSCOs) to NYSDEC Subpart 375-6 and SCLs for gasoline/fuel oil contaminated soil; and/or (3) Toxicity Characteristic Regulatory Levels for Hazardous Waste published in RCRA and 6 New York City Code for Rules and Regulation (NYCRR) Part 371.

The subsurface soils encountered during this Phase II SCI consisted predominantly of brown fine to coarse sand with some clay and gravel from grade to 15 ftbg. Man-made materials (brick, concrete, etc.) and/or wood fragments, which are indicative of urban fill, were encountered throughout much the Corridor at depths ranging from 0.5 to 15 ftbg. Groundwater was not encountered within any of the on-site borings. Bedrock was not encountered during the Phase II SCI.

Field screening (i.e., PID readings and visual and olfactory observations) did not identify impacted soils within the Corridor.

VOCs, including acetone and methylene chloride, were detected in 10 of the 39 grab samples collected. Acetone was detected at concentrations exceeding Unrestricted Use (Track 1) SCOs in three (3) of the grab samples collected. Acetone is a common laboratory cross contaminant and is most likely not representative of subsurface conditions. Methylene chloride, which is also a common laboratory cross contaminant, was detected below applicable standards in seven (7) of the 39 grab samples collected. PAHs, including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k) fluoranthene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and/or pyrene, were detected in two (2) of the 39 composite samples collected at concentrations below their corresponding Unrestricted Use (Track 1) and Restricted Use (Track 2) SCOs and CP-51 SCLs. The detected PAHs may be attributed to: (a) residuals from isolated releases in the area of the Corridor; and/or, (b) the presence of historic fill material placed at the Corridor. PCBs were not detected in any of the 39 composite samples collected. TCLP RCRA metals, including arsenic, barium, chromium, lead, and selenium, were detected in all 39 composite samples collected at concentrations below their corresponding 6 NYCRR Part 371 and RCRA standards. Metals are naturally occurring but may be influenced by contaminants in historic fill material placed throughout the Corridor.

Ignitability (flash point), reactivity (cyanide and sulfide), and corrosivity (pH) were within the acceptable RCRA ranges. TPHC-DRO were detected at concentrations ranging from approximately 9.5 mg/kg to 180 mg/kg in five (5) of the 39 samples collected. TPHC-GRO were not detected in any of the 39 samples collected. There are no regulatory standards for TPHC-DRO and TPHC-GRO.

Conclusions and Recommendations

Based on the evaluation of the field screening data and the laboratory analytical results, and a comparison to applicable regulatory standards, the following conclusions are presented:

- Field screening (i.e., PID readings and visual and olfactory observations) did not identify any petroleum-impacted soils within the Corridor;
- Laboratory analytical results did not identify petroleum-impacted soils throughout the Corridor;
- The subsurface soil samples collected from the Corridor did not exhibit hazardous waste characteristics;
- Since groundwater was not encountered, no groundwater samples were collected.

- Based on the Phase II SCI Work Plan prepared by LiRo and dated September 30, 2015, a total of 48 soil borings were proposed to be advanced along the Corridor. However, soil borings SB-13, SB-21, SB-27, SB-31, SB-41, SB-45, and SB-46 were canceled due to the presence of underground utilities. Soil boring SB-24 was cancelled due to a private water line being encountered and soil boring SB-48 was cancelled due to being located outside the Corridor limits. Due to these borings not being installed, some areas along the Corridor could not be properly evaluated. The potential exists for localized areas of impact within those areas.

Based on the results of the field investigation and laboratory analytical results, LiRo recommends the following:

- The contract documents should identify provisions and a contingency for managing, handling, transporting and disposing of non-hazardous potentially contaminated soil. The Contractor should be required to submit a Material Handling Plan, to identify the specific protocol and procedures that will be employed to manage the waste in accordance with applicable regulations;
- Dust control procedures are recommended during excavation activities to minimize the creation and dispersion of fugitive airborne dust. A Community Air Monitoring Plan (CAMP) shall be developed in accordance with NYSDEC DER-10 Regulations. The CAMP requires real-time monitoring for VOCs and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is intended to provide a measure of protection for the downwind community from potential airborne contaminant releases as a direct result of investigative and remedial work activities. Specific requirements shall be reviewed for each situation in consultation with NYSDOH to ensure proper applicability;
- While groundwater was not encountered during the Phase II SCI field activities, dewatering may be necessary during construction activities in the Corridor. If encountered, groundwater samples should be collected and analyzed for NYCDEP Sewer Discharge Limitations. Depending on those results, groundwater may require pre-treatment prior to discharge.
- In addition, should dewatering be necessary during construction activities within the Corridor, the contractor should be required to obtain NYCDEP sewer discharge permit. Lastly, if discharge into storm sewers (which ultimately discharge to surface water) is required during such dewatering, it may be done under the appropriate NYSDEC State Pollutant Discharge Elimination System (SPDES) permit. Additional sampling and laboratory analysis may be required to satisfy NYSDEC requirements prior to discharge into storm sewers; and,
- Before beginning any excavation activity, the contractor shall submit a Corridor-specific health and safety plan (HASP) that will meet the requirements set forth by the Occupational, Safety and Health Administration (OSHA), the New York State Department of Health (NYSDOH) and any other applicable regulations. The HASP should identify the possible locations and risks associated with the potential contaminants that may be encountered, and the administrative and engineering controls that will be utilized to mitigate concerns (i.e., dust control procedures).

1.0 INTRODUCTION

On behalf of the New York City Department of Design and Construction (NYCDDC), LiRo Engineers, Inc. (LiRo) conducted a Phase II Subsurface Corridor Investigation (Phase II SCI) of the Atlantic Avenue Corridor located between Georgia Avenue and just east of Fountain Avenue (the "Corridor"). The Corridor is located in the East New York and Cypress Hills neighborhoods of Brooklyn, New York. Excavation for the reconstruction of water mains is proposed along the Corridor. The proposed depth of excavation for the work is approximately 15 to 18 feet below grade (ftbg). The Phase II SCI was conducted to determine if the Corridor's environmental condition will impact proposed construction activities.

The Corridor is approximately 6,893-foot long and consists of a portion of Atlantic Avenue between Georgia Avenue and just east of Fountain Avenue, near the entrances to Conduit Boulevard in the East New York and Cypress Hills sections in Brooklyn, New York.

1.1 Summary of Previous Environmental Investigations

LiRo prepared a Phase I Corridor Assessment Report (Phase I CAR) dated August 26, 2015, which presented the results of a survey conducted along the Corridor to assess the presence of potential sources of subsurface contamination within, and in the immediate vicinity of, the Corridor. The survey also included a review of fire insurance maps to document historical use and a limited review of the New York State databases to identify sites that are known to be contaminated.

The Phase I CAR identified 42 sites that had a Final "High" risk and 133 sites that had a Final "Moderate" risk to impact the subsurface of the Corridor and recommended advancing borings, installing temporary well points, and collecting soil and groundwater samples to assess potential impacts.

HIGH RISK SITES

- 1) Post Office – East New York Station, 2643-2667 Atlantic Ave. and 85-89 Pennsylvania Ave. (High Risk Site No. 1)
- 2) Former Strauss Discount Auto 107 (Currently Advanced Auto Parts), 2686 Atlantic Ave. / Dry Cleaners, 2672 Atlantic Ave. (High Risk Site No. 2)
- 3) Former Oil Storage Facility (current apartment building), 2767 Atlantic Ave. (High Risk Site No. 3)
- 4) Jimmy's Shop (auto repair), 2776 Atlantic Ave. (High Risk Site No. 4)
- 5) St. Malachy's School (UST and LTANK site), 220 Hendrix St. (High Risk Site No. 5)
- 6) Mobil Gas Station (Bolla EM Realty, LLC), 2816 Atlantic Ave. / Atlantic Ave. and Hendrix St. / Manhole No. 5290, 2820 Atlantic Ave./243 Hendrix St. (High Risk Site No. 6)
- 7) Former Auto Repair (currently NY Karstore.com – used car sales), 2857-2861 Atlantic Ave. (High Risk Site No. 7)
- 8) Merit Oil Corp. (currently Speedway), 2880 Atlantic Ave./2864-2886 Atlantic Ave./249-257 Barbey St. and 202-212 Jerome Ave. / Nursery, 2870-2874 Atlantic Ave. (High Risk Site No. 8)
- 9) Martin Auto Care, 2916 Atlantic Ave. / 2912 Atlantic Ave. Realty Corp. (UST site) / Gibraltar Transmission, 2914 Atlantic Ave. (High Risk Site No. 9)
- 10) Former Garage with Two (2) Tanks (currently Richie's Gym, Dance Atlantic, and Atlantic Safety), 2927-2933 Atlantic Ave. and 198-206 Ashford St. (High Risk Site No. 10)

- 11) /12) K-Union Station Holder (NY SHWS, Brownsfield, and MGP site), Atlantic Ave., Ashford St., and Liberty Ave. / Con Edison – Cleveland, 2950 Atlantic Ave. / Atlantic Ave. Service, 2950 Atlantic Ave. / 2934-2954 Atlantic Ave., 207-241 Ashford St., and 296-332 Cleveland Ave. (High Risk Site No. 11/12)
- 13) Commercial Building (currently Clean Rite Center Laundry Super Store), 2958 Atlantic Ave. / Garage with One (1) Tank, 2956-2960 Atlantic Ave. and 295-303 Cleveland Ave. (High Risk Site No. 13)
- 14) Riveria Motel (UST and LTANK site), 2969 Atlantic Ave. (High Risk Site No. 14)
- 15) Intermediate School 302K School (AST site, NY Spill site, and former auto repair facility), 350 Linwood St. / Auto Repair, 294 Linwood Ave. (High Risk Site No. 15)
- 16) Former Gas Station (currently a vacant lot), 2983-2991 Atlantic Ave. and 213-221 Elton Ave. (High Risk Site No. 16)
- 17) Garage with One (1) Gas Tank (currently Sal's Tire), 3008-3010 Atlantic Ave. (High Risk Site No. 17)
- 18) Former Garage and Auto Repair with One (1) Gas Tank (currently EHAB Human Services), 3021-3029 Atlantic Ave. (High Risk Site No. 18)
- 19) St. Rita's School (UST site), 260 Shepherd Ave. (High Risk Site No. 19)
- 20) Former Manufacturing Facility, Foundry, and Auto Repair Facility (currently Medisys Medical Center and Jamaica Hospital Medical Center), 3064-3088 Atlantic Ave., 239-249 Shepherd Ave., and 2-26 Berriman St. (High Risk Site No. 20)
- 21) Formerly Rubel Coal and Ice Corp. (currently an apartment building), 31-39 Berriman St. – TTF / 3104 Atlantic Ave. / 36 Atkins Ave. / 62 Atkins Ave. / 55 Berriman St. – TTF, 55 Berriman St. / Standard Lime Co., 49-57 Berriman St. / Standard Oil Co. of NY, 63-85 Berriman St. and 791-801 Liberty Ave. (High Risk Site No. 21)
- 22) Formerly the Long Island Railroad Yard and City Ash Removal Station (currently a public housing apartment complex), Liberty Ave. to Atlantic Ave. between Berriman St. and Montauk Ave. (High Risk Site No. 22)
- 23) UST and LTANK Site and Former Auto Station (currently a public housing apartment complex), 3126 Atlantic Ave. / 33 Atkins Ave. / 36 Montauk Ave. / 64 Montauk Ave. / 61 Atkins Ave. / 30 Montauk Ave. (High Risk Site No. 23)
- 24) Cypress Hills Service (BP Gas Station) / Atlantic Ave., Inc., 3123 Atlantic Ave. / Gas Station, Auto Repair, and Auto Sales, 3119-3129 Atlantic Ave. and 220-230 Hale Ave. (High Risk Site No. 24)
- 25) Former Gas Station (currently McDonald's), Former KFC Restaurant, 3143 Atlantic Ave. / Gas Station, 3143-3161 Atlantic Ave. and 244-262 Norwood Ave. (High Risk Site No. 25)
- 26) Former Manufacturing Facility (currently Mobilia Furniture and Carpet Warehouse), 3144-3166 Atlantic Ave. (High Risk Site No. 26)
- 27) Former Beer Depot and Garage with Two (2) Gas Tanks (currently Maggie's ParaTransit Corp.), 3163-3177 Atlantic Ave. and 245-255 Norwood Ave. (High Risk Site No. 27)
- 28) Shell Service Station, 3170 Atlantic Ave. / Bill Wolf Petroleum, 3170-3186 Atlantic Ave. and 1-11 Milford St. (High Risk Site No. 28)
- 29) Former Gas Station (currently Wendy's Restaurant), 3179-3189 Atlantic Ave. and 248-258 Logan Ave. (High Risk Site No. 29)
- 30) Gas Station, Auto Repair, and Used Truck Sales (currently Compass Gas), 3196-3218 Atlantic Ave., 2-20 Fountain Ave., and 259-273 Logan St. / Dominick Vitucci, 2 Fountain Ave. (High Risk Site No. 30)
- 31) Former Truck Parking and Heavy Equipment Storage (currently parking for Maggie's ParaTransit Corp.), 38-116 Dinsmore Pl., 266-286 Chestnut St., and 3201-3269 Atlantic Ave. (High Risk Site No. 31)

- 32) Formerly Brooklyn Water Works – Ridgewood Pumping Station (currently City Line Park), 3226-3262 Atlantic Ave. and 1-55 Fountain Ave. (High Risk Site No. 32)
- 33) Former Garage with One (1) Gas Tank (currently a ParaTransit Complex), 233 Norwood Ave. Corp., 235 Norwood Ave. (High Risk Site No. 33)
- 34) One story Building with Gas Tank (commercial operations unknown), 196-198 Schenck Ave. (High Risk Site No. 34)
- 35) Formerly Novoche Chemical Manufacturing Co., Inc. (currently Cypress Hills Community School/Public School 89), 2911-2915 Atlantic Ave. and 255-267 Warwick Ave. (High Risk Site No. 35)
- 36) Formerly Transmission Repair (currently Nick's Iron Works), 143-147 Wyona St. (High Risk Site No. 36)
- 37) Maggie's ParaTransit, 234 Logan St. / 232-244 Logan St. (High Risk Site No. 37)
- 38) Gated Property with Gas Tank that is being used as a parking facility and staging area for oil trucks, 132-136 New Jersey Ave. (High Risk Site No. 38)
- 39) Former Garage with Two (2) Gas Tanks (currently an apartment building and engine cleaning facility), 53-57 Sheffield Ave. (High Risk Site No. 39)
- 40) Former Garage with Two (2) Gas Tanks (currently Home Furnishings Depot), 62 Pennsylvania Ave. / 50-60 Pennsylvania Ave. / Manufacturing Facility, 28-72 Pennsylvania Ave. (High Risk Site No. 40)
- 41) Former Auto Body Repair (currently D&C Collision and Atlantic Welding Supply), 87 Georgia Ave. / Manufacturing Facility, 91-95 Georgia Ave. / Gas Storage, 97 Georgia Ave. (High Risk Site No. 41)
- 42) Former Marble Shop (currently a vacant building), 211-213 Highland Pl. (High Risk Site No. 42)
- 43) Manufacturing Facility, 325-327 Liberty Ave. and 124-128 Sheffield Ave. / Multi Display and Pane and Envirogreen Services, 107 Georgia Ave. (High Risk Site No. 43)

MODERATE RISK SITES

- 1) AST site (currently a Commercial Building with Storefronts), 2634-2640 Atlantic Ave. / 91 Pennsylvania Ave. (Moderate Risk Site No. 1)
- 2) NYCT - Atlantic Ave., Atlantic Ave. and Pennsylvania Ave. Substation / Pennsylvania Ave. and Atlantic Ave. (Moderate Risk Site No. 2)
- 3) Former Manufacturing Facility and AST site (identified as "Central" in the regulatory records), 2644 Atlantic Ave. (Moderate Risk Site No. 3)
- 4) Former Auto Repair Facility (currently a thrift store and furniture store), 2671 Atlantic Ave. (Moderate Risk Site No. 4)
- 5) Former Manufacturing Facility (currently POP Appliance, AJ Carisma Thrift Shop, and apartments), 2683 Atlantic Ave. (Moderate Risk Site No. 5)
- 6) Mrs. Maxwell's Bakery (AST site), 2700 Atlantic Ave. (Moderate Risk Site No. 6)
- 7) Undertakers, 2709-2715 Atlantic Ave. and 124-130 Wyona Ave. (Moderate Risk Site No. 7)
- 8) /9)/10) Con Edison Service Box 18055, 2732 Atlantic Ave. / Kings Auto Repair Center, 2734 Atlantic Ave. / Former Manufacturing Facility, 2738 Atlantic Ave. / Manufacturing Facility, 2742 Atlantic Ave. (currently Touch of Glass Window Tinting) (Moderate Risk Site No. 8/9/10)
- 11) Former Manufacturing Facility (currently Bay Bee Lounge Nursery Day Care), 131 Bradford St. (Moderate Risk Site No. 11)
- 12) Used Auto Sales, 2750 Atlantic Ave. (Moderate Risk Site No. 12)
- 13) Tire Sales and Service, 2765 Atlantic Ave. and 190-202 Miller Ave. (Moderate Risk Site No. 13)
- 14) Former Manufacturing Facility (currently Three [3] Commercial Storefronts with apartments on the second and third floors), 2771-2775 Atlantic Ave. (Moderate Risk Site No. 14)

- 15) Former Printing Facility (currently Mira Lounge - Hall Rental), 2783 Atlantic Ave. (Moderate Risk Site No. 15)
- 16) Former Auto Repair Facility (currently Danay's Enterprises - travel tickets, income tax, insurance), 2786 Atlantic Ave. (Moderate Risk Site No. 16)
- 17) Royal Repair, 168 Van Siclen Ave. (Moderate Risk Site No. 17)
- 18) Former Manufacturing Facility (currently Commercial Storefronts and apartments on the second and third floors), 2789 Atlantic Ave. and 148 Van Siclen Ave. (Moderate Risk Site No. 18)
- 19) Former Manufacturing Facility (currently Valez Upholstery Furniture Repair), 2827 Atlantic Ave. (Moderate Risk Site No. 19)
- 20) Former Printing Facility (currently African Clothing Store, apartments, Ingrid Beauty Salon, and Linar Carpets, Linoleum, and Tiles), 2829-2835 Atlantic Ave. (Moderate Risk Site No. 20)
- 21) Former Auto Repair Facility (currently Papa John's Pizza), 2838 Atlantic Ave. (Moderate Risk Site No. 21)
- 22) Former Manufacturing Facility and AST Site (currently a vacant commercial/industrial facility), 2840 Atlantic Ave. (Moderate Risk Site No. 22)
- 23) Former Auto Repair Facility (currently Atlantic Beverages), 2845 Atlantic Ave. / Auto Repair, 165 Schenck Ave. (Moderate Risk Site No. 23)
- 24) Former Manufacturing Facility (currently CJ Multi-Service Corp. - computer repair, internet care, and income tax), 2869 Atlantic Ave. (Moderate Risk Site No. 24)
- 25) Former Manufacturing Facility (currently Brooklyn Shake, Muscle Empowerment Formulas, and a vacant commercial unit), 2883-2885 Atlantic Ave. and 200 Jerome Ave (Moderate Risk Site No. 25)
- 26) Former Undertakers (currently Alfursan International - black seed, baby oils, incense, and garments - wholesale/rental), 2888-2890 Atlantic Ave. (Moderate Risk Site No. 26)
- 27) Formerly Bayside Fuel Oil (currently Cube Smart Storage), 2887 Atlantic Ave. / Star Suspender and Garter Co., Inc., 2887-2909 Atlantic Ave., 189-199 Jerome Ave., and 260-268 Warwick Ave (Moderate Risk Site No. 27)
- 28) Formerly Atlantic Lube, Inc. (currently Atlantic Car Care Center), 2894 Atlantic Ave. (Moderate Risk Site No. 28)
- 29) AAMCO Auto Repair, 2900-2906 Atlantic Ave. (Moderate Risk Site No. 29)
- 30) Machine Shop (currently White Tool and Supply, Inc.), 3047-3049 Atlantic Ave. / Manufacturing Facility, 3051 Atlantic Ave. (Moderate Risk Site No. 30)
- 31) Formerly Vestpro (AST site) (currently Safeguard Self Storage), 2941 Atlantic Ave. (Moderate Risk Site No. 31)
- 32) Manhole No. 1874 (NY Spill site), Atlantic Ave. and Cleveland Ave. (Moderate Risk Site No. 32)
- 33) Used Auto Sales and Repair (currently Imperial Auto Mall), 2970 Atlantic Ave. (Moderate Risk Site No. 33)
- 34) Former Auto Repair Facilities (currently vacant lots), 2993-2997 Atlantic Ave. / 2993 Atlantic Ave. (Moderate Risk Site No. 34)
- 35) Former Auto Repair Facility (currently a portion of Sal's Tire), 3002 Atlantic Ave. / Manufacturing Facility, 3004-3006 Atlantic Ave. (Moderate Risk Site No. 35)
- 36) Former Manufacturing Facility (currently the Gap Generation Church), 3009 Atlantic Ave. and 304 Linwood Ave. (Moderate Risk Site No. 36)
- 37) Former Auto Repair Facility (currently A&R Best Auto Sales), 3018 Atlantic Ave. (Moderate Risk Site No. 37)
- 38) Con Edison Service Box 55987 / Manufacturing Facility (currently Saisar, Inc.), 3027 Atlantic Ave. (Moderate Risk Site No. 38)

- 39) Private Garage with One (1) Tank (currently High Class Auto Body and Towing), 3031 Atlantic Ave. / 3033 Atlantic Ave. (Moderate Risk Site No. 39)
- 40) Former Auto Repair Facility and Laundry Facility (currently an apartment building), 224-226 Essex St. / 234 Essex St. (Moderate Risk Site No. 40)
- 41) Formerly Dynamic Auto Clinic (currently Brooklyn Auto Paint), 3053 Atlantic Ave (Moderate Risk Site No. 41)
- 42) Followers of Jesus Mennonite Church (former manufacturing site and AST site), 3065 Atlantic Ave. / American Numbering Machines, 3065-3069 Atlantic Ave. and 218-220 Shepherd Ave (Moderate Risk Site No. 42)
- 43) Former Auto Repair (currently Atlantic Express Deli), 3137-3139 Atlantic Ave. and 277 Hale Ave. (Moderate Risk Site No. 43)
- 44) Former Auto Repair Facility (currently El Cacique Restaurant), 3294 Atlantic Ave. (Moderate Risk Site No. 44)
- 45) Former Manufacturing Facility (currently K-One Floors, Inc., United Safety Depot, and apartments), 2631-2633 Atlantic Ave. (Moderate Risk Site No. 45)
- 46) Former Auto Glazing (currently a vacant lot and a portion of GR Thrift), 76-78 Pennsylvania Ave. (Moderate Risk Site No. 46)
- 47) Former Auto Repair Facility (currently Atlantic Lift Systems), 154 Vermont St. (Moderate Risk Site No. 47)
- 48) Engine Company 332, 155-165 Bradford St. (Moderate Risk Site No. 48)
- 49) Former Auto Repair Facility (currently a residence), 146 Van Siclen Ave (Moderate Risk Site No. 49)
- 50) Former Auto Repair Facility (currently a residence), 168-172 Schenk Ave (Moderate Risk Site No. 50)
- 51) St. Michael Roman Catholic Church (UST and AST site), 219-237 Jerome St. / St. Michaels School, 237 Jerome St. / St. Michael's Roman Catholic Church, 255 Jerome Ave. (Moderate Risk Site No. 51)
- 52) Iron Works/Auto Repair Facility, 211 Elton St (Moderate Risk Site No. 52)
- 53) Former Auto Repair Facility (currently a residential building), 219 Shepherd Ave. (Moderate Risk Site No. 53)
- 54) Former Manufacturing Facilities (currently a warehouse), 13-19 Montauk Ave. (Moderate Risk Site No. 54)
- 55) Former Auto Repair Facility (currently a vacant commercial building), 20-28 Milford St. (Moderate Risk Site No. 55)
- 56) Former Auto Repair Facility and Manufacturing Facility (currently vacant building which was formerly Mustard Seed Forensic Social Work Services), 2625 Atlantic Ave. (Moderate Risk Site No. 56)
- 57) Red Line Tire and Wheel, 2624 Atlantic Ave. (Moderate Risk Site No. 57)
- 58) Formerly Electric Motor Repair (currently New and Used Tires), 2620 Atlantic Ave. (Moderate Risk Site No. 58)
- 59) Wyona Realty Associates (AST, LTANK, and NY Spill site), 110 Wyona St. (Moderate Risk Site No. 59)
- 60) Wyona Auto Repair, 146-150 Wyona St. (Moderate Risk Site No. 60)
- 61) Formerly Ideal Clamp Manufacturing Co., Inc. (currently Solco Plumbing Supply), 413-437 Liberty Ave., 201-209 Vermont St., and 162-172 Wyona Ave. / Laundry Facility, 195-197 Vermont St. / Manufacturing Facility, 154-160 Wyona St. (Moderate Risk Site No. 61)
- 62) Former Iron Works Facility (currently a vacant structure), 219 Miller Ave. (Moderate Risk Site No. 62)

- 63) Former Auto Repair Facility (currently a vacant commercial building), 247-249 Hendrix St. (Moderate Risk Site No. 63)
- 64) Former Auto Repair Facilities (currently Liberty Communications), 251 Hendrix St. / 255 Hendrix St. (Moderate Risk Site No. 64)
- 65) Former Garage and Repair Shop (currently New Age Steel Products), 179-181 Van Siclen Ave. (Moderate Risk Site No. 65)
- 66) Former Auto Repair Facility and Manufacturing Facility (currently a residence and vacant lot), 274 Barbey St. (Moderate Risk Site No. 66)
- 67) Former Machine Shop (currently a residence), 267-269 Barbey St. (Moderate Risk Site No. 67)
- 68) Former Manufacturing Facilities (currently Electric Supply and Lighting), 220-228 Ashford St. (Moderate Risk Site No. 68)
- 69) Former Auto Repair Facility (currently townhouses), 205 Elton St. (Moderate Risk Site No. 69)
- 70) Former Auto Repair Facility and Former Manufacturing Facility (currently New Genesis Christian Center), 224 Shepherd Ave. (Moderate Risk Site No. 70)
- 71) St. Rita's Roman Catholic Church (UST site), 275 Shepherd Ave. (Moderate Risk Site No. 71)
- 72) Key Capital Funding (currently an auto repair facility and formerly a manufacturing facility), 23 Montauk Ave. / Machine Shop, 23-27 Montauk Ave. (Moderate Risk Site No. 72)
- 73) Con Edison, front of 229 Norwood Ave. (a residence) / Private Residence, 229 Norwood Ave. (Moderate Risk Site No. 73)
- 74) Brooklyn Auto Repair, 36-40 Milford St. (Moderate Risk Site No. 74)
- 75) E-Designation Site / Vacant Lot, 23 Milford St. (Moderate Risk Site No. 75)
- 76) E-Designation Site / Residence, 25 Milford St. (Moderate Risk Site No. 76)
- 77) Class A Cars (currently a junk yard), 477 Liberty Ave. / Manufacturing Facility, 475-483 Liberty Ave. and 240-244 Miller Ave. (Moderate Risk Site No. 77)
- 78) E-Designation Site / Townhouses, 280 Logan St. (Moderate Risk Site No. 78)
- 79) E-Designation Site / Townhouses, 284 Logan St. (Moderate Risk Site No. 79)
- 80) Con Edison (currently Dominik Vitucci Truck Yard and Machine Shop), 28 Fountain Ave. (Moderate Risk Site No. 80)
- 81) Former Automotive Chemical Manufacturer (currently a portion of the Con Edison Complex), 243-247 Ashford St. and 334-336 Cleveland Ave. (Moderate Risk Site No. 81)
- 82) Shiny Carwash and Lube Center, Inc., 2591 Atlantic Ave. / 2591-2613 Atlantic Ave. (Moderate Risk Site No. 82)
- 83) Formerly Wartburg Lutheran Home for the Aging (UST and LTANK site) (currently Bushwick Center for Rehab and Health Care), 50 Sheffield Ave. (Moderate Risk Site No. 83)
- 84) Former Printing Facility (currently Krownholdaz Palace), 2610 Atlantic Ave. (Moderate Risk Site No. 84)
- 85) Former Manufacturing Facility (currently Christ Deliveries and Healing Industries), 2608 Atlantic Ave. (Moderate Risk Site No. 85)
- 86) Former Garage with Two (2) Gas Tanks (currently Best Quality Supplies), 90-96 Sheffield Ave. and 79-85 Georgia Ave. (Moderate Risk Site No. 86)
- 87) Formerly Metal Products (currently a vacant commercial building), 99-103 Sheffield Ave. (Moderate Risk Site No. 87)
- 88) Auto Repair – Volkswagon-Audi Parts and Service, 61-67 Pennsylvania Ave. (Moderate Risk Site No. 88)
- 89) Former HA Dependable Auto Collision (currently Dieguito Auto Repair), 186-188 Vermont St. (Moderate Risk Site No. 89)
- 90) Former Gas Station (currently a parking lot), 401-411 Liberty Ave. and 204-210 Vermont St (Moderate Risk Site No. 90)

- 91) Former Manufacturing Site and E-Designation Site (currently townhouses), 286 Logan St. / Jerome Bedding Co., 286-288 Logan Ave. (Moderate Risk Site No. 91)
- 92) E-Designation Site / Vacant Lot, 29 Milford St. (Moderate Risk Site No. 92)
- 93) E-Designation Site / Townhouse, 288 Logan St. (Moderate Risk Site No. 93)
- 94) Garage with Two (2) Gas Tanks (currently 5-Star Auto Care), 503-505 Liberty Ave. (Moderate Risk Site No. 94)
- 95) Former Manufacturing Facility (currently a vacant lot used for corrugated steel storage), 264-274 Hendrix St. and 529-533 Liberty Ave. (Moderate Risk Site No. 95)
- 96) Auto Repair Facilities and NY Spill Site (currently Auto Fresh 2), 263 Hendrix St. / 273 Hendrix St. (Moderate Risk Site No. 96)
- 97) Auto Repair Facility and Oil Burner Company (currently an auto repair facility and church), 579-581 Liberty Ave. (Moderate Risk Site No. 97)
- 98) Former Garage with three (3) Tanks (currently an unlabeled commercial building), 583-593 Liberty Ave. and 279-295 Barbey St. (Moderate Risk Site No. 98)
- 99) Former Auto Repair Facility (currently a residence), 285 Essex St. (Moderate Risk Site No. 99)
- 100) Former Auto Repair Facility and Metals Works (currently the Restoration Church of Jesus Christ Apostle, Inc.), 44 Berriman St. (Moderate Risk Site No. 100)
- 101) Former Garage with One (1) Tank (currently a vacant commercial building), 46-56 Berriman St (Moderate Risk Site No. 101)
- 102) Carbusters Auto Recycling, 60 Berriman St. / Auto Repair and Auto Wrecking Facilities, 60-66 Berriman St. (Moderate Risk Site No. 102)
- 103) Two Friends Corp. (apartments), 250 Richmond St. / Auto Repair, 242-252 Richmond St. (Moderate Risk Site No. 103)
- 104) Manufacturing Facility, 245 Richmond St. and 91-97 Dinsmore Pl. / Auto Repair Facilities, 81-89 Dinsmore Pl. and 247-251 Richmond St. (Moderate Risk Site No. 104)
- 105) Former Garage with a Gas Tank, Former Cleaners, and Former Furniture Manufacturer (currently Sheffield Corp. Deli), 2618-2628 Fulton St. (Moderate Risk Site No. 105)
- 106) Formerly Gaseteria Penn and Fulton (currently Gould Plaza - US Fried Chicken, Metro PC, Lawndrought Superstore, and Home Furnishings Depot), 38 Pennsylvania Ave. / 2630-2640 Fulton St. and 38-48 Pennsylvania Ave. (Moderate Risk Site No. 106)
- 107) Sangiz Corp., 2642-2666 Fulton St. / Gulf Station, 2642 Fulton St. / Con Edison, Opposite 2642 Fulton St. / 2642-2666 Fulton Ave. (Moderate Risk Site No. 107)
- 108) Former Manufacturing Facility (currently a vacant commercial building), 107 New Jersey Ave. and 2668-2672 Fulton St. (Moderate Risk Site No. 108)
- 109) Dry Cleaners, 110 Van Siclen Ave. (Moderate Risk Site No. 109)
- 110) Con Edison, 2740 Fulton St. / Manufacturing Facility, 2736-2740 Fulton St. (currently NAPA Auto and Truck Parts) (Moderate Risk Site No. 110)
- 111) Auto Repair Facility and Former Manufacturing Facility (currently R&R Cheap Car Auto Sales), 2766-2772 Fulton St. (Moderate Risk Site No. 111)
- 112) Arleney's Super Dry/Flor French Cleaners, 2814 Fulton St. (Moderate Risk Site No. 112)
- 113) NYC Dept. of Education, 135 Schenck Ave. (Moderate Risk Site No. 113)
- 114) Cleveland M Cleaners, 2948 Fulton St. (Moderate Risk Site No. 114)
- 115) Formerly My Brothers Place Auto Repair (currently Bienvo Auto Repair and J&J Auto Repair), 3086 Fulton St. / 181 Highland Pl. (Moderate Risk Site No. 115)
- 116) Former Auto Repair Facility (currently Fulton Laundromat), 3060 Fulton St. (Moderate Risk Site No. 116)
- 117) Formerly Columbia Cable and Electric (currently a vacant warehouse), 245-279 Chestnut St. / Gas Station, 3281-3297 Atlantic Ave. (Moderate Risk Site No. 117)



- 118) Formerly Sal's Tire Show (currently Cuba Tire Shop), 48 Georgia Ave. (Moderate Risk Site No. 118)
- 119) Auto Repair Facility (currently Iman Chocolatiers and Roadway Towing, Inc.), 74-80 Georgia Ave. (Moderate Risk Site No. 119)
- 120) Former Auto Repair Facility with a Gas Tank (currently AV Tech Wholesale Gold Dust, LLC and Foreign Domestic Auto Repair), 82 Georgia Ave. (Moderate Risk Site No. 120)
- 121) Formerly Iron Works (currently a vacant building), 86-96 Georgia Ave. (Moderate Risk Site No. 121)
- 122) Former Gas Station (currently a vacant commercial building), 113-115 Georgia Ave. and 315-323 Liberty Ave. (Moderate Risk Site No. 122)
- 123) Formerly Used Auto Sales (currently a parking lot), 2617-2639 Fulton St. and 36 Pennsylvania Ave. / 2635-2639 Fulton St. and 30-36 Pennsylvania Ave. (Moderate Risk Site No. 123)
- 124) Cypress Hills Car Care Center, Inc., 2641 Fulton St. (Moderate Risk Site No. 124)
- 125) Auto Repair Facility (currently Atlantic Car Service and Used Car Sales), 2695-2697 Fulton St. (Moderate Risk Site No. 125)
- 126) Inland Paper Product, 189 Wyona St. / Manufacturing Facility, 192-196 Bradford St. / Manufacturing Facility, 444 Liberty Ave. / Former Gas Station, 462 Liberty Ave. and 180-190 Bradford St. (Moderate Risk Site No. 126)
- 127) Consolidated Edison / Manhole No. 5277 / VS 4483, Miller Ave. and Liberty Ave. (Moderate Risk Site No. 127)
- 128) Former Auto Repair Facility (currently a one car private garage and a vacant lot), 2777 Fulton St. / 2779 Fulton St. (Moderate Risk Site No. 128)
- 129) MTA NYCT - Van Sclen, Van Sclen Ave. and Fulton St. (Moderate Risk Site No. 129)
- 130) Auto Repair Facility (currently Adolfo's Auto Body), 530 Liberty Ave. (Moderate Risk Site No. 130)
- 131) Former Auto Repair Facility (currently Franssiely Grocery), 285 Hendrix St. / 536 Liberty Ave. (Moderate Risk Site No. 131)
- 132) Former Dry Cleaners, AST Site, and LTANK Site (currently Hendrix Arms and apartments), 168 Hendrix St. / Dry Cleaners, 2811 Fulton St. and 170 Hendrix St. (Moderate Risk Site No. 132)
- 133) Con Edison Manhole 5 / Manhole 5291, Liberty Ave. and Schenck Ave. (Moderate Risk Site No. 133)
- 134) Maldondao Home - TTF (currently Crane Cooling Corp.), 2849 Fulton St. (likely Fulton St.) / Machine Shop, 2849-2855 Fulton St. (Moderate Risk Site No. 134)
- 135) Development Property (currently a residential complex), 584-600 Liberty Ave. (Moderate Risk Site No. 135)

1.2 Scope of Work

The Phase II SCI consisted of a field investigation, laboratory analyses, and the preparation of this report, which includes tables summarizing the laboratory analytical results and figures depicting boring locations, significant site features and, if applicable, contamination occurrence and distribution. Drilling activities for the field investigation were performed by Associated Environmental Services, Limited (AES) of Hauppauge, New York. Oversight of drilling activities was performed by LiRo. Laboratory analyses were provided by Con-Test Analytical Laboratory (Con-Test) of East Longmeadow, Massachusetts, a NYS Department of Health (NYSDOH) approved laboratory (No. 10899). Field derived Quality Assurance/Quality Control (QA/QC) samples (i.e., field blanks, trip blanks, duplicates) were not collected for this project. The field investigation was conducted from October 10, 2015 through November 12, 2015 and consisted of the following components.

- The advancement of 39 borings (SB-01 through SB-12, SB-14 through SB-20, SB-21 through SB-23, SB-25 through SB-26, SB-28 through SB-30, SB-32 through SB-40, SB-42 through SB-44, and SB-47) to a terminal depth of 15 ftbg or refusal, whichever was encountered first. It should be noted that based on the Phase II SCI Work Plan prepared by LiRo and dated September 30, 2015, a total of 48 soil borings were proposed to be advanced along the Corridor. However, soil borings SB-13, SB-21, SB-27, SB-31, SB-41, SB-45, and SB-46 were canceled due to the presence of underground utilities. Soil boring SB-24 was cancelled due to a private water line being encountered and soil boring SB-48 was cancelled due to being located outside the Corridor limits;
- The borings were advanced using a GeoProbe direct push drill rig. Prior to direct push advancement, borings were cleared to a depth of six (6) feet using a hand auger and/or a vacuum excavator (Vacex). Soil samples were collected using 4-foot long or 5-foot long, 2-inch diameter Macro Core stainless steel samplers equipped with polyvinyl chloride (PVC) liners. In addition, a Health and Safety Plan was prepared prior to commencing field work.
- Field screening, classification, and identification of soils from the ground surface to the bottom of each boring. Soil samples were visually classified in the field using the Unified Soil Classification System (USCS). Field screening consisted of visual and olfactory indicators of impacts as well as screening with a photoionization detector (PID).
- The collection of one (1) composite and one (1) grab sample from the 39 soil boring locations (SB-01 through SB-12, SB-14 through SB-20, SB-21 through SB-23, SB-25 through SB-26, SB-28 through SB-30, SB-32 through SB-40, SB-42 through SB-44, and SB-47). The composite samples were comprised of soil from the entire boring column. The grab samples were collected from the 6-inch interval exhibiting evidence of petroleum impacts (highest PID reading) or from the bottom 6-inch interval in each boring.
- Laboratory analysis of the composite samples for: (1) Polycyclic Aromatic Hydrocarbons (PAHs) via United States Environmental Protection Agency (USEPA) Method 8270C; (2) Polychlorinated Biphenyls (PCBs) via USEPA Method 3550B/8082; (3) Total Petroleum Hydrocarbon Diesel Range Organics/Gasoline Range Organics (TPHC DRO/GRO) via USEPA Method 8015B; (4) Resource Conservation and Recovery Act (RCRA) Characteristics via USEPA SW-846; and, (5) Toxicity Characteristic Leaching Procedure (TCLP) RCRA Metals via USEPA SW-846.

- Laboratory analysis of the grab samples for TCL volatile organic compounds (VOCs) by USEPA Method 8260B.

2.0 CORRIDOR INFORMATION

2.1 Corridor Location, Description and Use

The Corridor is located in the East New York and Cypress Hills sections of the Borough of Brooklyn, New York. The Corridor consists of a portion of Atlantic Avenue between Georgia Avenue and just east of Fountain Avenue, near the entrances to Conduit Boulevard, which is developed with a paved roadway and existing infrastructure systems.

Property usage noted along the Corridor during the inspection consists primarily of commercial and residential properties. Properties of potential environmental concern noted along the Corridor during the Corridor inspection include:

- Post Office – East New York Station, 2643-2667 Atlantic Ave. and 85-89 Pennsylvania Ave. (High Risk Site No. 1)
- Formerly Strauss Discount Auto 107 (Currently Advanced Auto Parts), 2686 Atlantic Ave. / Dry Cleaners, 2672 Atlantic Ave. (High Risk Site No. 2)
- Jimmy's Shop (auto repair), 2776 Atlantic Ave. (High Risk Site No. 4)
- Mobil Gas Station (Bolla EM Realty, LLC), 2816 Atlantic Ave. / Atlantic Ave. and Hendrix St. / Manhole No. 5290, 2820 Atlantic Ave./243 Hendrix St. (High Risk Site No. 6)
- Former Auto Repair (currently NY Karstore.com – used car sales), 2857-2861 Atlantic Ave. (High Risk Site No. 7)
- Merit Oil Corp. (currently Speedway), 2880 Atlantic Ave./2864-2886 Atlantic Ave./249-257 Barbey St. and 202-212 Jerome Ave. / Nursery, 2870-2874 Atlantic Ave. (High Risk Site No. 8)
- Martin Auto Care, 2916 Atlantic Ave. / 2912 Atlantic Ave. Realty Corp. (UST site) / Gibraltar Transmission, 2914 Atlantic Ave. (High Risk Site No. 9)
- Cypress Hills Service (BP Gas Station) / Atlantic Ave., Inc., 3123 Atlantic Ave. / Gas Station, Auto Repair, and Auto Sales, 3119-3129 Atlantic Ave. and 220-230 Hale Ave. (High Risk Site No. 24)
- Former Beer Depot and Garage with Two (2) Gas Tanks (currently Maggie's ParaTransit Corp.), 3163-3177 Atlantic Ave. and 245-255 Norwood Ave. (High Risk Site No. 27)
- Shell Service Station, 3170 Atlantic Ave. / Bill Wolf Petroleum, 3170-3186 Atlantic Ave. and 1-11 Milford St. (High Risk Site No. 28)
- Gas Station, Auto Repair, and Used Truck Sales (currently Compass Gas), 3196-3218 Atlantic Ave., 2-20 Fountain Ave., and 259-273 Logan St. / Dominick Vitucci, 2 Fountain Ave. (High Risk Site No. 30)
- NYCT – Atlantic Ave., Atlantic Ave. and Pennsylvania Ave. Substation / Pennsylvania Ave. and Atlantic Ave. (Moderate Risk Site No. 2)
- Former Auto Repair Facility (currently a thrift store and furniture store), 2671 Atlantic Ave. (Moderate Risk Site No. 4)
- Undertakers, 2709-2715 Atlantic Ave. and 124-130 Wyona Ave. (Moderate Risk Site No. 7)
- Used Auto Sales, 2750 Atlantic Ave. (Moderate Risk Site No. 12)
- Tire Sales and Service, 2765 Atlantic Ave. and 190-202 Miller Ave. (Moderate Risk Site No. 13)
- Royal Repair, 168 Van Siclen Ave. (Moderate Risk Site No. 17)
- Formerly Atlantic Lube, Inc. (currently Atlantic Car Care Center), 2894 Atlantic Ave. (Moderate Risk Site No. 28)

- AAMCO Auto Repair, 2900-2906 Atlantic Ave. (Moderate Risk Site No. 29)
- Machine Shop (currently White Tool and Supply, Inc.), 3047-3049 Atlantic Ave. / Manufacturing Facility, 3051 Atlantic Ave. (Moderate Risk Site No. 30)
- Used Auto Sales and Repair (currently Imperial Auto Mall), 2970 Atlantic Ave. (Moderate Risk Site No. 33)
- Former Auto Repair Facility (currently a portion of Sal's Tire), 3002 Atlantic Ave. / Manufacturing Facility, 3004-3006 Atlantic Ave. (Moderate Risk Site No. 35)
- Former Auto Repair Facility (currently A&R Best Auto Sales), 3018 Atlantic Ave. (Moderate Risk Site No. 37)
- Private Garage with One (1) Tank (currently High Class Auto Body and Towing), 3031 Atlantic Ave. / 3033 Atlantic Ave. (Moderate Risk Site No. 39)
- Formerly Dynamic Auto Clinic (currently Brooklyn Auto Paint), 3053 Atlantic Ave (Moderate Risk Site No. 41)
- Red Line Tire and Wheel, 2624 Atlantic Ave. (Moderate Risk Site No. 57)
- Formerly Electric Motor Repair (currently New and Used Tires), 2620 Atlantic Ave. (Moderate Risk Site No. 58)
- Shiny Carwash and Lube Center, Inc., 2591 Atlantic Ave. / 2591-2613 Atlantic Ave. (Moderate Risk Site No. 82)

The Corridor is approximately 6,893 feet long. A map of the Corridor area is presented as Figures 2A-2C.

2.2 Description of Surrounding Properties

Property uses off the Corridor, but in the immediate area of the Corridor, are primarily comprised of commercial and residential properties. Properties of potential environmental concern noted in the area of, but off, the Corridor include:

- Former Truck Parking and Heavy Equipment Storage (currently parking for Maggie's ParaTransit Corp.), 38-116 Dinsmore Pl., 266-286 Chestnut St., and 3201-3269 Atlantic Ave. (High Risk Site No. 31)
- Former Garage with One (1) Gas Tank (currently a ParaTransit Complex), 233 Norwood Ave. Corp., 235 Norwood Ave. (High Risk Site No. 33)
- Formerly Transmission Repair (currently Nick's Iron Works), 143-147 Wyona St. (High Risk Site No. 36)
- Maggie's ParaTransit, 234 Logan St. / 232-244 Logan St. (High Risk Site No. 37)
- Former Auto Body Repair (currently D&C Collision and Atlantic Welding Supply), 87 Georgia Ave. / Manufacturing Facility, 91-95 Georgia Ave. / Gas Storage, 97 Georgia Ave. (High Risk Site No. 41)
- Iron Works/Auto Repair Facility, 211 Elton St (Moderate Risk Site No. 52)
- Wyona Auto Repair, 146-150 Wyona St. (Moderate Risk Site No. 60)
- Former Iron Works Facility (currently a vacant structure), 219 Miller Ave. (Moderate Risk Site No. 62)
- Former Garage and Repair Shop (currently New Age Steel Products), 179-181 Van Siclen Ave. (Moderate Risk Site No. 65)
- Former Manufacturing Facilities (currently Electric Supply and Lighting), 220-228 Ashford St. (Moderate Risk Site No. 68)

- Key Capital Funding (currently an auto repair facility and formerly a manufacturing facility), 23 Montauk Ave. / Machine Shop, 23-27 Montauk Ave. (Moderate Risk Site No. 72)
- Brooklyn Auto Repair, 36-40 Milford St. (Moderate Risk Site No. 74)
- Class A Cars (currently a junk yard), 477 Liberty Ave. / Manufacturing Facility, 475-483 Liberty Ave. and 240-244 Miller Ave. (Moderate Risk Site No. 77)
- Con Edison (currently Dominik Vitucci Truck Yard and Machine Shop), 28 Fountain Ave. (Moderate Risk Site No. 80)
- Former Automotive Chemical Manufacturer (currently a portion of the Con Edison Complex), 243-247 Ashford St. and 334-336 Cleveland Ave. (Moderate Risk Site No. 81)
- Auto Repair – Volkswagon-Audi Parts and Service, 61-67 Pennsylvania Ave. (Moderate Risk Site No. 88)
- Former HA Dependable Auto Collision (currently Dieguito Auto Repair), 186-188 Vermont St. (Moderate Risk Site No. 89)
- Former Manufacturing Facility (currently a vacant lot used for corrugated steel storage), 264-274 Hendrix St. and 529-533 Liberty Ave. (Moderate Risk Site No. 95)
- Auto Repair Facilities and NY Spill Site (currently Auto Fresh 2), 263 Hendrix St. / 273 Hendrix St. (Moderate Risk Site No. 96)
- Auto Repair Facility and Oil Burner Company (currently an auto repair facility and church), 579-581 Liberty Ave. (Moderate Risk Site No. 97)
- Carbusters Auto Recycling, 60 Berriman St./ Auto Repair and Auto Wrecking Facilities, 60-66 Berriman St. (Moderate Risk Site No. 102)
- Two Friends Corp. (apartments), 250 Richmond St. / Auto Repair, 242-252 Richmond St. (Moderate Risk Site No. 103)
- Manufacturing Facility, 245 Richmond St. and 91-97 Dinsmore Pl. / Auto Repair Facilities, 81-89 Dinsmore Pl. and 247-251 Richmond St. (Moderate Risk Site No. 104)
- Dry Cleaners, 110 Van Siclen Ave. (Moderate Risk Site No. 109)
- Con Edison, 2740 Fulton St. / Manufacturing Facility, 2736-2740 Fulton St. (currently NAPA Auto and Truck Parts) (Moderate Risk Site No. 110)
- Auto Repair Facility and Former Manufacturing Facility (currently R&R Cheap Car Auto Sales), 2766-2772 Fulton St. (Moderate Risk Site No. 111)
- Arleney's Super Dry/Flor French Cleaners, 2814 Fulton St. (Moderate Risk Site No. 112)
- Cleveland M Cleaners, 2948 Fulton St. (Moderate Risk Site No. 114)
- Formerly My Brothers Place Auto Repair (currently Bienvo Auto Repair and J&J Auto Repair), 3086 Fulton St. / 181 Highland Pl. (Moderate Risk Site No. 115)
- Former Auto Repair Facility (currently Fulton Laundromat), 3060 Fulton St. (Moderate Risk Site No. 116)
- Formerly Sal's Tire Show (currently Cuba Tire Shop), 48 Georgia Ave. (Moderate Risk Site No. 118)
- Auto Repair Facility (currently Iman Chocolatiers and Roadway Towing, Inc.), 74-80 Georgia Ave. (Moderate Risk Site No. 119)
- Former Auto Repair Facility with a Gas Tank (currently AV Tech Wholesale Gold Dust, LLC and Foreign Domestic Auto Repair), 82 Georgia Ave. (Moderate Risk Site No. 120)
- Cypress Hills Car Care Center, Inc., 2641 Fulton St. (Moderate Risk Site No. 124)
- Auto Repair Facility (currently Atlantic Car Service and Used Car Sales), 2695-2697 Fulton St. (Moderate Risk Site No. 125)

- Inland Paper Product, 189 Wyona St. / Manufacturing Facility, 192-196 Bradford St. / Manufacturing Facility, 444 Liberty Ave. / Former Gas Station, 462 Liberty Ave. and 180-190 Bradford St. (Moderate Risk Site No. 126)
- Former Auto Repair Facility (currently a one car private garage and a vacant lot), 2777 Fulton St. / 2779 Fulton St. (Moderate Risk Site No. 128)
- Auto Repair Facility (currently Adolfo's Auto Body), 530 Liberty Ave. (Moderate Risk Site No. 130)
- Maldondao Home – TTF (currently Crane Cooling Corp.), 2849 Fulton St. (likely Fulton St.) / Machine Shop, 2849-2855 Fulton St. (Moderate Risk Site No. 134)

2.3 Corridor and Regional Topographic Setting

Based on a review of the United States Geological Survey (USGS.) 7.5-Minute Quadrangle Map, Brooklyn, NY, dated 1980 the elevation of the Corridor ranges from approximately 35 feet above mean sea level (amsl) at the eastern end of the Corridor to approximately 55 feet amsl at the western end of the Corridor. The topography of the immediate Corridor area is gently sloping to the southeast. A copy of the topographic map is presented in Figure 1.

2.4 Corridor and Regional Geology

Site and Regional Geology and Hydrogeology are based on information provided in the Geologic Map of New York State (Lower Hudson Sheet) and the USGS "Hydrogeologic Framework of Long Island, New York." Based on these sources, physiographically, Kings and Queens Counties are part of the Long Island Hydrogeologic System. In a roughly north-south cross section, the geology can be characterized as a wedge-shaped layer of Cretaceous and Pleistocene age sedimentary deposits, thickening to the south-southeast. Several impermeable clay layers are located within these sedimentary deposits, generally creating three (3) distinct aquifers. The deep aquifers in southeastern Kings and Queens Counties extend into Nassau and Suffolk Counties and are the sole source of drinking water for Nassau and Suffolk Counties and as such are protected in Kings and Queens Counties. However, the potable water supply for the Corridor comes from the NYC municipal water system which is primarily withdrawn from the Catskills Reservoir in Upstate New York.

Bedrock is of Precambrian and Paleozoic age. The thickness of the unconsolidated sediment ranges from zero (0) to approximately 1,300 ftbg from north to south. Outcrops of metamorphic bedrock can be found along the northwest portions of Queens. The uppermost unconsolidated unit consists of Pleistocene glacial till and moraine deposits in the northern portions of the Queens and Kings Counties and glaciofluvial sediments derived from melt-water of the retreating glaciers to the south. These deposits constitute the Upper Glacial Aquifer.

The Cretaceous age sediments are characterized by three (3) periods of deposition separated by periods of erosion. The lowermost unit, known as the Raritan Formation, was formed by streams and coalescing delta deposits. The formation has been divided into two (2) units, the Lloyd Sand Member and a conformable overlying clay unit (the Raritan Confining Unit).

The Magothy Formation was deposited in an environment dominated by streams and coalescing deltas. The coarse basal unit indicates an environment of high energy that decreased rapidly, resulting in deposition of finer sands and silts that make up the majority of the formation.

Several episodes of Pleistocene glaciation by a southward advance from New England and the Hudson River valley eroded the Cretaceous deposits. The unconformity that extends across most of Queens and Kings Counties between the Cretaceous deposits and the overlying sediments, represents glacial scouring and glaciofluvial activity. Evidence of ice contact with the underlying Cretaceous deposits is absent in the southern portion of Queens and Kings Counties, indicating the southernmost limit of the advancing ice sheets.

The oldest Pleistocene deposit, represented only on western Long Island and Queens and Kings Counties is the Jameco Gravel (Jameco Aquifer). It is a channel filling of gravel and coarse sands which may represent a paleo Hudson River.

The terminal moraine of the last glacial advance is represented by the Harbor Hill Moraine. The Moraine trends southwest to northeast through central Kings and Queens Counties. The moraine deposits consist of poorly sorted silts, clays, sands and boulders and form the topographic highs in the area.

The subsurface soils encountered during this Phase II SCI consisted predominantly of brown fine to coarse sand with some clay and gravel from grade to 15 ftbg. Man-made materials (brick, concrete, etc.) and/or wood fragments, which are indicative of urban fill, were encountered throughout much the Corridor at depths ranging from 0.5 to 15 ftbg. Bedrock was not encountered during the Phase II SCI.

2.5 Corridor and Regional Hydrogeology

The first unconfined aquifer encountered is the upper glacial aquifer. The depth to the water table varies but generally follows topography. Closer to sea level, groundwater depths can occur five (5) to 10 ftbg. Generally, groundwater flow follows topographic elevation of the area with flow migrating from higher to lower elevations.

Based on the Brooklyn, New York topographic map, groundwater is anticipated to be present at depths ranging from approximately 20 to 40 ftbg, depending on the location along the Corridor. Groundwater was not encountered within any of the on-site borings (which extended to 15 ftbg) during the LiRo Phase II SCI. The nearest surface water body is the Ridgewood Reservoir located approximately 4,000 feet up-gradient from the Corridor. Since this is likely a manmade body of water and located up-gradient of the Corridor, groundwater is not anticipated to flow toward this reservoir. Based on elevation, groundwater flow is anticipated to be to the southeast. Groundwater flow direction may also vary due to seasonal fluctuations in precipitation, local usage demands, local variation in geology, underground structures, or local dewatering operations.

Based on the information supplied by Environmental Data Resources, Inc. (EDR) of Shelton Connecticut in the Radius Map Report, the Corridor does not fall within a state or national wetland area. The nearest wetland is located just over one-half mile north of the Corridor.

The EDR report has also indicated that the Corridor is not located within the limits of 100-year and 500-year flood zones. No 100-year or 500-year flood zones appear to be located within the area of the Corridor.

3.0 CORRIDOR EVALUATION

Proposed construction activities at this Corridor include soil excavation and may include dewatering, which in-turn requires that soils and groundwater at the Corridor be characterized to identify material handling requirements (i.e., use of protective equipment) and for material reuse, handling, and/or waste disposal requirements. LiRo provided oversight for the advancement of 39 soil borings and the collection of soil samples during the field investigation at the designated areas in the vicinity of the planned construction. The soil samples from the borings were transferred into laboratory supplied sample jars and properly labeled. The samples were stored with ice in a cooler to preserve the samples at 4° Celsius prior to and during shipment. A chain-of-custody was prepared prior to sample shipment. A summary of the field observations, including the location of the sites and the details of the soil borings, is provided in Table 1.

3.1 Soil Quality Investigation

Thirty-nine (39) borings (SB-01 through SB-12, SB-14 through SB-20, SB-21 through SB-23, SB-25 through SB-26, SB-28 through SB-30, SB-32 through SB-40, SB-42 through SB-44, and SB-47) were advanced to a terminal depth of 15 ftbg, or refusal, whichever was encountered first, using a GeoProbe direct push drill rig. Prior to direct push advancement, borings were cleared to a depth of six (6) ftbg using a hand auger and/or a vacuum excavator. Soil samples were collected using 4-foot long or 5-foot long, 2-inch diameter Macro Core stainless steel samplers equipped with polyvinyl chloride (PVC) liners. Soil boring locations are shown on Figure 2. The designations and sampling intervals for the samples that were submitted to the laboratory are included in Table 1. Maps depicting each boring location are included in Appendix A. Boring logs are provided in Appendix B. The locations of each boring are described below:

- **SB-01** – Advanced in the vicinity of “Moderate” risk site Nos. 82, 83, and 118 and located on Atlantic Avenue, 52 feet east of Georgia Avenue and 11 feet north of the Atlantic Avenue curb line.
- **SB-02** – Advanced in the vicinity of “Moderate” risk site Nos. 84 and 85 and located on Atlantic Avenue, 40 feet west of Sheffield Avenue and 5 feet south of the Atlantic Avenue curb line.
- **SB-03** – Advanced in the vicinity of “Moderate” risk site Nos. 45 and 56 and located on Atlantic Avenue, 116 feet west of Pennsylvania Avenue and 5 feet north of the Atlantic Avenue curb line.
- **SB-04** – Advanced in the vicinity of “Moderate” risk site Nos. 1, 57, and 58 and located on Atlantic Avenue, 83 feet west of Pennsylvania Avenue and 7 feet south of the Atlantic Avenue curb line.
- **SB-05** – Advanced in the vicinity of “Moderate” risk site No. 3 and located on Atlantic Avenue, 95 feet west of New Jersey Avenue and 4 feet south of the Atlantic Avenue curb line.
- **SB-06** – Advanced in the vicinity of “High” risk site No. 1 and located on Atlantic Avenue, 72 feet west of New Jersey Avenue and 5 feet north of the Atlantic Avenue curb line.
- **SB-07** – Advanced in the vicinity of “High” risk site No. 2 and located on Atlantic Avenue, 65 feet east of New Jersey Avenue and 2 feet south of the Atlantic Avenue curb line.

- **SB-08** – Advanced in the vicinity of “Moderate” risk site No. 8 and located on Atlantic Avenue, 75 feet west of Wyona Street and 5 feet north of the Atlantic Avenue curb line.
- **SB-09** – Advanced in the vicinity of “Moderate” risk site Nos. 8, 9, and 10 and located on Atlantic Avenue, 97 feet east of Wyona Street and 4 feet south of the Atlantic Avenue curb line.
- **SB-10** – Advanced in the vicinity of “Moderate” risk site No. 11 and located on Atlantic Avenue, 25 feet east of Bradford Street and 5 feet north of the Atlantic Avenue curb line.
- **SB-11** – Advanced in the vicinity of “High” risk site No. 3 and “Moderate” risk site No. 14 and located on Atlantic Avenue, 58 feet east of Miller Avenue and 5 feet north of the Atlantic Avenue curb line.
- **SB-12** – Advanced in the vicinity of “High” risk site No. 4 and located on Atlantic Avenue, 69 feet east of Miller Avenue and 5 feet south of the Atlantic Avenue curb line.
- **SB-13** – This boring was cancelled due to the presence of underground utilities in the area of the proposed location.
- **SB-14** – Advanced in the vicinity of “High” risk site No. 5 and located on Atlantic Avenue, 91 feet east of Van Siclen Avenue and 7 feet south of the Atlantic Avenue curb line.
- **SB-15** – Advanced in the vicinity of “High” risk site No. 6 and located on Atlantic Avenue, 61 feet east of Hendrix Street and 5 feet south of the Atlantic Avenue curb line.
- **SB-16** – Advanced in the vicinity of “Moderate” risk site Nos. 19 and 20 and located on Atlantic Avenue, 74 feet east of Hendrix Street and 3 feet north of the Atlantic Avenue curb line.
- **SB-17** – Advanced in the vicinity of “Moderate” risk site No. 22 and located on Atlantic Avenue, 66 feet east of Schenck Avenue and 5 feet south of the Atlantic Avenue curb line.
- **SB-18** – Advanced in the vicinity of “High” risk site No. 7 and located on Atlantic Avenue, 50 feet west of Barbey Street and 5 feet north of the Atlantic Avenue curb line.
- **SB-19** – Advanced in the vicinity of “High” risk site No. 8 and located on Atlantic Avenue, 91 feet east of Barbey Street and 2 feet south of the Atlantic Avenue curb line.
- **SB-20** – Advanced in the vicinity of “Moderate” risk site No. 25 and located on Atlantic Avenue, 61 feet west of Jerome Street and 5 feet north of the Atlantic Avenue curb line.
- **SB-21** – This boring was cancelled due to the presence of underground utilities in the area of the proposed location.
- **SB-22** – Advanced in the vicinity of “Moderate” risk site No. 27 and located on Atlantic Avenue, 40 feet west of Warwick Street and 10 feet north of the Atlantic Avenue curb line.



- **SB-23** – Advanced in the vicinity of “High” risk site No. 35 and “Moderate” risk site No. 30 and located on Atlantic Avenue, 86 feet east of Warwick Street and 10 feet north of the Atlantic Avenue curb line.
- **SB-24** – Boring terminated due to water line being encountered at approximately 5 ftb.
- **SB-25** – Advanced in the vicinity of “High” risk site Nos. 11 and 12 and located on Atlantic Avenue, 85 feet west of Cleveland Street and 3 feet south of the Atlantic Avenue curb line.
- **SB-26** – Advanced in the vicinity of “High” risk site Nos. 13 and 15 and located on Atlantic Avenue, 29 feet east of Cleveland Street and 5 feet south of the Atlantic Avenue curb line.
- **SB-27** – This boring was cancelled due to the presence of underground utilities in the area of the proposed location.
- **SB-28** – Advanced in the vicinity of “High” risk site No. 15 and located on Atlantic Avenue, 65 feet west of Linwood Street and 5 feet south of the Atlantic Avenue curb line.
- **SB-29** – Advanced in the vicinity of “High” risk site No. 16 and “Moderate” risk site Nos. 34 and 52 and located on Atlantic Avenue, 86 feet east of Elton Street and 12 feet north of the Atlantic Avenue curb line.
- **SB-30** – Advanced in the vicinity of “High” risk site No. 17 and “Moderate” risk site Nos. 35 and 37 and located on Atlantic Avenue, 21 feet east of Linwood Street and 5 feet south of the Atlantic Avenue curb line.
- **SB-31** – This boring was cancelled due to the presence of underground utilities in the area of the proposed location.
- **SB-32** – Advanced in the vicinity of “High” risk site No. 19 and located on Atlantic Avenue, 88 feet west of Shepherd Avenue and 4 feet south of the Atlantic Avenue curb line.
- **SB-33** – Advanced in the vicinity of “Moderate” risk site Nos. 41 and 42 and located on Atlantic Avenue, 108 feet east of Essex Street and 12 feet north of the Atlantic Avenue curb line.
- **SB-34** – Advanced in the vicinity of “High” risk sites No. 20 and located on Atlantic Avenue, 85 feet east of Shepherd Avenue and 7 feet south of the Atlantic Avenue curb line.
- **SB-35** – Advanced in the vicinity of “High” risk sites Nos. 21 and 22 and located on Atlantic Avenue, 49 feet west of Highland Place and 13 feet north of the Atlantic Avenue curb line.
- **SB-36** – Advanced in the vicinity of “High” risk sites Nos. 21 and 22 and located on Atlantic Avenue, 77 feet west of Atkins Avenue and 11 feet south of the Atlantic Avenue curb line.
- **SB-37** – Advanced in the vicinity of “High” risk site No. 24 and located on Atlantic Avenue, 32 feet west of Hale Avenue and 12 feet north of the Atlantic Avenue curb line.

- **SB-38** – Advanced in the vicinity of “Moderate” risk site No. 43 and located on Atlantic Avenue, 45 feet east of Hale Avenue and 10 feet north of the Atlantic Avenue curb line.
- **SB-39** – Advanced in the vicinity of “High” risk site No. 26 and located on Atlantic Avenue, 43 feet east of Montauk Avenue and 10 feet south of the Atlantic Avenue curb line.
- **SB-40** – Advanced in the vicinity of “High” risk site No. 25 and located on Atlantic Avenue, 22 feet west of Norwood Avenue and 10 feet north of the Atlantic Avenue curb line.
- **SB-41** – This boring was cancelled due to the presence of underground utilities in the area of the proposed location.
- **SB-42** – Advanced in the vicinity of “High” risk site No. 28 and located on Atlantic Avenue, 33 feet east of Milford Street and 5 feet south of the Atlantic Avenue curb line.
- **SB-43** – Advanced in the vicinity of “High” risk site No. 29 and located on Atlantic Avenue, 125 feet west of Logan Street and 13 feet north of the Atlantic Avenue curb line.
- **SB-44** – Advanced in the vicinity of “High” risk site No. 30 and located on Atlantic Avenue, 31 feet east of Logan Street and 10 feet south of the Atlantic Avenue curb line.
- **SB-45** – This boring was cancelled due to the presence of underground utilities in the area of the proposed location.
- **SB-46** – This boring was cancelled due to the presence of underground utilities in the area of the proposed location.
- **SB-47** – Advanced in the vicinity of “High” risk site No. 32 and located on Atlantic Avenue, 34 feet east of Fountain Avenue and 17 feet south of the Atlantic Avenue and Conduit Boulevard curb line.
- **SB-48** – This boring was cancelled due to the proposed location being located outside the Corridor area and no topographic maps being obtained.

Soil from each boring was classified and examined for visual evidence (i.e., staining, discoloration) and any olfactory indications (i.e., odors) of contamination. Continuous soil samples were collected from each of the borings at 4-foot or 5-foot intervals. Upon sample retrieval, the soils were examined for visual evidence (i.e., staining, discoloration) and any olfactory indications (i.e., odors) of contamination. In addition, a PID was used to screen the soil for VOC vapors.

In order to identify representative conditions relative to the presence of PAHs, PCBs, TPHC DRO/GRO, RCRA Characteristics, and TCLP RCRA metals over the entire soil column in each boring, composite soil samples were collected by mixing the soil from the entire column in a stainless steel bowl. Boring composite samples were collected from all 39 soil borings.

In order to identify representative conditions relative to the presence of VOCs, grab soil samples were collected from the bottom 6-inch interval in all 39 soil borings.

Based on the Phase II SCI Work Plan prepared by LiRo and dated September 30, 2015, a total of 48 soil borings were proposed to be advanced along the Corridor. However, soil borings SB-13, SB-21, SB-27, SB-31, SB-41, SB-45, and SB-46 were canceled due to the presence of underground utilities. Soil boring SB-24 was cancelled due to a private water line being encountered and soil boring SB-48 was cancelled due to being located outside the Corridor limits

3.2 Groundwater Quality Investigation

Since groundwater was not anticipated to be encountered prior to initiating the Phase II SCI field activities, no groundwater sampling was proposed within the Phase II SCI work plan. No groundwater was encountered during the field activities.

3.3 Laboratory Analyses

The soil samples were submitted to Con-Test, a NYS Department of Health (NYSDOH) approved laboratory (No. 10899). Field derived Quality Assurance/Quality Control (QA/QC) samples (i.e., field blank, trip blank, duplicate) were not collected for this project. Laboratory analytical reports are included in Appendix C.

The grab soil samples were analyzed for USEPA Target Compound List (TCL) volatile organic compounds (VOCs) by Method 8260B. The boring composite soil samples were analyzed for: PAHs via USEPA Method 8270C; (2) PCBs via USEPA Method 3550B/8082; (3) TPHC DRO/GRO via USEPA Method 8015B; (4) RCRA Characteristics via USEPA SW-846; and, (5) TCLP RCRA Metals via USEPA SW-846.

3.4 Data Evaluation

In order to evaluate the subsurface soil quality, the laboratory analytical results of the grab and composite soil samples were compared with the regulatory standards identified in: (1) NYSDEC Subpart 375-6: Remedial Program Unrestricted and Restricted Use (Track 1 and Track 2) Soil Cleanup Objectives (SCOs); (2) NYSDEC CP-51 Soil Cleanup Levels (SCLs) which include Supplemental Soil Cleanup Objectives (SSCOs) to NYSDEC Subpart 375-6 and SCLs for gasoline/fuel oil contaminated soil; and/or (3) Toxicity Characteristic Regulatory Levels for Hazardous Waste published in RCRA and 6 NYCRR Part 371.

4.0 FINDINGS

This section discusses the analytical data and findings for the activities discussed in Section 3.0. Boring logs and well installation records can be found in Appendix B. Complete analytical data reports are included in Appendix C.

4.1 Field Screening

Field screening (i.e., PID readings and visual and olfactory observations) did not identify impacted soils within the Corridor. Refer to Table 1 for a summary of environmental boring data.

4.2 Soil Laboratory Analytical Results

4.2.1 Volatile Organic Compounds (VOCs) in Soil

VOCs were detected in 10 of the 39 grab samples collected. Acetone was detected at concentrations exceeding Unrestricted Use (Track 1) SCOs in three (3) of the grab samples collected including SB-08, SB-10, and SB-28. Acetone is a common laboratory cross contaminant and is most likely not representative of subsurface conditions.

Methylene chloride, which is also a common laboratory cross contaminant, was detected below applicable standards in seven (7) of the 39 grab samples collected. Refer to Table 2 for a summary of TCL VOC detections.

4.2.2 Polycyclic Aromatic Hydrocarbons (PAHs) in Soil

PAHs were detected in two (2) of the 39 composite samples collected. Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and/or pyrene were detected at concentrations below their corresponding Unrestricted Use (Track 1) and Restricted Use (Track 2) SCOs and CP-51 SCLs in SB-23 and SB-25. The detected PAHs may be attributed to: (a) residuals from isolated releases in the area of the Corridor; and/or, (b) the presence of historic fill material placed at the Corridor. Refer to Table 3 for a summary of TCL PAH detections.

4.2.3 Polychlorinated Biphenyls (PCBs) in Soil

PCBs were not detected in any of the 39 composite samples collected. Refer to Table 4 for a summary of the PCB analysis.

4.2.4 Toxicity Characteristic Leaching Procedure (TCLP) Resource Conservation and Recovery Act (RCRA) Metals in Soil

TCLP RCRA metals were detected in all 39 composite samples collected. Arsenic, barium, chromium, lead, and selenium were detected below their corresponding 6 NYCRR Part 371 and RCRA standards. Based on their consistency, most of the detected concentrations are attributed to background levels. However, some of the detected concentrations for arsenic may be attributed to contaminants in historic fill material placed throughout the Corridor. Refer to Table 5 for a summary of TCLP RCRA metals detections.

4.2.5 Waste Characterization of Soil

Ignitability (flash point), reactivity (cyanide and sulfide), and corrosivity (pH) were within the acceptable RCRA ranges. TPHC-DRO were detected at concentrations ranging from approximately 9.5 mg/kg to 180 mg/kg in five (5) of the 39 samples collected. The highest concentration, 180 mg/kg, was detected in the sample collected from boring SB-02, which is representative of subsurface soils in the westerly end of the Corridor. TPHC-GRO were not detected in any of the 39 samples collected. There are no regulatory standards for TPHC-DRO and TPHC-GRO. Analytical results will need to be compared to levels acceptable by the chosen receiving facility to determine appropriate waste Characterization prior to off-site disposal. Refer to Table 6 for a summary of TCLP parameters, RCRA Characteristics, and TPHC DRO/GRO results.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the evaluation of the field screening data and the laboratory analytical results, and a comparison to applicable regulatory standards, the following conclusions are presented.

Based on the evaluation of the field screening data and the laboratory analytical results, and a comparison to applicable regulatory standards, the following conclusions are presented:

- Field screening (i.e., PID readings and visual and olfactory observations) did not identify any petroleum-impacted soils within the Corridor;
- Laboratory analytical results did not identify petroleum-impacted soils throughout the Corridor;
- The subsurface soil samples collected from the Corridor did not exhibit hazardous waste characteristics;
- Since groundwater was not encountered, no groundwater samples were collected.
- Based on the Phase II SCI Work Plan prepared by LiRo and dated September 30, 2015, a total of 48 soil borings were proposed to be advanced along the Corridor. However, soil borings SB-13, SB-21, SB-27, SB-31, SB-41, SB-45, and SB-46 were canceled due to the presence of underground utilities. Soil boring SB-24 was cancelled due to a private water line being encountered and soil boring SB-48 was cancelled due to being located outside the Corridor limits. Due to these borings not being installed, some areas along the Corridor could not be properly evaluated. The potential exists for localized areas of impact within those areas.

Based on the results of the field investigation and laboratory analytical results, LiRo recommends the following:

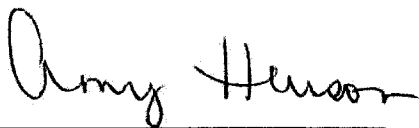
- The contract documents should identify provisions and a contingency for managing, handling, transporting and disposing of non-hazardous potentially contaminated soil. The Contractor should be required to submit a Material Handling Plan, to identify the specific protocol and procedures that will be employed to manage the waste in accordance with applicable regulations;
- Dust control procedures are recommended during excavation activities to minimize the creation and dispersion of fugitive airborne dust. A Community Air Monitoring Plan (CAMP) shall be developed in accordance with NYSDEC DER-10 Regulations. The CAMP requires real-time monitoring for VOCs and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is intended to provide a measure of protection for the downwind community from potential airborne contaminant releases as a direct result of investigative and remedial work activities. Specific requirements shall be reviewed for each situation in consultation with NYSDOH to ensure proper applicability;
- While groundwater was not encountered during the Phase II SCI field activities, dewatering may be necessary during construction activities in the Corridor. If encountered, groundwater samples should be collected and analyzed for NYCDEP Sewer Discharge Limitations. Depending on those results, groundwater may require pre-treatment prior to discharge.

- In addition, should dewatering be necessary during construction activities within the Corridor, the contractor should be required to obtain NYCDEP sewer discharge permit. Lastly, if discharge into storm sewers (which ultimately discharge to surface water) is required during such dewatering, it may be done under the appropriate NYSDEC State Pollutant Discharge Elimination System (SPDES) permit. Additional sampling and laboratory analysis may be required to satisfy NYSDEC requirements prior to discharge into storm sewers; and,
- Before beginning any excavation activity, the contractor shall submit a Corridor-specific health and safety plan (HASP) that will meet the requirements set forth by the Occupational, Safety and Health Administration (OSHA), the New York State Department of Health (NYSDOH) and any other applicable regulations. The HASP should identify the possible locations and risks associated with the potential contaminants that may be encountered, and the administrative and engineering controls that will be utilized to mitigate concerns (i.e., dust control procedures).

6.0 STATEMENT OF LIMITATIONS

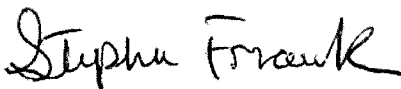
The data presented and the opinions expressed in this report are qualified as stated in the attachment to this section of the report.

Report Prepared By:



Amy Hewson
Senior Environmental Analyst

Report Reviewed By:



Stephen Frank
Senior Geologist

Report Reviewed By:



Robert Kreuzer
Project Manager

STATEMENT OF LIMITATIONS

The data presented and the opinions expressed in this report are qualified as follows:

The sole purpose of the investigation and of this report is to assess the physical characteristics of the Corridor with respect to the presence or absence in the environment of oil or hazardous materials and substances as defined in the applicable state and federal environmental laws and regulations and to gather information regarding current and past environmental conditions at the Corridor.

LiRo derived the data in this report primarily from visual inspections, examination of records in the public domain, interviews with individuals with information about the Corridor, and a limited number of subsurface explorations made on the dates indicated. The passage of time, manifestation of latent conditions or occurrence of future events may require further exploration at the Corridor, analysis of the data, and reevaluation of the findings, observations, and conclusions expressed in the report.

In preparing this report, LiRo has relied upon and presumed accurate certain information (or the absence thereof) about the Corridor and adjacent properties provided by governmental officials and agencies, the Client, and others identified herein. Except as otherwise stated in the report, LiRo has not attempted to verify the accuracy or completeness of any such information.

The data reported and the findings, observations, and conclusions expressed in the report are limited by the Scope of Services, including the extent of subsurface exploration and other tests. The Scope of Services was defined by the requests of the Client, the time and budgetary constraints imposed by the Client, and the availability of access to the Corridor.

Because of the limitations stated above, the findings, observations, and conclusions expressed by LiRo in this report are not, and should not be considered, an opinion concerning the compliance of any past or present owner or operator of the Corridor with any federal, state or local law or regulation. No warranty or guarantee, whether express or implied, is made with respect to the data reported or findings, observations, and conclusions expressed in this report. Further, such data, findings, observations, and conclusions are based solely upon Corridor conditions in existence at the time of investigation.

This report has been prepared on behalf of and for the exclusive use of the Client, and is subject to and issued in connection with the Agreement and the provisions thereof.



TABLES

- TABLE 1 – SUMMARY OF FIELD INVESTIGATION**
- TABLE 2 – SUMMARY OF TCL VOCs DETECTED IN SOIL**
- TABLE 3 – SUMMARY OF PAHs DETECTED IN SOIL**
- TABLE 4 – SUMMARY OF PCBs DETECTED IN SOIL**
- TABLE 5 – SUMMARY OF WASTE CHARACTERISTICS DETECTED IN SOIL**

**Table 1. Summary of Environmental Boring Data
Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York**

Boring No.	Sample ID	PID (ppm)	Sample Interval (ftbg)	Total VOCs (ug/kg)	Total PAHs (ug/kg)	Total PCBs (ug/kg)	Depth to Water (ftbg)	Total Depth (ftbg)	Other Comments
SB-01	SB-01-14.5-15	<1	14.5-15	22	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	Composite		NA	ND	ND	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.	
SB-02	SB-02-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	Composite		NA	ND	ND	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.	
SB-03	SB-03-14.5-15	<1	14.5-15	22	NA	NA	NA	11.5	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	Composite		NA	ND	ND	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.	
SB-04	SB-04-11-11.5	<1	11-11.5	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	Composite		NA	ND	ND	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.	
SB-05	SB-05-14.5-15	<1	14.5-15	NA	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	Composite		NA	ND	ND	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.	
SB-06	SB-06-14.5-15	<1	14.5-15	NA	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	Composite		NA	ND	ND	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.	
SB-07	SB-07-14.5-15	<1	14.5-15	26	NA	NA	NA	10.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	Composite		NA	ND	ND	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.	
SB-08	SB-08-9.5-10	<1	9.5-10	210	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	Composite		NA	ND	ND	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.	
SB-09	SB-09-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	Composite		NA	ND	ND	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.	
SB-10	SB-10-14.5-15	<1	14.5-15	250	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	Composite		NA	ND	ND	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.	
SB-11	SB-11-14.5-15	<1	14.5-15	22	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	Composite		NA	ND	ND	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.	
SB-12	SB-12-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	Composite		NA	ND	ND	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.	
SB-13	NA	NA	NA	NA	NA	NA	NA	Boring cancelled due to the presence of underground utilities.	
SB-14	SB-14-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	Composite		NA	ND	ND	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.	
SB-15	SB-15-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	Composite		NA	ND	ND	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.	
SB-16	SB-16-14.5-15	<1	14.5-15	21	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	Composite		NA	ND	ND	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.	

Notes:

All composite soil samples were analyzed for Polycyclic Aromatic Hydrocarbons (PAHs), Target Compound List (TCL) Polychlorinated Biphenyls (PCBs), Total Petroleum Hydrocarbon (TPHC) Diesel Range Organics/Gasoline Range Organics (TPHC DRO/GRO), Resource Conservation and Recovery Act (RCRA) Characteristics, and Toxicity Characteristic Leaching Procedure (TCLP) RCRA Metals.

NA = Not Analyzed/Not Applicable

ND = Non detect

ftbg = feet below grade surface

ppm = parts per million (or mg/kg)

ug/kg = microgram per kilogram

Table 1. Summary of Environmental Boring Data
 Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
 Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

Boring No.	Sample ID	PID (ppm)	Sample Interval (ftbg)	Total VOCs (ug/kg)	Total PAHs (ug/kg)	Total PCBs (ug/kg)	Depth to Water (ftbg)	Total Depth (ftbg)	Other Comments
SB-16	SB-16-14.5-15	<1	14.5-15	21	NA	NA	NA	15.0	No petroleum odors, visual evidence of impact, or elevated PID readings were detected.
	SB-16-COMP		Composite	NA	ND	ND			
SB-17	SB-17-14.5-15	<1	14.5-15	NA	NA	NA	NA	15.0	No petroleum odors, visual evidence of impact, or elevated PID readings were detected.
	SB-17-COMP		Composite	NA	ND	ND			
SB-18	SB-18-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence of impact, or elevated PID readings were detected.
	SB-18-COMP		Composite	NA	ND	ND			
SB-19	SB-19-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence of impact, or elevated PID readings were detected.
	SB-19-COMP		Composite	NA	ND	ND			
SB-20	SB-20-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence of impact, or elevated PID readings were detected.
	SB-20-COMP		Composite	NA	ND	ND			
SB-21	NA	NA	NA	NA	NA	NA	NA	NA	Boring cancelled due to the presence of underground utilities.
SB-22	SB-22-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence of impact, or elevated PID readings were detected.
	SB-22-COMP		Composite	NA	ND	ND			
SB-23	SB-23-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence of impact, or elevated PID readings were detected.
	SB-23-COMP		Composite	NA	4,000	ND			
SB-24	NA	NA	NA	NA	NA	NA	NA	NA	Boring cancelled due to the presence of underground utilities.
	SB-25-4-4.5	<1	4-4.5	ND	NA	NA	NA	4.5	No petroleum odors, visual evidence of impact, or elevated PID readings were detected.
SB-25	SB-25-COMP		Composite	NA	2,390	ND			
	SB-26-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence of impact, or elevated PID readings were detected.
SB-26	SB-26-COMP		Composite	NA	ND	ND			
	NA	NA	NA	NA	NA	NA	NA	NA	Boring cancelled due to the presence of underground utilities.
SB-28	SB-28-14.5-15	<1	14.5-15	110	NA	NA	NA	15.0	No petroleum odors, visual evidence of impact, or elevated PID readings were detected.
	SB-28-COMP		Composite	NA	ND	ND			
SB-29	SB-29-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence of impact, or elevated PID readings were detected.
	SB-29-COMP		Composite	NA	ND	ND			
SB-30	SB-30-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence of impact, or elevated PID readings were detected.
	SB-30-COMP		Composite	NA	ND	ND			
SB-31	NA	NA	NA	NA	NA	NA	NA	NA	Boring cancelled due to the presence of underground utilities.

Notes:
 All composite soil samples were analyzed for Polycyclic Aromatic Hydrocarbons (PAHs), Target Compound List (TCL) Polychlorinated Biphenyls (PCBs), Total Petroleum Hydrocarbon (TPHC) Diesel Range Organics/Gasoline Range Organics (TPHC DRO/GRO), Resource Conservation and Recovery Act (RCRA) Characteristics, and Toxicity Characteristic Leaching Procedure (TCLP) RCRA Metals.
 NA = Not Analyzed/Not Applicable
 ND = Non detect
 ftbg = feet below grade surface
 ppm = parts per million (or mg/kg)
 ug/kg = microgram per kilogram

**Table 1. Summary of Environmental Boring Data
Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York**

Boring No.	Sample ID	PID (ppm)	Sample Interval (ftbg)	Total VOCs (ug/kg)	Total PAHs (ug/kg)	Total PCBs (ug/kg)	Depth to Water (ftbg)	Total Depth (ftbg)	Other Comments
SB-32	SB-32-8.5-9	<1	8.5-9	ND	NA	NA	NA	9.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	SB-32-COMP		Composite	NA	ND	ND			
SB-33	SB-33-14.5-15	<1	14.5-15	29	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	SB-33-COMP		Composite	NA	ND	ND			
SB-34	SB-34-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	SB-34-COMP		Composite	NA	ND	ND			
SB-35	SB-35-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	SB-35-COMP		Composite	NA	ND	ND			
SB-36	SB-36-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	SB-36-COMP		Composite	NA	ND	ND			
SB-37	SB-37-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	SB-37-COMP		Composite	NA	ND	ND			
SB-38	SB-38-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	SB-38-COMP		Composite	NA	ND	ND			
SB-39	SB-39-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	SB-39-COMP		Composite	NA	ND	ND			
SB-40	SB-40-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	SB-40-COMP		Composite	NA	ND	ND			
SB-41	NA	NA	NA	NA	NA	NA	NA	NA	Boring cancelled due to the presence of underground utilities.
SB-42	SB-42-14.5-15	<1	14.5-15	21	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	SB-42-COMP		Composite	NA	ND	ND			
SB-43	SB-43-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	SB-43-COMP		Composite	NA	ND	ND			
SB-44	SB-44-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	SB-44-COMP		Composite	NA	ND	ND			
SB-45	NA	NA	NA	NA	NA	NA	NA	NA	Boring cancelled due to the presence of underground utilities.
SB-46	NA	NA	NA	NA	NA	NA	NA	NA	Boring cancelled due to the presence of underground utilities.
SB-47	SB-47-14.5-15	<1	14.5-15	ND	NA	NA	NA	15.0	No petroleum odors, visual evidence or impact, or elevated PID readings were detected.
	SB-47-COMP		Composite	NA	ND	ND			
SB-48	NA	NA	NA	NA	NA	NA	NA	NA	Boring cancelled due to being proposed outside of the Corridor limits and no topographic map being available.

Notes:

All composite soil samples were analyzed for Polycyclic Aromatic Hydrocarbons (PAHs), Target Compound List (TCL) Polychlorinated Biphenyls (PCBs), Total Petroleum Hydrocarbon (TPHC) Diesel Range Organics/Gasoline Range Organics (TPHC DRO/GRO), Resource Conservation and Recovery Act (RCRA) Characteristics, and Toxicity Characteristic Leaching Procedure (TCLP) RCRA Metals.
 NA = Not Analyzed/Not Applicable
 ND = Non detect
 ftbg = feet below grade surface
 ppm = parts per million (or mg/kg)
 ug/kg = microgram per kilogram

**Table 2. Summary of Target Compound List (TCL) Volatile Organic Compounds (VOCs) Detected in Soil
 Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
 Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York**

TCL VOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ft bgs)					
				SB-01-14.5-15 11/12/2015 14.5-15	SB-02-14.5-15 11/4/2015 14.5-15	SB-03-14.5-15 11/12/2015 14.5-15	SB-04-11-11.5 11/4/2015 11-11.5	SB-05-14.5-15 11/4/2015 14.5-15	
Acetone	50	100,000	NS	ND	ND	ND	ND	ND	ND
Methylene chloride	50	51,000	NS	ND	ND	22	ND	ND	ND
Total VOCs	NS	NS	NS	22	ND	22	22	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

NS = No Standard

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Table 2. Summary of Target Compound List (TCL) Volatile Organic Compounds (VOCs) Detected in Soil Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

TCL VOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ft bgs)				
				SB-06-14.5-15 11/12/2015 14.5-15	SB-07-14.5-15 11/4/2015 14.5-15	SB-08-9.5-10 11/12/2015 9.5-10	SB-09-14.5-15 11/5/2015 14.5-15	SB-10-14.5-15 11/12/2015 14.5-15
Acetone	50	100,000	NS	ND	ND	ND	ND	ND
Methylene chloride	50	51,000	NS	ND	26	ND	ND	ND
Total VOCs	NS	NS	NS	ND	26	210	ND	250

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface.

NS = No Standard

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

**Table 2. Summary of Target Compound List (TCL) Volatile Organic Compounds (VOCs) Detected in Soil
 Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
 Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York**

TCL VOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ft bgs)					
				SB-11-14.5-15 11/11/2015 14.5-15	SB-12-14.5-15 11/5/2015 14.5-15	SB-14-14.5-15 11/5/2015 14.5-15	SB-15-14.5-15 11/5/2015 14.5-15	SB-16-14.5-15 11/11/2015 14.5-15	
Acetone	50	100,000	NS	ND	ND	ND	ND	ND	ND
Methylene chloride	50	51,000	NS	22	ND	ND	ND	ND	21
Total VOCs	NS	NS	NS	22	ND	ND	ND	ND	21

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

NS = No Standard

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Table 2. Summary of Target Compound List (TCL) Volatile Organic Compounds (VOCs) Detected in Soil Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

TCL VOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ft bgs)						
				SB-17-14.5-15 11/5/2015 14.5-15	SB-18-14.5-15 11/11/2015 14.5-15	SB-19-14.5-15 11/5/2015 14.5-15	SB-20-14.5-15 11/11/2015 14.5-15	SB-22-14.5-15 11/11/2015 14.5-15		
Acetone	50	100,000	NS	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	50	51,000	NS	ND	ND	ND	ND	ND	ND	ND
Total VOCs	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

NS = No Standard

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

**Table 2. Summary of Target Compound List (TCL) Volatile Organic Compounds (VOCs) Detected in Soil
 Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
 Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York**

TCL VOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ft bgs)						
				SB-23-14.5-15 11/11/2015 14.5-15	SB-25-4-4.5 10/23/2015 4-4.5	SB-26-14.5-15 11/6/2015 14.5-15	SB-28-14.5-15 11/6/2015 14.5-15	SB-29-14.5-15 11/10/2015 14.5-15		
Acetone	50	100,000	NS	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	50	51,000	NS	ND	ND	ND	ND	ND	ND	ND
Total VOCs	NS	NS	NS	ND	ND	ND	110	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

NS = No Standard

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Table 2. Summary of Target Compound List (TCL) Volatile Organic Compounds (VOCs) Detected in Soil Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

TCL VOC	Part 375-6.8 (a) (Track 1) Unrestricted Use Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ft bgs)						
				SB-30-14.5-15 11/6/2015 14.5-15	SB-32-8.5-9 11/6/2015 8.5-9	SB-33-14.5-15 11/10/2015 14.5-15	SB-34-14.5-15 11/6/2015 14.5-15	SB-35-14.5-15 11/10/2015 14.5-15		
Acetone	50	100,000	NS	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	50	51,000	NS	ND	ND	29	ND	ND	ND	ND
Total VOCs	NS	NS	NS	ND	ND	29	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

NS = No Standard

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

**Table 2. Summary of Target Compound List (TCL) Volatile Organic Compounds (VOCs) Detected in Soil
Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York**

TCL VOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ft bgs)				
				SB-36-14.5-15 11/9/2015 14.5-15	SB-37-14.5-15 11/10/2015 14.5-15	SB-38-14.5-15 11/10/2015 14.5-15	SB-39-14.5-15 11/9/2015 14.5-15	SB-40-14.5-15 11/10/2015 14.5-15
Acetone	50	100,000	NS	ND	ND	ND	ND	ND
Methylene chloride	50	51,000	NS	ND	ND	ND	ND	ND
Total VOCs	NS	NS	NS	ND	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

NS = No Standard

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Table 2. Summary of Target Compound List (TCL) Volatile Organic Compounds (VOCs) Detected in Soil
 Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
 Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

TCL VOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ft bgs)		
				SB-42-14.5-15 11/9/2015 14.5-15	SB-43-14.5-15 11/9/2015 14.5-15	SB-44-14.5-15 11/9/2015 14.5-15
Acetone	50	100,000	NS	ND	ND	ND
Methylene chloride	50	51,000	NS	ND	ND	ND
Total VOCs	NS	NS	NS	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

NS = No Standard

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14,

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

**Table 3. Summary of Polycyclic Aromatic Hydrocarbons (PAHs) Detected in Soil
 Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
 Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York**

TCL SVOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ft bgs)								
				SB-01-COMP 11/12/2015	SB-02-COMP 11/4/2015	SB-03-COMP 11/12/2015	SB-04-COMP 11/4/2015	SB-05-COMP 11/4/2015	Composite	Composite	Composite	Composite
				ND	ND	ND	ND	ND	ND	ND	ND	
Benzo(a)anthracene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	800	1,000	800	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flouranthene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	500	500	500	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total PAHs	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

PAHs = Polycyclic Aromatic Hydrocarbons

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Table 3. Summary of Polycyclic Aromatic Hydrocarbons (PAHs) Detected in Soil Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

TCL SVOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ft bgs)									
				SB-06-COMP		SB-07-COMP		SB-08-COMP		SB-09-COMP		SB-10-COMP	
				11/12/2015	Composite	11/4/2015	Composite	11/12/2015	Composite	11/4/2015	Composite	11/12/2015	Composite
Benzo(a)anthracene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND		
Benzo(a)pyrene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND		
Benzo(b)fluoranthene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND		
Benzo(g,h,i)perylene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND		
Benzo(k)fluoranthene	800	1,000	800	ND	ND	ND	ND	ND	ND	ND	ND		
Chrysene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND		
Flouranthene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND		
Indeno(1,2,3-cd)pyrene	500	500	500	ND	ND	ND	ND	ND	ND	ND	ND		
Phenanthrene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND		
Pyrene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND		
Total PAHs	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND		

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

PAHs = Polycyclic Aromatic Hydrocarbons

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Table 3. Summary of Polycyclic Aromatic Hydrocarbons (PAHs) Detected in Soil Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

TCL SVOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ft bgs)						
				SB-11-COMP Composite	SB-12-COMP Composite	SB-14-COMP Composite	SB-15-COMP Composite	SB-16-COMP Composite	SB-16-COMP Composite	
				11/11/2015	11/5/2015	11/5/2015	11/5/2015	11/5/2015	11/11/2015	
Benzo(a)anthracene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	800	1,000	800	ND	ND	ND	ND	ND	ND	ND
Chrysene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND
Flouranthene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	500	500	500	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND
Pyrene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND
Total PAHs	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

PAHs = Polycyclic Aromatic Hydrocarbons

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Table 3. Summary of Polycyclic Aromatic Hydrocarbons (PAHs) Detected in Soil Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

TCL SVOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ft bgs)									
				SB-11-COMP		SB-12-COMP		SB-14-COMP		SB-15-COMP		SB-16-COMP	
				11/11/2015	Composite	11/5/2015	Composite	11/5/2015	Composite	11/5/2015	Composite	11/11/2015	Composite
Benzo(a)anthracene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	800	1,000	800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flouranthene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	500	500	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total PAHs	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

PAHs = Polycyclic Aromatic Hydrocarbons

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Table 3. Summary of Polycyclic Aromatic Hydrocarbons (PAHs) Detected in Soil Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

TCL SVOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ft bgs)						
				SB-23-COMP	SB-25-COMP	SB-26-COMP	SB-28-COMP	SB-29-COMP		
				11/11/2015	10/23/2015	11/6/2015	11/6/2015	11/10/2015	Composite	
Benzo(a)anthracene	1,000	1,000	1,000	350	290	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,000	1,000	1,000	340	290	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	1,000	1,000	1,000	440	330	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	100,000	100,000	100,000	190	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	800	1,000	800	200	ND	ND	ND	ND	ND	ND
Chrysene	1,000	1,000	1,000	360	280	ND	ND	ND	ND	ND
Flouranthene	100,000	100,000	100,000	740	460	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	500	500	500	210	ND	ND	ND	ND	ND	ND
Phenanthrene	100,000	100,000	100,000	440	210	ND	ND	ND	ND	ND
Pyrene	100,000	100,000	100,000	730	530	ND	ND	ND	ND	ND
Total PAHs	NS	NS	NS	4,000	2,390	ND	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

PAHs = Polycyclic Aromatic Hydrocarbons

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Table 3. Summary of Polycyclic Aromatic Hydrocarbons (PAHs) Detected in Soil Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

TCL SVOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ft bgs)															
				SB-30-COMP	SB-32-COMP	SB-33-COMP	SB-34-COMP	SB-35-COMP	SB-36-COMP	SB-37-COMP	SB-38-COMP								
				11/6/2015	11/6/2015	11/10/2015	11/6/2015	11/10/2015	11/6/2015	11/10/2015	Composite	Composite							
Benzo(a)anthracene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Benzo(b)fluoranthene	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Benzo(g,h,i)perylene	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Benzo(k)fluoranthene	800	1,000	1,000	800	1,000	1,000	800	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Chrysene	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Flouranthene	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Indeno(1,2,3-cd)pyrene	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Phenanthrene	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Pyrene	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Total PAHs	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft. bgs = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

PAHs = Polycyclic Aromatic Hydrocarbons

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Table 3. Summary of Polycyclic Aromatic Hydrocarbons (PAHs) Detected in Soil Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

TCL SVOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ft bgs)								
				SB-36-COMP 11/9/2015	SB-37-COMP 11/10/2015	SB-38-COMP 11/10/2015	SB-39-COMP 11/9/2015	SB-40-COMP 11/10/2015	Composite	Composite	Composite	Composite
				Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	
Benzo(a)anthracene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	800	1,000	800	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Flouranthene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	500	500	500	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total PAHs	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

PAHs = Polycyclic Aromatic Hydrocarbons

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Table 3. Summary of Polycyclic Aromatic Hydrocarbons (PAHs) Detected in Soil Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

TCL SVOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ft bgs)					
				SB-42-COMP	SB-43-COMP	SB-44-COMP	SB-47-COMP	Composite	Composite
				11/9/2015	11/9/2015	11/9/2015	11/9/2015	Composite	Composite
Benzo(a)anthracene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	800	1,000	800	ND	ND	ND	ND	ND	ND
Chrysene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND
Flouranthene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	500	500	500	ND	ND	ND	ND	ND	ND
Phenanthrene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND
Pyrene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND
Total PAHs	NS	NS	NS	ND	ND	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ft bgs = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

PAHs = Polycyclic Aromatic Hydrocarbons

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

**Table 4. Summary of Polychlorinated Biphenyls (PCBs) Detected in Soil
 Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
 Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York**

PCBs	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs) 100	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs) 1,000	CP-51 Soil Cleanup Levels (SCLs) NS	Sample ID, Date Collected, and Depth (ftbg)				
				SB-01-COMP 11/12/2015 Composite	SB-02-COMP 11/4/2015 Composite	SB-03-COMP 11/12/2015 Composite	SB-04-COMP 11/4/2015 Composite	SB-05-COMP 11/4/2015 Composite
Total PCBs				ND	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ftbg = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).
 CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Table 4. Summary of Polychlorinated Biphenyls (PCBs) Detected in Soil Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains Atlantic Ave. between Georgia Ave., Brooklyn, New York

PCBs	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ftbg)								
				SB-06-COMP 11/12/2015 Composite	SB-07-COMP 11/4/2015 Composite	SB-08-COMP 11/12/2015 Composite	SB-09-COMP 11/4/2015 Composite	SB-10-COMP 11/12/2015 Composite	Composite	Composite	Composite	Composite
Total PCBs	100	1,000	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ftbg = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).
 CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

**Table 4. Summary of Polychlorinated Biphenyls (PCBs) Detected in Soil
Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York**

PCBs	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs) 100	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs) 1,000	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ftbg)					
				SB-11-COMP 11/11/2015 Composite	SB-12-COMP 11/5/2015 Composite	SB-14-COMP 11/5/2015 Composite	SB-15-COMP 11/5/2015 Composite	SB-16-COMP 11/11/2015 Composite	Composite
Total PCBs			NS	ND	ND	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ftbg = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).
CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives



**Table 4. Summary of Polychlorinated Biphenyls (PCBs) Detected in Soil
 Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
 Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York**

PCBs	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ftbg)					
				SB-17-COMP 11/5/2015 Composite	SB-18-COMP 11/11/2015 Composite	SB-19-COMP 11/5/2015 Composite	SB-20-COMP 11/11/2015 Composite	SB-22-COMP 11/11/2015 Composite	Composite
Total PCBs	100	1,000	NS	ND	ND	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ftbg = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).
 CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

Italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

**Table 4. Summary of Polychlorinated Biphenyls (PCBs) Detected in Soil
Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York**

PCBs	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs) 100	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs) 1,000	CP-51 Soil Cleanup Levels (SCLs) NS	Sample ID, Date Collected, and Depth (ftbg)					
				SB-23-COMP 11/11/2015 Composite	SB-25-COMP 10/23/2015 Composite	SB-26-COMP 11/6/2015 Composite	SB-28-COMP 11/6/2015 Composite	SB-29-COMP 11/10/2015 Composite	Composite
Total PCBs				ND	ND	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ftbg = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).
CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives



Table 4. Summary of Polychlorinated Biphenyls (PCBs) Detected in Soil Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

PCBs	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs)	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ftbg)					
				SB-30-COMP 11/6/2015 Composite	SB-32-COMP 11/6/2015 Composite	SB-33-COMP 11/10/2015 Composite	SB-34-COMP 11/6/2015 Composite	SB-35-COMP 11/10/2015 Composite	Composite
Total PCBs	100	1,000	NS	ND	ND	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ftbg = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

**Table 4. Summary of Polychlorinated Biphenyls (PCBs) Detected in Soil
Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York**

PCBs	Part 375-6.8 (a) (Track 1) Unrestricted Use Soil Cleanup Objectives (SCOs) 100	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs) 1,000	CP-51 Soil Cleanup Levels (SCLs)	Sample ID, Date Collected, and Depth (ftbg)					
				SB-36-COMP 11/9/2015 Composite	SB-37-COMP 11/10/2015 Composite	SB-38-COMP 11/10/2015 Composite	SB-39-COMP 11/9/2015 Composite	SB-40-COMP 11/10/2015 Composite	Composite
Total PCBs			NS	ND	ND	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ftbg = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).
CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

**Table 4. Summary of Polychlorinated Biphenyls (PCBs) Detected in Soil
 Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
 Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York**

PCBs	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs) 100	Part 375-6.8 (b) Restricted Use (Track 2) Residential Soil Cleanup Objectives (SCOs) 1,000	CP-51 Soil Cleanup Levels (SCLs) NS	Sample ID, Date Collected, and Depth (ftbg)			
				SB-42-COMP 11/9/2015 Composite	SB-43-COMP 11/9/2015 Composite	SB-44-COMP 11/9/2015 Composite	SB-47-COMP 11/9/2015 Composite
Total PCBs				ND	ND	ND	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

ftbg = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December CP-51 Soil Cleanup Levels (SCLs) = New York State Department of Environmental Conservation (NYSDEC) CP-51 – Soil Cleanup Guidance (CP-51) (October 21, 2010).

BOLD = Concentration exceeds NYSDEC CP-51 SCLs Table 1 - Supplemental Soil Cleanup Objectives (Residential), Table 2 - SCLs for Gasoline Contaminated Soils, Table 3 - SCLs for Fuel oil Contaminated Soil

italicized = Concentration exceeds Restricted Use (Track 2) Residential Soil Cleanup Objectives

Table 5. Summary of Waste Characterization in Soil
Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

Parameter	6 NYCRR Part 371 and RCRA	Sample ID, Date Collected, and Depth (ftbg)												
		SB-01-COMP	SB-02-COMP	SB-03-COMP	SB-04-COMP	SB-05-COMP	SB-06-COMP	SB-07-COMP	SB-08-COMP					
		11/12/2015	11/4/2015	11/12/2015	11/4/2015	11/4/2015	11/12/2015	11/4/2015	11/12/2015	11/4/2015	11/12/2015			
METALS ¹	ug/L	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite
Arsenic	5,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	100,000	230	390	380	300	440	310	460	510	460	460	460	460	510
Chromium	5,000	ND	ND	ND	15	ND	ND	74	ND	74	74	74	74	ND
Lead	5,000	ND	11	ND	ND	ND	ND	19	ND	19	19	19	19	ND
Selenium	1,000	ND	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MISC. PARAMETERS (units)														
Reactivity Sulfide (mg/kg)	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Reactivity Cyanide (mg/kg)	250	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH (SU)	2-12.5	7.8	6.8	7.6	7.4	8.0	6.5	7.6	6.1	7.6	7.6	7.6	7.6	6.1
Ignitability	>140 °F	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
TPHC Diesel Range Organics (mg/kg)	NS	ND	180	ND	9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
TPHC Gasoline Range Organics (mg/kg)	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
 ftbg = feet below grade surface
 NS = No Standard
 ND = Compound not detected above method detection limit (see attached lab report for md/ls)
 SU = Standard unit
 J = Estimated value
 mg/Kg = milligram per kilogram
 ug/L = microgram per liter
 ug/Kg = microgram per kilogram
 °F = Degrees Fahrenheit
¹ = TCLP RCRA Metals



Table 5. Summary of Waste Characterization in Soil
Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

Parameter	6 NYCRR Part 371 and RCRA	Sample ID, Date Collected, and Depth (ftbg)											
		SB-09-COMP	SB-10-COMP	SB-11-COMP	SB-12-COMP	SB-14-COMP	SB-15-COMP	SB-16-COMP	SB-17-COMP	Composite		Composite	
		11/4/2015	11/12/2015	11/11/2015	11/5/2015	11/5/2015	11/5/2015	11/11/2015	11/11/2015	11/5/2015	11/11/2015	11/5/2015	11/5/2015
METALS¹	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	5,000	310	350	370	380	290	380	380	380	380	380	380	400
Barium	100,000	ND	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	5,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	39
Lead	5,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MISC. PARAMETERS (units)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Reactivity Sulfide (mg/kg)	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Reactivity Cyanide (mg/kg)	250	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH (SU)	2-12.5	6.9	6.6	7.3	7.4	7.4	7.4	7.4	7.4	7.7	7.7	7.8	8.2
Ignitability	>140 °F	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
TPHC Diesel Range Organics (mg/kg)	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15
TPHC Gasoline Range Organics (mg/kg)	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

- ftbg = feet below grade surface
- NS = No Standard
- ND = Compound not detected above method detection limit (see attached lab report for mdl's)
- SU = Standard unit
- J = Estimated value
- mg/Kg = milligram per kilogram
- ug/L = microgram per liter
- ug/Kg = microgram per kilogram
- °F = Degrees Fahrenheit
- 1 = TCLP RCRA Metals

Table 5. Summary of Waste Characterization in Soil
Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

Parameter	6 NYCRR Part 371 and RCRA	Sample ID, Date Collected, and Depth (ftbg)									
		SB-18-COMP 11/11/2015	SB-19-COMP 11/15/2015	SB-20-COMP 11/11/2015	SB-22-COMP 11/11/2015	SB-23-COMP 11/11/2015	SB-25-COMP 10/23/2015	SB-26-COMP 11/6/2015	SB-28-COMP 11/6/2015		
METALS¹	ug/L	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite
Arsenic	5,000	ND	ND	ND	ND	30	ND	ND	ND	ND	ND
Barium	100,000	300	270	440	330	360	510	450	310	ND	ND
Chromium	5,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	5,000	ND	ND	ND	ND	120	38	ND	ND	ND	ND
Selenium	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MISC. PARAMETERS (units)											
Reactivity Sulfide (mg/kg)	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Reactivity Cyanide (mg/kg)	250	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH (SU)	2-12.5	7.6	7.8	6.9	6.3	8.7	8.9	6.2	7.4	7.4	7.4
Ignitability	>140 °F	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
TPHC Diesel Range Organics (mg/kg)	NS	ND	ND	ND	ND	67	31	ND	ND	ND	ND
TPHC Gasoline Range Organics (mg/kg)	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
 ftbg = feet below grade surface
 NS = No Standard
 ND = Compound not detected above method detection limit (see attached lab report for mdl's)
 SU = Standard unit
 J = Estimated value
 mg/Kg = milligram per kilogram
 ug/L = microgram per liter
 ug/Kg = microgram per kilogram
 °F = Degrees Fahrenheit
¹ = TCLP RCRA Metals



Department of Design and Construction

PROJECT ID.: HWD10105

New York City Department of Design and Construction
Phase II Subsurface Corridor Investigation Report

Reconstruction of Water Mains in Atlantic Ave. between Georgia Ave. and Fountain Ave. - Brooklyn, NY

Table 5. Summary of Waste Characterization in Soil
Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

Parameter	6 NYCRR Part 371 and RCRA	Sample ID, Date Collected, and Depth (ftbg)														
		SB-29-COMP	SB-30-COMP	SB-32-COMP	SB-33-COMP	SB-34-COMP	SB-35-COMP	SB-36-COMP	SB-37-COMP	Composite		Composite				
		11/10/2015	11/6/2015	11/6/2015	11/10/2015	11/6/2015	11/10/2015	11/9/2015	11/10/2015	11/10/2015	Composite	Composite	Composite	Composite		
METALS¹	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	5,000	430	180	310	120	170	130	260	370	ND	ND	ND	ND	ND	ND	ND
Barium	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	5,000	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	5,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MISC. PARAMETERS (units)																
Reactivity Sulfide (mg/kg)	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Reactivity Cyanide (mg/kg)	250	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH (SU)	2-12.5	6.8	7.1	7.8	5.8	7.1	7.7	7.6	6.7	7.7	7.6	7.6	7.6	7.6	7.6	7.6
Ignitability	>140 °F	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
TPHC Diesel Range Organics (mg/kg)	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TPHC Gasoline Range Organics (mg/kg)	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

- ftbg = feet below grade surface
- NS = No Standard
- ND = Compound not detected above method detection limit (see attached lab report for mdl's)
- SU = Standard unit
- J = Estimated value
- mg/Kg = milligram per kilogram
- ug/L = microgram per liter
- ug/Kg = microgram per kilogram
- °F = Degrees Fahrenheit
- ¹ = TCLP RCRA Metals

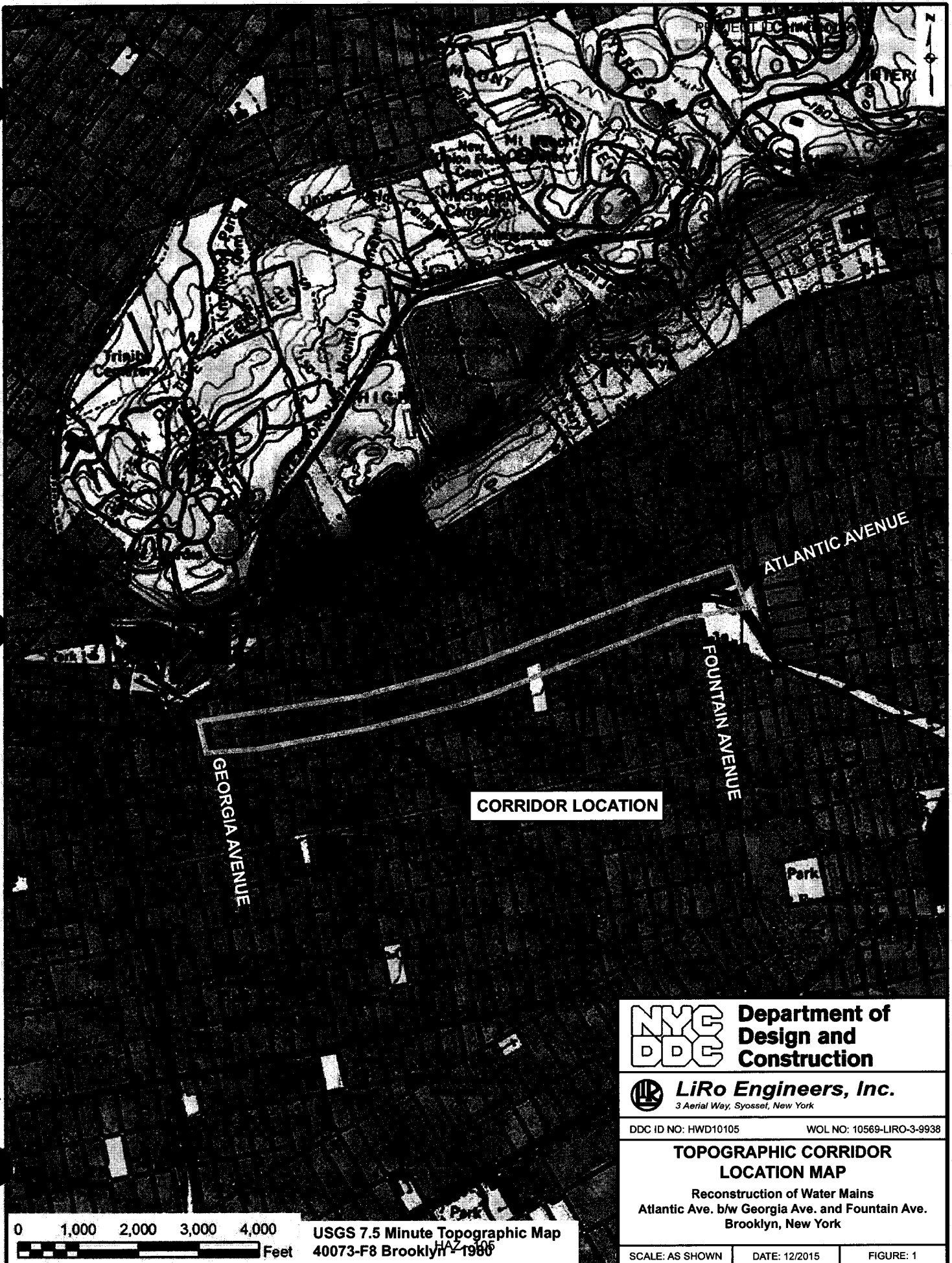
Table 5. Summary of Waste Characterization in Soil
Phase II Subsurface Corridor Investigation for the Reconstruction of Water Mains
Atlantic Ave. between Georgia Ave. and Fountain Ave., Brooklyn, New York

Parameter	6 NYCRR Part 371 and RCRA	Sample ID, Date Collected, and Depth (ftbg)									
		SB-38-COMP 11/10/2015	SB-39-COMP 11/9/2015	SB-40-COMP 11/10/2015	SB-42-COMP 11/9/2015	SB-43-COMP 11/9/2015	SB-44-COMP 11/9/2015	SB-47-COMP 11/9/2015			
METALS¹	ug/L										
Arsenic	5,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	100,000	210	180	420	270	250	270	250	270	240	240
Chromium	5,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	5,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MISC. PARAMETERS (units)											
Reactivity Sulfide (mg/kg)	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Reactivity Cyanide (mg/kg)	250	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH (SU)	2-12.5	6.4	8.0	7.6	8.7	7.4	5.9	7.4	5.9	7.4	7.4
Ignitability	>140 °F	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
TPHC Diesel Range Organics (mg/kg)	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TPHC Gasoline Range Organics (mg/kg)	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

- ftbg = feet below grade surface
- NS = No Standard
- ND = Compound not detected above method detection limit (see attached lab report for mdl's)
- SU = Standard unit
- J = Estimated value
- mg/Kg = milligram per kilogram
- ug/L = microgram per liter
- ug/Kg = microgram per kilogram
- °F = Degrees Fahrenheit
- ¹ = TCLP RCRA Metals

FIGURE 1 – TOPOGRAPHIC CORRIDOR LOCATION MAP



**Department of
Design and
Construction**



LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

DDC ID NO: HWD10105

WOL NO: 10569-LIRO-3-9938

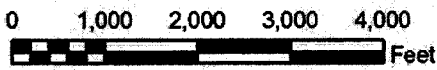
**TOPOGRAPHIC CORRIDOR
LOCATION MAP**

Reconstruction of Water Mains
Atlantic Ave. b/w Georgia Ave. and Fountain Ave.
Brooklyn, New York

SCALE: AS SHOWN

DATE: 12/2015

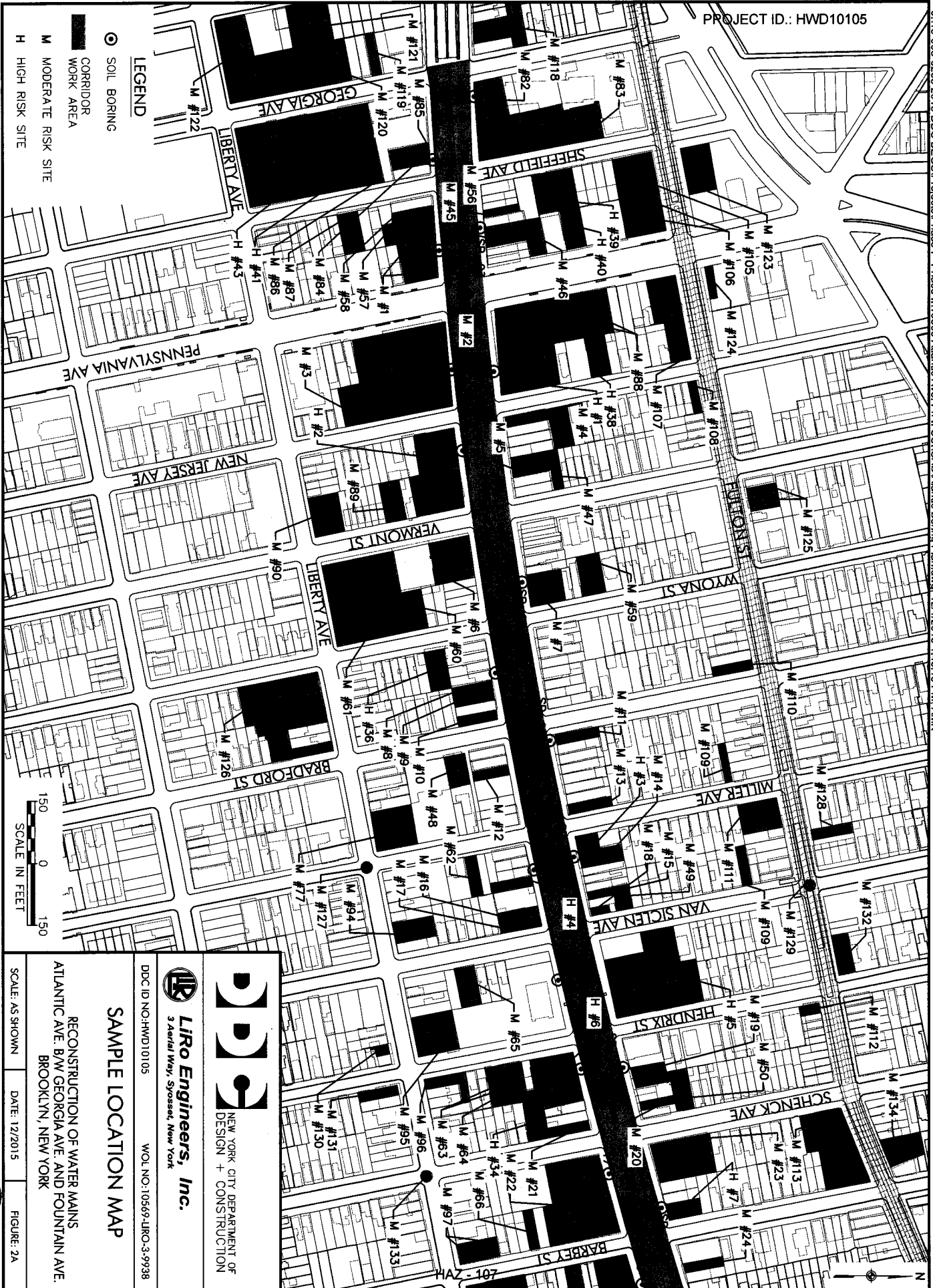
FIGURE: 1



USGS 7.5 Minute Topographic Map
40073-F8 Brooklyn 1980

FIGURE 2 – SAMPLE LOCATION PLAN

PROJECT ID.: HWD10105



DBE
 NEW YORK CITY DEPARTMENT OF
 DESIGN + CONSTRUCTION

Liro Engineers, Inc.
 3 Aerial Way, Syosset, New York

DDC ID NO.: HWD10105
 WOL NO.: 10569-LIRO-3-9938

SAMPLE LOCATION MAP

RECONSTRUCTION OF WATER MAINS
 ATLANTIC AVE. BW GEORGIA AVE. AND FOUNTAIN AVE.
 BROOKLYN, NEW YORK

SCALE: AS SHOWN
 DATE: 12/2015
 FIGURE: 2A

PROJECT ID: HWD10405



Liro Engineers, Inc.
 3 Aerial Way, Syosset, New York

NEW YORK CITY DEPARTMENT OF
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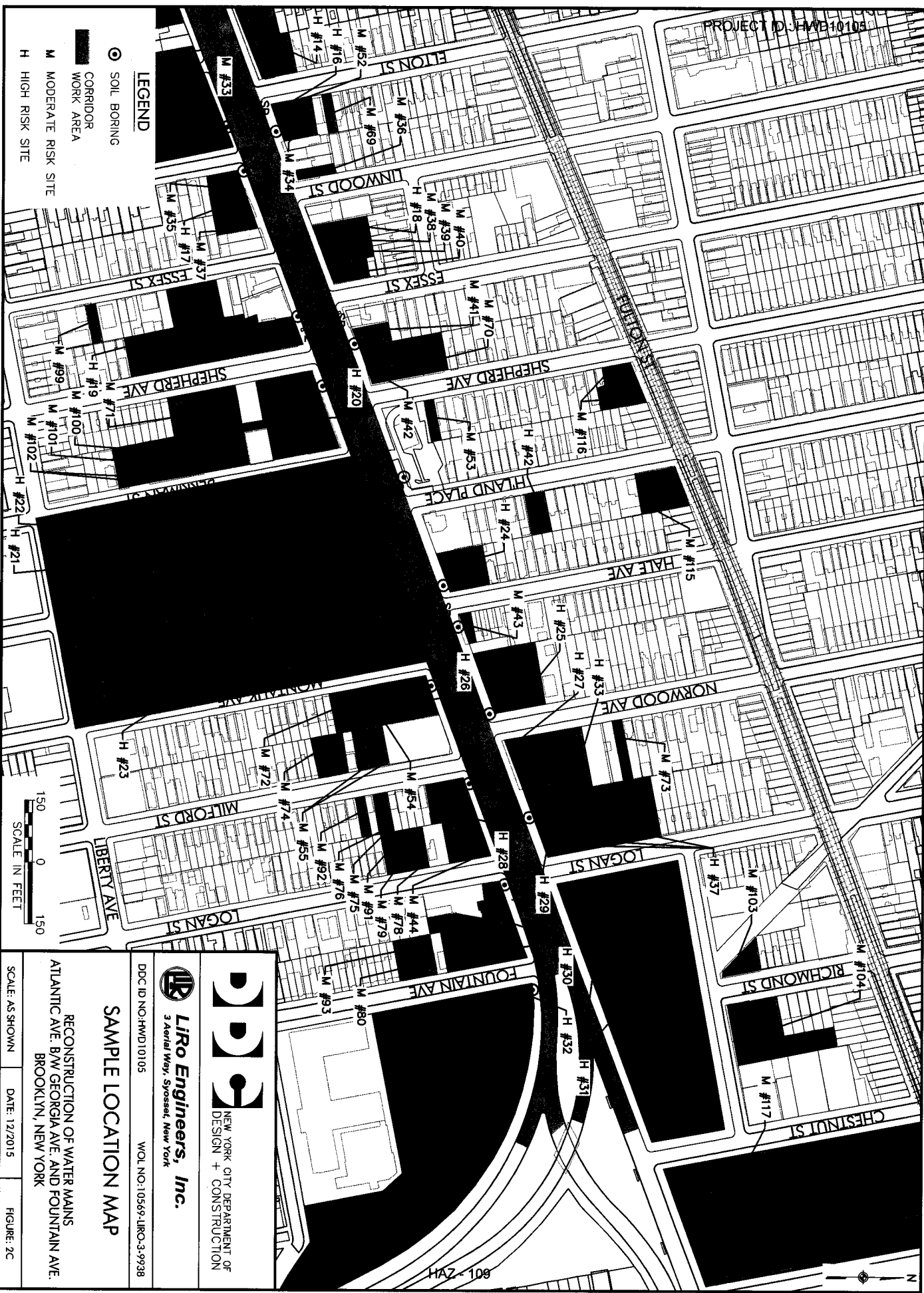
SAMPLE LOCATION MAP

RECONSTRUCTION OF WATER MAINS
 ATLANTIC AVE, BW GEORGIA AVE, AND FOUNTAIN AVE.
 BROOKLYN, NEW YORK

SCALE: AS SHOWN DATE: 12/2015 FIGURE: 2B

DDC ID NO: HWD10105 WOL NO: 10569-LIRO-3-9938

PROJECT ID: HAVB10105



Liro Engineers, Inc.
 3 Aerial Way, Syosset, New York

DDC ID NO: HWD10105 WOL NO: 10569-LIRC-3-9938

SAMPLE LOCATION MAP

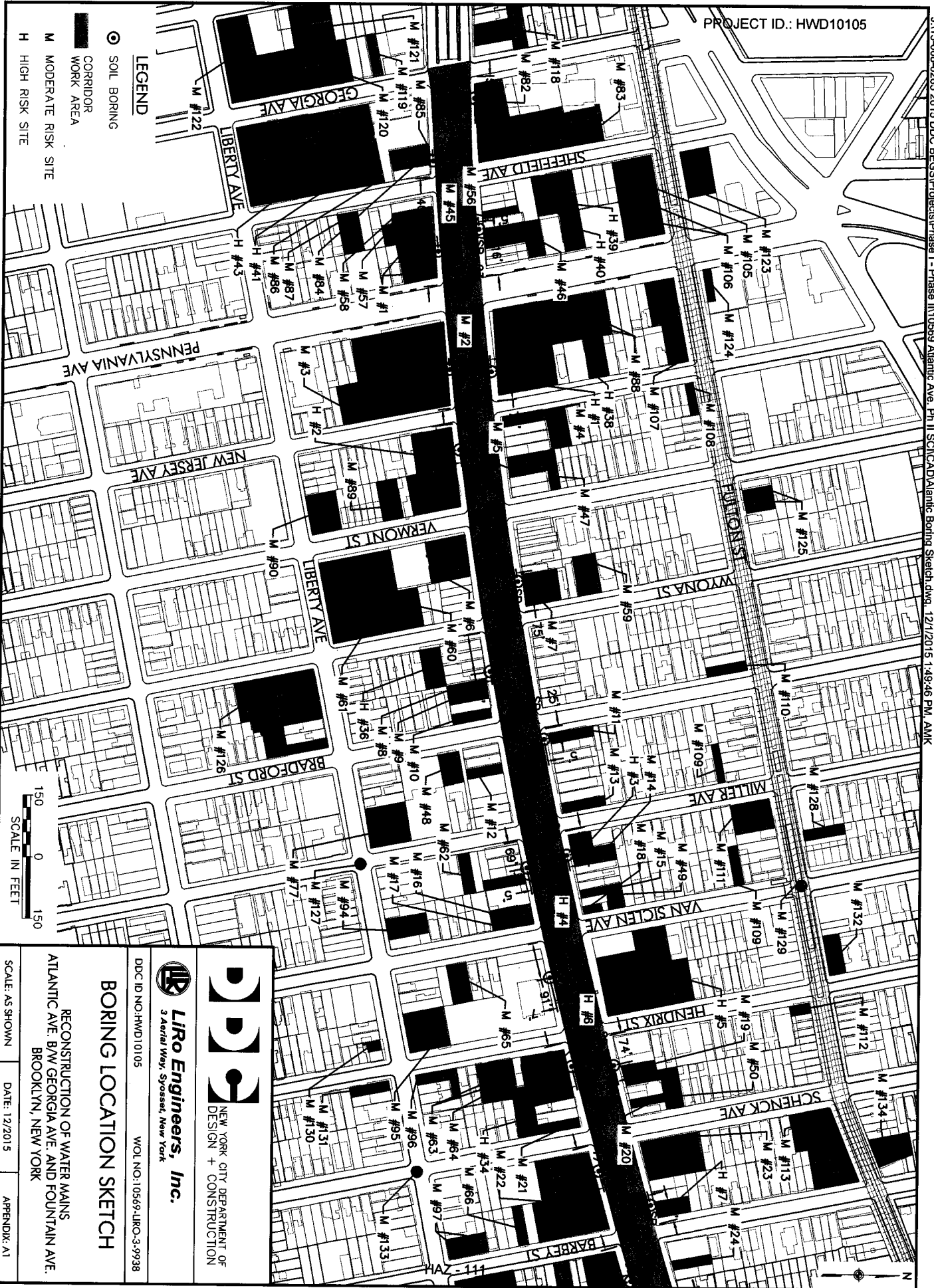
RECONSTRUCTION OF WATER MAINS
 ATLANTIC AVE. B/W GEORGIA AVE. AND FOUNTAIN AVE.
 BROOKLYN, NEW YORK

SCALE: AS SHOWN DATE: 12/2015 FIGURE: 2C

HAZ - 109

APPENDIX A
BORING LOCATION SKETCHES

PROJECT ID.: HWD10105



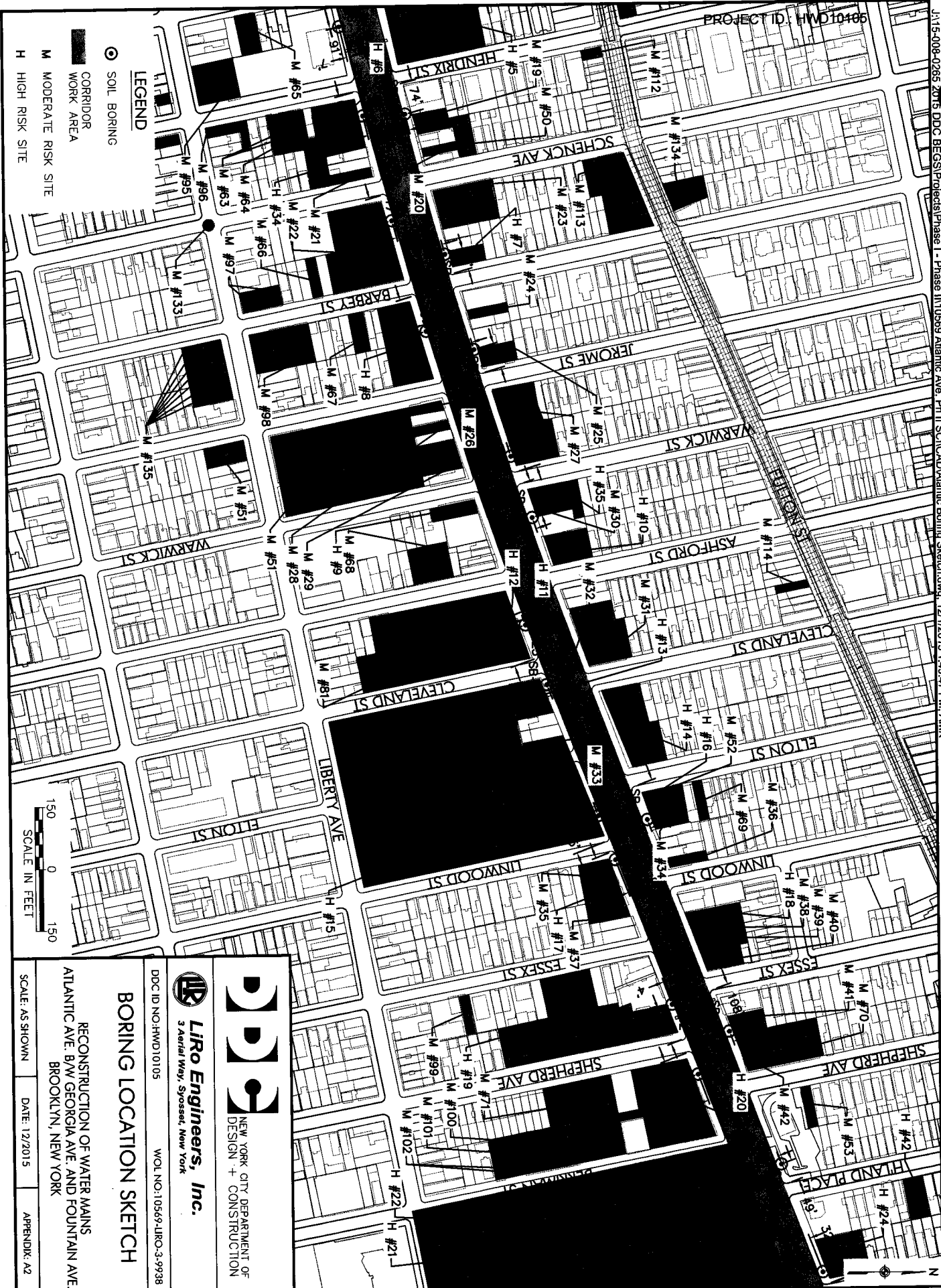
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 3 Aerial Way, Syosset, New York

BORING LOCATION SKETCH

RECONSTRUCTION OF WATER MAINS
 ATLANTIC AVE, BW GEORGIA AVE AND FOUNTAIN AVE,
 BROOKLYN, NEW YORK

DDC ID NO: HWD10105 VOL NO: 10569-LIRO-3-9938
 SCALE: AS SHOWN DATE: 12/2015 APPENDIX A1



LRO Engineers, Inc.
 3 Aerial Way, Spasset, New York

NEW YORK CITY DEPARTMENT OF
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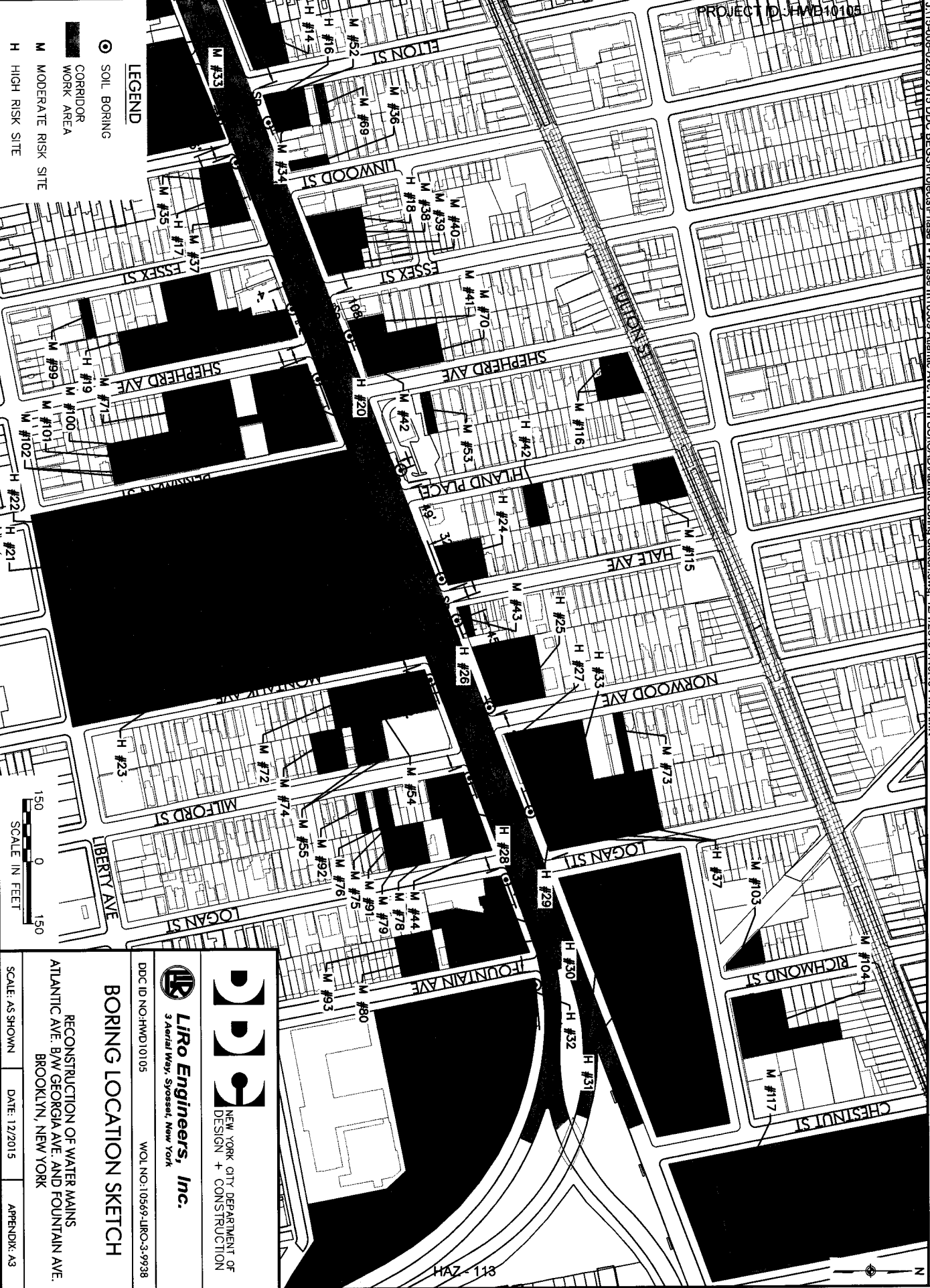
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 WOL NO.: 10569-LRO-3-9938

BORING LOCATION SKETCH

RECONSTRUCTION OF WATER MAINS
 ATLANTIC AVE. B/W GEORGIA AVE. AND FOUNTAIN AVE.
 BROOKLYN, NEW YORK

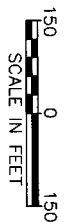
SCALE: AS SHOWN DATE: 12/2015 APPENDIX: A2

PROJECT ID: HWB10105



LEGEND

- SOIL BORING
- █ CORRIDOR WORK AREA
- ▬ MODERATE RISK SITE
- H HIGH RISK SITE



DDI
 NEW YORK CITY DEPARTMENT OF DESIGN + CONSTRUCTION

Liro Engineers, Inc.
 3 Aerial Way, Sposset, New York

WOL NO: 10569-LIRO-3-9938

BORING LOCATION SKETCH

RECONSTRUCTION OF WATER MAINS
 ATLANTIC AVE, B'W GEORGIA AVE, AND FOUNTAIN AVE,
 BROOKLYN, NEW YORK

SCALE: AS SHOWN DATE: 12/2015 APPENDIX: A:3

APPENDIX B
GEOLOGIC BORING LOGS



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-01	
CLIENT: Department of Design and Construction - BEGS					SHEET: 1 of 39	
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265	
GROUNDWATER: NA					LOCATION: Georgia Ave/Atlantic Ave	
DATE			TIME	LEVEL	TYPE	CAS.
					NA	1"
					WT.	NA
					FALL	NA
SAMPLER 5' long Macros					GROUND ELEVATION: NA	
TUBE					DATE STARTED: October 19, 2015	
					DATE FINISHED: November 12, 2015	
					DRILLER: Kensley N.	
					GEOLOGIST: Eva Jakubowska	
					REVIEWED BY:	

DEPTH FEET	STRATA	SAMPLE			DESCRIPTION			USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"	REC% ROD%	COLOR	CONSISTENCY HARDNESS		
1					NA	Dark brown	NA		Cleared to 6' bgs.
6					20%	Brown	Dense	FILL	0.0 ppm Moist
10					100%	Brown	Dense		0.0 ppm Moist
15									End of boring at 15 ft bgs
20									
25									
30									
35									

COMMENTS: Grab sample collected @ 14.5-15 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-01



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-02				
CLIENT: Department of Design and Construction - BEGS					SHEET: 2 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Sheffield Ave/Atlantic Ave				
CAS.:					GROUND ELEVATION: NA				
SAMPLER: 5' long Macros					DATE STARTED: October 19, 2015				
TUBE:					DATE FINISHED: November 4, 2015				
					DRILLER: Jose Garcia				
					GEOLOGIST: Eva Jakubowska				
					REVIEWED BY:				

DEPTH FEET	STRATA	SAMPLE			DESCRIPTION			USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS		
1					NA	Dark brown to reddish-brown	NA	0-4": Concrete.	Cleared to 6' bgs.
6								4"-6": Fine to medium Sand, some clay and fill material.	0.0 ppm Moist
10					30%	Reddish-brown	Medium dense	6-10": Fine to medium Sand with fill material.	0.0 ppm Moist
15					80%	Brown	Medium dense	10-15": Fine to medium Sand with fill material.	0.0 ppm Moist
20								End of boring at 15 ft bgs	
25									
30									
35									

COMMENTS: Grab sample collected @ 14.5-15 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-02



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avenue, Brooklyn, NY - HWD10105					BORING NO.: SB-03				
CLIENT: Department of Design and Construction - BEGS					SHEET: 3 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Pennsylvania Ave/Atlantic Ave				
CAS.					GROUND ELEVATION: NA				
SAMPLER					DATE STARTED: November 3, 2015				
TUBE					DATE FINISHED: November 12, 2015				
DATE					DRILLER: Kensley N.				
TIME					GEOLOGIST: Eva Jakubowska				
LEVEL					REVIEWED BY:				
TYPE									
TYPE									
DIA.									
WT.									
FALL									

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1										Cleared to 6' bgs.
					NA	Black to brown	NA	0-6': Fine to medium Sand and fill material.		0.0 ppm Moist
6					90%	Reddish-brown	Dense	6-10': Fine to medium Sand with fill material.	FILL	0.0 ppm Moist
10					80%	Reddish-brown	Dense	10-15': Medium to coarse Sand with fill material.		0.0 ppm Moist
15								End of boring at 15 ft bgs		
20										
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-03



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-04					
CLIENT: Department of Design and Construction - BEGS					SHEET: 4 of 39					
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265					
GROUNDWATER: NA					LOCATION: Pennsylvania Ave/Atlantic Ave					
DATE			LEVEL		CAS.		SAMPLER		TUBE	GROUND ELEVATION: NA
			NA		DIA. 1"		5' long Macros			DATE STARTED: October 20, 2015
					WT. NA					DATE FINISHED: November 4, 2015
			FALL		NA					DRILLER: Jose Garcia
										GEOLOGIST: Eva Jakubowska
										REVIEWED BY:

DEPTH FEET	SAMPLE				DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1	[Grid]				NA	Reddish-brown	NA	0-4": Concrete.	FILL	Cleared to 6' bgs.
6								4"-6": Fine Sand, some silt, fill material, and pea gravel.		0.0 ppm Moist
10					60%	Brown	Soft	6-10": Fine to medium Sand with fill material.		0.0 ppm Moist
					10%	Brown	Soft	10-11.5": Little recovery, fine Sand, some fill material.		0.0 ppm Moist
15							End of boring at 11.5' bgs due to refusal.			
20										
25										
30										
35										

COMMENTS: Grab sample collected @ 11.0-11.5 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).					PROJECT NO.: 15-008-0265				
					BORING NO.: SB-04				



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avenue, Brooklyn, NY - HWD10105

BORING NO: SB-05

CLIENT: Department of Design and Construction - BEGS

SHEET: 5 of 39

BORING CONTRACTOR: Associated Environmental Services, Ltd.

JOB NO.: 15-008-0265

GROUNDWATER: NA

CAS.

SAMPLER

TUBE

LOCATION: New Jersey Ave/Atlantic Ave

GROUND ELEVATION: NA

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	TUBE
			NA	DIA.	1"		5' long Macros
				WT.	NA		
				FALL	NA		

DATE STARTED: October 20, 2015

DATE FINISHED: November 4, 2015

DRILLER: Kensley N.

GEOLOGIST: Eva Jakubowska

REVIEWED BY:

DEPTH FEET	STRATA	SAMPLE			REC% RQD%	COLOR	CONSISTENCY HARDNESS	DESCRIPTION	USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"						
1					NA	Dark brown to brown	NA	0-1": Mulch. 1"-6": Fine to medium Sand, some clay and cobbles.	FILL	Cleared to 6' bgs. 0.0 ppm Moist
6					100%	Reddish-brown	Medium dense	6-10': Fine to medium Sand with fill material.		0.0 ppm Moist
10					80%	Reddish-brown	Medium dense	10-15': Fine to medium Sand with fill material.		0.0 ppm Moist
15								End of boring at 15 ft bgs		
20										
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).

PROJECT NO.: 15-008-0265

BORING NO.: SB-05



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105
CLIENT: Department of Design and Construction - BEGS
BORING CONTRACTOR: Associated Environmental Services, Ltd.

BORING NO.: SB-06
SHEET: 6 of 39
JOB NO.: 15-008-0265
LOCATION: New Jersey Ave/Atlantic Ave

GROUNDWATER: NA	CAS.	SAMPLER	TUBE
DATE	TIME	LEVEL	TYPE
			NA
			DIA.
			1"
			WT.
			NA
			FALL
			NA

GROUND ELEVATION: NA
DATE STARTED: November 3, 2015
DATE FINISHED: November 12, 2015
DRILLER: Kensley N.
GEOLOGIST: Eva Jakubowska
REVIEWED BY:

DEPTH FEET	SAMPLE				DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1					NA	Brown	NA	0-4": Concrete.		Cleared to 6' bgs.
6								4"-6": Fine Sand, some silt and small to medium sized pea gravel.		0.0 ppm Moist
10					100%	Reddish-brown	Medium dense	6-10": Fine to medium Sand with fill material.	FILL	0.0 ppm Moist
15					90%	Reddish-brown	Medium dense	10-15": Medium to coarse Sand with fill material.		0.0 ppm Moist
20								End of boring at 15 ft bgs		
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).

PROJECT NO.: 15-008-0265
BORING NO.: SB-06



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avenue, Brooklyn, NY - HWD10105
CLIENT: Department of Design and Construction - BEGS
BORING CONTRACTOR: Associated Environmental Services, Ltd.

BORING NO: SB-07
SHEET: 7 of 39
JOB NO.: 15-008-0265
LOCATION: New Jersey Ave/Atlantic Ave

GROUNDWATER: NA				CAS.	SAMPLER	TUBE
DATE	TIME	LEVEL	TYPE	TYPE		5' long Macros
			NA	DIA.	1"	
				WT.	NA	
			FALL		NA	

GROUND ELEVATION: NA
DATE STARTED: October 20, 2015
DATE FINISHED: November 4, 2015
DRILLER: Jose Garcia
GEOLOGIST: Eva Jakubowska
REVIEWED BY:

DEPTH FEET	STRATA	SAMPLE				REC% RQD%	COLOR	CONSISTENCY HARDNESS	DESCRIPTION MATERIAL DESCRIPTION	USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"							
1								0-2": Asphalt.		Cleared to 6' bgs.	
					NA	Dark brown to brown	NA	2"-6": Fine Sand, some clay and fill material.		0.0 ppm Moist	
6					50%	Brown	Soft	6-10": Fine to medium Sand with fill material.	FILL	0.0 ppm Moist	
10					10%	Brown	Soft	10-15": Little recovery, fine to medium Sand with fill material.		0.0 ppm Moist	
15								End of boring at 15 ft bgs			
20											
25											
30											
35											

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).

PROJECT NO.: 15-008-0265
BORING NO.: SB-07



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-08					
CLIENT: Department of Design and Construction - BEGS					SHEET: 8 of 39					
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265					
GROUNDWATER: NA					LOCATION: Vermont St/Atlantic Ave					
DATE			LEVEL		CAS.		SAMPLER		TUBE	
			NA		1"		5' long Macros		NA	
					GROUND ELEVATION: NA					
					DATE STARTED: November 2, 2015					
					DATE FINISHED: November 12, 2015					
					DRILLER: Kensley N.					
					GEOLOGIST: Eva Jakubowska					
					REVIEWED BY:					

DEPTH FEET	STRATA	SAMPLE			REC% RQD%	DESCRIPTION			USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"		COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1					NA	Brown to reddish-brown	NA	0-6": Concrete.	FILL	Cleared to 6' bgs.
6								6"-6": Fine Sand, some silt and round rocks.		0.0 ppm
10					100%	Reddish-brown	Dense	6-10": Fine Sand with fill material.		Moist
15								End of boring at 10' bgs due to Refusal		
20										
25										
30										
35										

COMMENTS: Grab sample collected @ 9.5-10.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).					PROJECT NO.: 15-008-0265				
					BORING NO.: SB-08				



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avenue, Brooklyn, NY - HWD10105					BORING NO.: SB-09				
CLIENT: Department of Design and Construction - BEGS					SHEET: 9 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Wyona St/Atlantic Ave				
CAS.					GROUND ELEVATION: NA				
SAMPLER					DATE STARTED: October 21, 2015				
TUBE					DATE FINISHED: November 5, 2015				
5' long Macros					DRILLER: Jose Garcia				
DATE					GEOLOGIST: Eva Jakubowska				
TIME					REVIEWED BY:				
LEVEL									
TYPE									
TYPE									
DIA.									
WT.									
FALL									

DEPTH FEET	STRATA	SAMPLE				REC% RQD%	COLOR	CONSISTENCY HARDNESS	DESCRIPTION MATERIAL DESCRIPTION	USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"							
1								0-4": Concrete.		Cleared to 6' bgs.	
					NA	Dark brown	NA	4"-6": Fine to medium Sand, some clay and fill material (tree roots, rocks, red brick pieces, etc.)		0.0 ppm Moist	
6											
					20%	Reddish-brown	Medium dense	6-10": Medium Sand with fill material.	FILL	0.0 ppm Moist	
10											
					90%	Reddish-brown	Dense	10-15": Medium to coarse Sand with fill material.		0.0 ppm Moist	
15											
20								End of boring at 15 ft bgs			
25											
30											
35											

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-09



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-10				
CLIENT: Department of Design and Construction - BEGS					SHEET: 10 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Bradford St/Atlantic Ave				
CAS.:					GROUND ELEVATION: NA				
SAMPLER: 5' long Macros					DATE STARTED: November 2, 2015				
TUBE:					DATE FINISHED: November 12, 2015				
DATE:					DRILLER: Kensley N.				
TIME:					GEOLOGIST: Eva Jakubowska				
LEVEL:					REVIEWED BY:				
TYPE: NA									
TYPE: DIA. 1"									
TYPE: WT. NA									
TYPE: FALL NA									

DEPTH FEET	STRATA	SAMPLE				DESCRIPTION			USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1	[Grid]				NA	Dark brown to reddish-brown	NA	0-6": Asphalt. 6"-6": Fine Sand, some silt and round rocks.	FILL	Cleared to 6' bgs. 0.0 ppm Moist
6					70%	Reddish-brown	Dense	6-10": Fine to medium Sand with fill material.		0.0 ppm Moist
10					100%	Reddish-brown	Dense	10-15": Fine to medium Sand, some silt and fill material.		0.0 ppm Moist
15								End of boring at 15 ft bgs		
20										
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265 BORING NO.: SB-10
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LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO: SB-11				
CLIENT: Department of Design and Construction - BEGS					SHEET: 11 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Miller Ave/Atlantic Ave				
DATE					GROUND ELEVATION: NA				
TIME					DATE STARTED: October 30, 2015				
LEVEL					DATE FINISHED: November 11, 2015				
TYPE					DRILLER: Kensley N.				
TYPE					GEOLOGIST: Eva Jakubowska				
CAS.					REVIEWED BY:				
SAMPLER									
TUBE									

DEPTH FEET	SAMPLE				DESCRIPTION			USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS		
1									Cleared to 6' bgs.
					NA	Brown	NA		0.0 ppm
									Moist
6									0.0 ppm
					60%	Brown	Soft	FILL	Moist
									0.0 ppm
10									Moist
									0.0 ppm
					100%	Brown	Soft		Moist
15									
20									
25									
30									
35									

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).

PROJECT NO.: 15-008-0265
BORING NO.: SB-11



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105

BORING NO: SB-12

CLIENT: Department of Design and Construction - BEGS

SHEET: 12 of 39

BORING CONTRACTOR: Associated Environmental Services, Ltd.

JOB NO.: 15-008-0265

GROUNDWATER: NA

LOCATION: Miller Ave/Atlantic Ave

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	TUBE
			NA		5' long Macros	
			DIA.	1"		
			WT.	NA		
			FALL	NA		

GROUND ELEVATION: NA

DATE STARTED: October 21, 2015

DATE FINISHED: November 5, 2015

DRILLER: Jose Garcia

GEOLOGIST: Eva Jakubowska

REVIEWED BY:

DEPTH FEET	STRATA	SAMPLE			REC% RQD%	CAS. COLOR	CONSISTENCY HARDNESS	DESCRIPTION MATERIAL DESCRIPTION	USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"						
1					NA	Light reddish-brown	NA	0-6": Concrete.		Cleared to 6' bgs.
6								6"-6": Fine Sand, some silt with small to medium sized cobbles.		0.0 ppm Moist
10					60%	Dark reddish-brown	Medium dense	6-10': Medium Sand with fill material.	FILL	0.0 ppm Moist
15					100%	Dark reddish-brown	Medium dense	10-15': Medium to fine Sand and fill material.		0.0 ppm Moist
20								End of boring at 15 ft bgs		
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).

PROJECT NO.: 15-008-0265

BORING NO.: SB-12



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-14				
CLIENT: Department of Design and Construction - BEGS					SHEET: 13 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Hendrix St/Atlantic Ave				
CAS.					GROUND ELEVATION: NA				
SAMPLER					DATE STARTED: October 21, 2015				
TUBE					DATE FINISHED: November 5, 2015				
DATE					DRILLER: Jose Garcia				
TIME					GEOLOGIST: Eva Jakubowska				
LEVEL					REVIEWED BY:				
TYPE									
TYPE									
DIA.									
WT.									
FALL									

DEPTH FEET	STRATA	SAMPLE				DESCRIPTION				USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1								0-6": Concrete.		Cleared to 6' bgs.	
					NA	Brown to reddish-brown	NA	6"-6": Fine Sand, some silt with small to medium sized cobbles.		0.0 ppm Moist	
6					90%	Reddish-brown	Medium dense	6-10": Medium to coarse Sand with fill material.	FILL	0.0 ppm Moist	
10					100%	Reddish-brown	Medium dense	10-15": Medium to coarse Sand, some rocks.		0.0 ppm Moist	
15								End of boring at 15 ft bgs			
20											
25											
30											
35											

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-14



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-15				
CLIENT: Department of Design and Construction - BEGS					SHEET: 14 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Hendrix St/Atlantic Ave				
CAS.:					GROUND ELEVATION: NA				
SAMPLER: 5' long Macros					DATE STARTED: October 21, 2015				
TUBE:					DATE FINISHED: November 5, 2015				
					DRILLER: Jose Garcia				
					GEOLOGIST: Eva Jakubowska				
					REVIEWED BY:				

DEPTH FEET	STRATA	SAMPLE			REC% RQD%	DESCRIPTION			USCS	REMARKS	
		"S" NO.	"N" NO.	BLOWS PER 6"		COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1	[Grid pattern]				NA	Dark brown to reddish-brown	NA	0-8": Concrete.	FILL	Cleared to 6' bgs.	
6								8"-6": Fine to medium Sand, with fill material and cobbles.			0.0 ppm Moist
10		[Dotted pattern]				90%	Reddish-brown	Soft	6-10": Medium Sand with some small pebbles.	SP	0.0 ppm Moist
15						100%	Reddish-brown	Soft	10-15": Medium to fine Sand, some silt and small pebbles at the bottom of the boring.	SW	0.0 ppm Moist
20									End of boring at 15 ft bgs		
25											
30											
35											

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-15



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105				BORING NO: SB-16	
CLIENT: Department of Design and Construction - BEGS				SHEET: 15 of 39	
BORING CONTRACTOR: Associated Environmental Services, Ltd.				JOB NO.: 15-008-0265	
GROUNDWATER: NA				LOCATION: Hendrix St/Atlantic Ave	
CAS.				GROUND ELEVATION: NA	
SAMPLER				DATE STARTED: October 30, 2015	
TUBE				DATE FINISHED: November 11, 2015	
DATE				DRILLER: Kensley N.	
TIME				GEOLOGIST: Eva Jakubowska	
LEVEL				REVIEWED BY:	
TYPE					
TYPE					
DIA. 1"					
WT. NA					
FALL NA					

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1	[Pattern]				NA	Brown	NA	0-6': Fine to medium Sand, some rocks.	SW	Cleared to 6' bgs.
6					80%	Reddish-brown	Soft	6-10': Medium to coarse Sand, some rocks.		0.0 ppm Moist
10					95%	Reddish-brown	Soft	10-15': Coarse Sand, some rocks.	SP	0.0 ppm Moist
15										End of boring at 15 ft bgs
20										
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).

PROJECT NO.: 15-008-0265
BORING NO.: SB-16



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-17		
CLIENT: Department of Design and Construction - BEGS					SHEET: 16 of 39		
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265		
GROUNDWATER: NA					LOCATION: Schenck Ave/Atlantic Ave		
DATE		TIME	LEVEL	TYPE	CAS.	SAMPLER	TUBE
				NA	1"	5' long Macros	
				DIA.	NA		GROUND ELEVATION: NA
				WT.	NA		DATE STARTED: October 22, 2015
				FALL	NA		DATE FINISHED: November 5, 2015
					DRILLER: Jose Garcia		
					GEOLOGIST: Eva Jakubowska		
					REVIEWED BY:		

DEPTH FEET	SAMPLE				DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1	[Grid Pattern]				NA	Black	NA	0-6': Fine to medium Sand, with fill material.	FILL	Cleared to 6' bgs. 0.0 ppm Moist
6					80%	Beige	Soft	6-10': Fine to medium Sand, some rocks.	SW	0.0 ppm Moist
10					100%	Beige	Soft	10-15': Fine to medium Sand, some rocks.		0.0 ppm Moist
15	[Dotted Pattern]									
20								End of boring at 15 ft bgs		
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265 BORING NO.: SB-17
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LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avenue, Brooklyn, NY - HWD10105

CLIENT: Department of Design and Construction - BEGS

BORING CONTRACTOR: Associated Environmental Services, Ltd.

GROUNDWATER: NA

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	TUBE
			NA	1"		5' long Macros
				WT.	NA	
			FALL	NA		

BORING NO: SB-18

SHEET: 17 of 39

JOB NO.: 15-008-0265

LOCATION: Barbey St/Atlantic Ave

GROUND ELEVATION: NA

DATE STARTED: October 30, 2015

DATE FINISHED: November 11, 2015

DRILLER: Kensley N.

GEOLOGIST: Eva Jakubowska

REVIEWED BY:

DEPTH FEET	STRATA	SAMPLE			REC% RQD%	COLOR	CONSISTENCY HARDNESS	DESCRIPTION MATERIAL DESCRIPTION	USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"						
1										Cleared to 6' bgs.
					NA	Brown	NA	0-6': Fine to medium Sand, some rocks.	FILL	0.0 ppm Moist
6					80%	Brown	Soft	6-10': Medium to coarse Sand.	SW	0.0 ppm Moist
10					100%	Brown	Soft	10-15': Coarse Sand with rocks.	SP	0.0 ppm Moist
15								End of boring at 15 ft bgs		
20										
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).

PROJECT NO.: 15-008-0265

BORING NO.: SB-18



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-19				
CLIENT: Department of Design and Construction - BEGS					SHEET: 18 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Jerome St/Atlantic Ave				
CAS.:					GROUND ELEVATION: NA				
SAMPLER: 5' long Macros					DATE STARTED: October 23, 2015				
TUBE:					DATE FINISHED: November 5, 2015				
					DRILLER: Jose Garcia				
					GEOLOGIST: Eva Jakubowska				
					REVIEWED BY:				

DEPTH FEET	STRATA	SAMPLE			REC% RQD%	DESCRIPTION			USCS	REMARKS	
		"S" NO.	"N" NO.	BLOWS PER 6"		COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1	[Grid Pattern]				NA	Reddish-brown	NA	0-6': Fine to medium Sand, with fill material and cobbles.	FILL	Cleared to 6' bgs.	
6										0.0 ppm Moist	
10					80%	Reddish-brown	Soft	6-10': Medium to coarse Sand, some rocks.		0.0 ppm Moist	
15		[Dotted Pattern]				80%	Reddish-brown	Soft	10-15': Medium to coarse Sand.	SW	0.0 ppm Moist
20											
25											
30											
35								End of boring at 15 ft bgs			

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-19



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-20				
CLIENT: Department of Design and Construction - BEGS					SHEET: 19 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Jerome St/Atlantic Ave				
CAS.					GROUND ELEVATION: NA				
SAMPLER					DATE STARTED: October 30, 2015				
TUBE					DATE FINISHED: November 11, 2015				
DATE					DRILLER: Jose Garcia				
TIME					GEOLOGIST: Eva Jakubowska				
LEVEL					REVIEWED BY:				
TYPE									
TYPE									
DIA.									
WT.									
FALL									

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1	[Grid Pattern]				NA	Reddish-brown	NA	0-6': Fine to medium Sand, some clay.	FILL	Cleared to 6' bgs. 0.0 ppm Moist
6					70%	Brown	Soft	6-10': Medium to coarse Sand.	SW	0.0 ppm Moist
10					80%	Brown	Soft	10-15': Coarse Sand, some pebbles.	SP	0.0 ppm Moist
15								End of boring at 15 ft bgs		
20										
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).

PROJECT NO.: 15-008-0265
BORING NO.: SB-20



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avenue, Brooklyn, NY - HWD10105					BORING NO.: SB-22				
CLIENT: Department of Design and Construction - BEGS					SHEET: 20 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Warwick St/Atlantic Ave				
CAS:					GROUND ELEVATION: NA				
SAMPLER: 5' long Macros					DATE STARTED: October 29, 2015				
TUBE:					DATE FINISHED: November 11, 2015				
					DRILLER: Kensley N.				
					GEOLOGIST: Eva Jakubowska				
					REVIEWED BY:				

DEPTH FEET	STRATA	SAMPLE			RECYCLED RQD%	DESCRIPTION			USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"		COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1					NA	Reddish-brown	NA	0-4": Concrete.	FILL	Cleared to 6' bgs.
6								4"-6": Fine to medium Sand, some rocks.		0.0 ppm Moist
10					70%	Reddish-brown	Soft	6-10": Fine to medium Sand.		0.0 ppm Moist
15					80%	Reddish-brown	Soft	10-15": Fine to medium Sand.	SW	0.0 ppm Moist
20								End of boring at 15 ft bgs		
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-22



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-23				
CLIENT: Department of Design and Construction - BEGS					SHEET: 21 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Warwick St/Atlantic Ave				
DATE					GROUND ELEVATION: NA				
TIME					DATE STARTED: November 3, 2015				
LEVEL					DATE FINISHED: November 11, 2015				
TYPE					DRILLER: Kensley N.				
TYPE					GEOLOGIST: Eva Jakubowska				
CAS.					REVIEWED BY:				
SAMPLER									
TUBE									
5' long Macros									

DEPTH FEET	STRATA	SAMPLE				DESCRIPTION				USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1								0-1': Concrete with rebar.		Cleared to 6' bgs.	
					NA	Brown	NA	4"-6': Fine Sand, some silt, tree roots, rocks.		0.0 ppm Moist	
6					30%	Brown	Soft	6-10': Fine Sand, some silt and fill material.	FILL	0.0 ppm Moist	
10					40%	Brown	Medium dense	10-15': Fine to medium Sand and fill material.		0.0 ppm Moist	
15								End of boring at 15 ft bgs			
20											
25											
30											
35											

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-23



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avenue, Brooklyn, NY - HWD10105					BORING NO.: SB-25	
CLIENT: Department of Design and Construction - BEGS					SHEET: 22 of 39	
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265	
GROUNDWATER: NA					LOCATION: Ashford St/Atlantic Ave	
DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	TUBE
			NA	1"	5' long Macros	
			WT.	NA		
			FALL	NA		
					GROUND ELEVATION: NA	
					DATE STARTED: November 3, 2015	
					DATE FINISHED: November 11, 2015	
					DRILLER: Kensley N.	
					GEOLOGIST: Eva Jakubowska	
					REVIEWED BY:	

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1	[Grid]							0-8": Concrete.	FILL	Cleared to 4.5' bgs. Due to refusal 0.0 ppm Moist
					NA	Brown	NA	8"-4.5': Fine to medium Sand with fill material.		
5										
								End of boring at 4.5 ft bgs due to refusal.		
10										
15										
20										
25										
30										
35										

COMMENTS: Grab sample collected @ 4.0-4.5 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-25



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-26				
CLIENT: Department of Design and Construction - BEGS					SHEET: 23 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Cleveland St/Atlantic Ave				
CAS.					GROUND ELEVATION: NA				
SAMPLER					DATE STARTED: October 23, 2015				
TUBE					DATE FINISHED: November 6, 2015				
5' long Macros					DRILLER: Kensley N.				
					GEOLOGIST: Eva Jakubowska				
					REVIEWED BY:				

DEPTH FEET	STRATA	SAMPLE				DESCRIPTION				USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1								0-4": Concrete.		Cleared to 6' bgs.	
					NA	Dark reddish-brown	NA	4"-6": Fine to medium Sand with fill material.	FILL	0.0 ppm Moist	
6											
					50%	Reddish-brown	Soft	6-10": Fine to medium Sand, some rocks.		0.0 ppm Moist	
10									SW	0.0 ppm Moist	
					80%	Reddish-brown	Soft	10-15": Medium to coarse Sand, some rocks.			
15											
								End of boring at 15 ft bgs			
20											
25											
30											
35											

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).					PROJECT NO.: 15-008-0265				
					BORING NO.: SB-26				



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-28				
CLIENT: Department of Design and Construction - BEGS					SHEET: 24 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Linwood St/Atlantic Ave				
CAS.					GROUND ELEVATION: NA				
SAMPLER					DATE STARTED: October 26, 2015				
TUBE					DATE FINISHED: November 6, 2015				
DATE					DRILLER: Kensley N.				
TIME					GEOLOGIST: Eva Jakubowska				
LEVEL					REVIEWED BY:				
TYPE									
TYPE									
DIA.									
WT.									
FALL									

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS	
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1	[Grid]					NA	Reddish-brown	NA	0-4": Concrete.	FILL	Cleared to 6' bgs.
									4"-6": Fine to medium Sand with fill material.		0.0 ppm
6						70%	Reddish-brown	Soft	6-10": Fine to medium Sand with some silt.		Moist
10						75%	Reddish-brown	Soft	10-15": Fine to medium Sand with some silt.	SM	0.0 ppm
15											Moist
20									End of boring at 15 ft bgs		
25											
30											
35											

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).

PROJECT NO.: 15-008-0265
BORING NO.: SB-28



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-29				
CLIENT: Department of Design and Construction - BEGS					SHEET: 25 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Elton St/Atlantic Ave				
CAS.					GROUND ELEVATION: NA				
SAMPLER					DATE STARTED: October 29, 2015				
TUBE					DATE FINISHED: November 10, 2015				
5' long Macros					DRILLER: Kensley N.				
DATE					GEOLOGIST: Eva Jakubowska				
TIME					REVIEWED BY:				
LEVEL									
TYPE									
NA									
TYPE									
DIA.									
1"									
WT.									
NA									
FALL									
NA									

DEPTH FEET	STRATA	SAMPLE				DESCRIPTION			USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1	[Pattern]				NA	Brown	NA	0-6': Fine to medium Sand with some silt.	SM	Cleared to 6' bgs.
6					60%	Brown	Soft	6-10': Fine to medium Sand with some silt.		0.0 ppm Moist
10					90%	Brown	Soft	10-15': Fine to medium Sand with some silt.		0.0 ppm Moist
15								End of boring at 15 ft bgs		
20										
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-29



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-30	
CLIENT: Department of Design and Construction - BEGS					SHEET: 26 of 39	
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265	
GROUNDWATER: NA					LOCATION: Linwood St/Atlantic Ave	
					GROUND ELEVATION: NA	
					DATE STARTED: October 23, 2015	
					DATE FINISHED: November 6, 2015	
					DRILLER: Kensley N.	
					GEOLOGIST: Eva Jakubowska	
					REVIEWED BY:	

DEPTH FEET	STRATA	SAMPLE				REC% RQD%	COLOR	CONSISTENCY HARDNESS	DESCRIPTION MATERIAL DESCRIPTION	USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"	TYPE						
1	[Grid pattern]					NA	Brown	NA	0-6": Concrete.	FILL	Cleared to 6' bgs.
								6"-6': Fine to medium Sand with small rocks.	0.0 ppm Moist		
6											
	[Dotted pattern]					80%	Light brown	Soft	6-10': Fine Sand with some silt.	SM	0.0 ppm Moist
10											
						80%	Light brown	Soft	10-15': Fine Sand with some silt.		0.0 ppm Moist
15											
									End of boring at 15 ft bgs		
20											
25											
30											
35											

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-30



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-32				
CLIENT: Department of Design and Construction - BEGS					SHEET: 27 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Shepherd Ave/Atlantic Ave				
CAS.					GROUND ELEVATION: NA				
SAMPLER					DATE STARTED: October 26, 2015				
TUBE					DATE FINISHED: November 6, 2015				
5' long Macros					DRILLER: Kensley N.				
DATE					GEOLOGIST: Eva Jakubowska				
TIME					REVIEWED BY:				
LEVEL									
TYPE									
NA									
TYPE									
DIA.									
1"									
WT.									
NA									
FALL									
NA									

DEPTH FEET	STRATA	SAMPLE				DESCRIPTION				USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1	[Grid]				NA	Reddish-brown	NA	0-6': Fine to medium Sand, with fill material.	FILL	Cleared to 6' bgs. 0.0 ppm Moist	
6					75%	Brown	Soft	6-9': Fine to medium Sand with some silt.	SM	0.0 ppm Moist	
10								End of boring at 9.0 ft bgs due to refusal.			
15											
20											
25											
30											
35											

COMMENTS: Grab sample collected @ 8.5-9.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-32



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-33				
CLIENT: Department of Design and Construction - BEGS					SHEET: 28 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Essex St/Atlantic Ave				
CAS.:					GROUND ELEVATION: NA				
SAMPLER:					DATE STARTED: October 29, 2015				
TUBE:					DATE FINISHED: November 10, 2015				
5' long Macros					DRILLER: Kensley N.				
					GEOLOGIST: Eva Jakubowska				
					REVIEWED BY:				

DEPTH FEET	STRATA	SAMPLE				REC% RQD%	COLOR	CONSISTENCY HARDNESS	DESCRIPTION MATERIAL DESCRIPTION	USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"	TYPE						
1	[Grid Pattern]					NA	Light reddish-brown	NA	0-6": Asphalt.	FILL	Cleared to 6' bgs.
									6"-6": Fine to medium Sand, some silt.		0.0 ppm
6						50%	Reddish-brown	Soft	6-10": Fine Sand, some silt and rocks.		Moist
											0.0 ppm
10						75%	Brown	Soft	10-15": Fine to medium Sand with some silt.		Moist
											0.0 ppm
15	[Dotted Pattern]									SM	Moist
20									End of boring at 15 ft bgs		
25											
30											
35											

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-33



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-34				
CLIENT: Department of Design and Construction - BEGS					SHEET: 29 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Shepherd Ave/Atlantic Ave				
CAS.					GROUND ELEVATION: NA				
SAMPLER					DATE STARTED: October 26, 2015				
TUBE					DATE FINISHED: November 6, 2015				
5' long Macros					DRILLER: Kensley N.				
					GEOLOGIST: Eva Jakubowska				
					REVIEWED BY:				

DEPTH FEET	STRATA	SAMPLE			RECYCLED ROD%	COLOR	CONSISTENCY HARDNESS	DESCRIPTION	USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"						
1	[Pattern]				NA	Reddish-brown	NA	0-6': Fine to medium Sand.	SM	Cleared to 6' bgs. 0.0 ppm Moist
6					90%	Reddish-brown	Soft	6-10': Fine Sand, some clay.	SC	0.0 ppm Moist
10					80%	Light brown	Soft	10-15': Fine to medium Sand with some silt.	SM	0.0 ppm Moist
15							End of boring at 15 ft bgs			
20										
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-34



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avenue, Brooklyn, NY - HWD10105					BORING NO.: SB-35				
CLIENT: Department of Design and Construction - BEGS					SHEET: 30 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Berriman St/Atlantic Ave				
CAS:					GROUND ELEVATION: NA				
SAMPLER: 5' long Macros					DATE STARTED: October 29, 2015				
TUBE:					DATE FINISHED: November 10, 2015				
DATE:					DRILLER: Kensley N.				
TIME:					GEOLOGIST: Eva Jakubowska				
LEVEL:					REVIEWED BY:				
TYPE: NA									
TYPE: DIA. 1"									
WT.: NA									
FALL: NA									

DEPTH FEET	STRATA	SAMPLE			REC% RQD%	COLOR	CONSISTENCY HARDNESS	DESCRIPTION		USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"				MATERIAL DESCRIPTION			
1	[Grid pattern]				NA	Light reddish-brown	NA	0-8": Concrete.		Cleared to 6' bgs.	
								8"-6": Fine to medium Sand, some rocks.	FILL	0.0 ppm Moist	
6					50%	Brown	Soft	6-10": Fine to medium Sand with some silt.		0.0 ppm Moist	
10					100%	Brown	Soft	10-15": Fine to medium Sand with some silt.	SM	0.0 ppm Moist	
15											
20								End of boring at 15 ft bgs			
25											
30											
35											

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-35



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-36				
CLIENT: Department of Design and Construction - BEGS					SHEET: 31 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Atkins Ave/Atlantic Ave				
CAS.					GROUND ELEVATION: NA				
SAMPLER					DATE STARTED: October 26, 2015				
TUBE					DATE FINISHED: November 9, 2015				
5' long Macros					DRILLER: Kensley N.				
					GEOLOGIST: Eva Jakubowska				
					REVIEWED BY:				

DEPTH FEET	STRATA	SAMPLE				DESCRIPTION				USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1	[Grid Pattern]							0-8": Concrete.		Cleared to 6' bgs.	
					NA	Light reddish-brown	NA	8"-6": Fine to medium Sand, some rocks.	FILL	0.0 ppm Moist	
6											
	[Dotted Pattern]				80%	Light brown	Soft	6-10": Fine to medium Sand with some silt.		0.0 ppm Moist	
10											
					70%	Light brown	Soft	10-15": Fine to medium Sand with some silt.	SM	0.0 ppm Moist	
15											
	[Blank]							End of boring at 15 ft bgs			
20											
25											
	[Blank]										
30											
	[Blank]										
35											

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).					PROJECT NO.: 15-008-0265				
					BORING NO.: SB-36				



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-37				
CLIENT: Department of Design and Construction - BEGS					SHEET: 32 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Hale Ave/Atlantic Ave				
CAS.					GROUND ELEVATION: NA				
SAMPLER					DATE STARTED: October 28, 2015				
TUBE					DATE FINISHED: November 10, 2015				
DATE					DRILLER: Kensley N.				
TIME					GEOLOGIST: Eva Jakubowska				
LEVEL					REVIEWED BY:				
TYPE									
TYPE									
DIA.									
WT.									
FALL									

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1	[Pattern]				NA	Reddish-brown	NA	0-1': Concrete.	SM	Cleared to 6' bgs.
								1'-6': Fine to medium Sand with some silt.		0.0 ppm Moist
6					60%	Brown	Soft	6-10': Fine to medium Sand with some silt.		0.0 ppm Moist
10					100%	Brown	Soft	10-15': Fine to medium Sand with some silt.		0.0 ppm Moist
15										
20								End of boring at 15 ft bgs		
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-37



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avenue, Brooklyn, NY - HWD10105					BORING NO.: SB-38				
CLIENT: Department of Design and Construction - BEGS					SHEET: 33 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Hale Ave/Atlantic Ave				
CAS.:					GROUND ELEVATION: NA				
SAMPLER: 5' long Macros					DATE STARTED: October 28, 2015				
TUBE:					DATE FINISHED: November 10, 2015				
					DRILLER: Kensley N.				
					GEOLOGIST: Eva Jakubowska				
					REVIEWED BY:				

DEPTH FEET	STRATA	SAMPLE				DESCRIPTION				USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1	[Hatched pattern]				NA	Black to reddish-brown	NA	0-1': Ash with fill material.	FILL	Cleared to 6' bgs.	
6					40%	Brown	Soft	1'-6': Fine to medium Sand with some clay and silt.	SM	0.0 ppm Moist	
10					80%	Brown	Soft	6-10': Fine to medium Sand with some silt.		0.0 ppm Moist	
15								10-15': Fine to medium Sand with some silt.		0.0 ppm Moist	
20							End of boring at 15 ft bgs				
25											
30											
35											

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-38



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-39				
CLIENT: Department of Design and Construction - BEGS					SHEET: 34 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Montauk Ave/Atlantic Ave				
CAS.					GROUND ELEVATION: NA				
SAMPLER					DATE STARTED: October 27, 2015				
TUBE					DATE FINISHED: November 9, 2015				
DATE					DRILLER: Kensley N.				
TIME					GEOLOGIST: Eva Jakubowska				
LEVEL					REVIEWED BY:				
TYPE									
TYPE									
DIA.									
WT.									
FALL									

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS	
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1	[Grid pattern]							0-4": Concrete with rebar.		Cleared to 6' bgs.	
						NA	Dark brown to reddish-brown	NA	4"-6": Fine to medium Sand, some rocks.	FILL	0.0 ppm Moist
6											0.0 ppm Moist
						100%	Light brown	Soft	6-10": Fine to medium Sand with some silt.		0.0 ppm Moist
10										SM	0.0 ppm Moist
						90%	Light brown	Soft	10-15": Fine to medium Sand with some silt.		0.0 ppm Moist
15											
20											
25											
30											
35											
								End of boring at 15 ft bgs			

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-39



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105
CLIENT: Department of Design and Construction - BEGS
BORING CONTRACTOR: Associated Environmental Services, Ltd.

BORING NO.: SB-40
SHEET: 35 of 39
JOB NO.: 15-008-0265
LOCATION: Norwood Ave/Atlantic Ave

GROUNDWATER: NA	CAS.	SAMPLER	TUBE
DATE	TIME	LEVEL	TYPE
			NA
			DIA.
			1"
			WT.
			NA
			FALL
			NA

GROUND ELEVATION: NA
DATE STARTED: October 28, 2015
DATE FINISHED: November 10, 2015
DRILLER: Kensley N.
GEOLOGIST: Eva Jakubowska
REVIEWED BY:

DEPTH FEET	STRATA	SAMPLE				DESCRIPTION			USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1								0-4": Concrete.		Cleared to 6' bgs.
					NA	Brown	NA	4"-6": Fine to medium Sand with some silt.		0.0 ppm Moist
6										
					50%	Brown	Soft	6-10": Fine to medium Sand with some rocks and silt.	SM	0.0 ppm Moist
10										
					80%	Brown	Soft	10-15": Fine to medium Sand with some silt.		0.0 ppm Moist
15										
								End of boring at 15 ft bgs		
20										
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).

PROJECT NO.: 15-008-0265
BORING NO.: SB-40



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-42	
CLIENT: Department of Design and Construction - BEGS					SHEET: 36 of 39	
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265	
GROUNDWATER: NA					LOCATION: Milford St/Atlantic Ave	
					GROUND ELEVATION: NA	
DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER
			NA	DIA.	1"	5' long Macros
				WT.	NA	
			FALL	FALL	NA	
					DATE STARTED: October 27, 2015	
					DATE FINISHED: November 9, 2015	
					DRILLER: Kensley N.	
					GEOLOGIST: Eva Jakubowska	
					REVIEWED BY:	

DEPTH FEET	SAMPLE				REC% RQD%	DESCRIPTION			USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"		COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1	[Pattern]				NA	Reddish-brown	NA	0-6': Fine to medium Sand with some silt.	SM	Cleared to 6' bgs. 0.0 ppm Moist
6					80%	Brown	Soft	6-10': Fine to medium Sand with some silt.		0.0 ppm Moist
10					70%	Brown	Soft	10-15': Fine to medium Sand with some silt.		0.0 ppm Moist
15								End of boring at 15 ft bgs		
20										
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-42



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-43				
CLIENT: Department of Design and Construction - BEGS					SHEET: 37 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Logan St/Atlantic Ave				
CAS.					GROUND ELEVATION: NA				
SAMPLER					DATE STARTED: October 28, 2015				
TUBE					DATE FINISHED: November 9, 2015				
5' long Macros					DRILLER: Kensley N.				
DATE					GEOLOGIST: Eva Jakubowska				
TIME					REVIEWED BY:				
LEVEL									
TYPE									
NA									
TYPE									
DIA.									
1"									
WT.									
NA									
FALL									
NA									

DEPTH FEET	STRATA	SAMPLE				DESCRIPTION			USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1					NA	Reddish-brown	NA	0-6": concrete.	SM	Cleared to 6' bgs.
								6"-6': Fine to medium Sand with some silt.		0.0 ppm
6										Moist
						50%	Brown	Soft		6-10': Fine to medium Sand with some silt.
10									Moist	
					80%	Brown	Soft	10-15': Fine to medium Sand with some silt.	0.0 ppm	
15									Moist	
								End of boring at 15 ft bgs		
20										
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).	PROJECT NO.: 15-008-0265
	BORING NO.: SB-43



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avnue, Brooklyn, NY - HWD10105					BORING NO.: SB-44				
CLIENT: Department of Design and Construction - BEGS					SHEET: 38 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Logan St/Atlantic Ave				
CAS.					GROUND ELEVATION: NA				
SAMPLER					DATE STARTED: October 27, 2015				
TUBE					DATE FINISHED: November 9, 2015				
5' long Macros					DRILLER: Kensley N.				
					GEOLOGIST: Eva Jakubowska				
					REVIEWED BY:				

DEPTH FEET	STRATA	SAMPLE				REC% RQD%	CAS. COLOR	SAMPLER CONSISTENCY HARDNESS	TUBE DESCRIPTION MATERIAL DESCRIPTION	USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"	TYPE						
1	[Patterned]					NA	Light reddish-brown	NA	0-6": Concrete.	SM	Cleared to 6' bgs.
									6"-6": Fine to medium Sand with some silt.		0.0 ppm
6											Moist
						50%	Reddish-brown	Soft	6-10": Fine to medium Sand with some silt.		0.0 ppm
10											Moist
						70%	Reddish brown to brown	Soft	10-15": Fine to medium Sand with some silt.		0.0 ppm
15											Moist
20											
25											
30											
35											

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).

PROJECT NO.: 15-008-0265
BORING NO.: SB-44



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: Water Mains Reconstruction - Atlantic Avenue, Brooklyn, NY - HWD10105					BORING NO.: SB-47				
CLIENT: Department of Design and Construction - BEGS					SHEET: 38 of 39				
BORING CONTRACTOR: Associated Environmental Services, Ltd.					JOB NO.: 15-008-0265				
GROUNDWATER: NA					LOCATION: Conduit Ave/Atlantic Ave				
CAS.					GROUND ELEVATION: NA				
SAMPLER					DATE STARTED: October 27, 2015				
TUBE					DATE FINISHED: November 9, 2015				
DATE					DRILLER: Kensley N.				
TIME					GEOLOGIST: Eva Jakubowska				
LEVEL					REVIEWED BY:				
TYPE									
TYPE									
DIA.									
WT.									
FALL									

DEPTH FEET	SAMPLE				DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1	[Grid Pattern]				NA	Reddish-brown	NA	0-6': Fine to medium Sand with rocks.	FILL	Cleared to 6' bgs. 0.0 ppm Moist
6					50%	Brown	Soft	6-10': Fine to medium Sand with some silt.	SM	0.0 ppm Moist
10					70%	Brown	Soft	10-15': Fine to medium Sand with some silt.		0.0 ppm Moist
15							End of boring at 15 ft bgs			
20										
25										
30										
35										

COMMENTS: Grab sample collected @ 14.5-15.0 ft bgs for VOCs. Composite sample collected from 0-15 ft bgs for remaining parameters. Soil was classified according to the Unified Soil Classification System (USCS).

PROJECT NO.: 15-008-0265
BORING NO.: SB-47

APPENDIX C
LABORATORY ANALYTICAL RESULTS



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 4, 2015

Steve Frank
LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202

Project Location: Atlantic Ave. Brooklyn, NY
Client Job Number:
Project Number: 15-008-0265
Laboratory Work Order Number: 15J1360

Enclosed are results of analyses for samples received by the laboratory on October 28, 2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Aaron L. Benoit", is written over a horizontal line.

Aaron L. Benoit
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Steve Frank

REPORT DATE: 11/4/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 15-008-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15J1360

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave. Brooklyn, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-25-4.0-4.5	15J1360-01	Soil		SM 2540G	
				SW-846 8260C	
SB-25-comp	15J1360-02	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

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SW-846 8015C

Qualifications:

PR-03

Sample preserved in the laboratory, not in the field as required by the method.

Analyte & Samples(s) Qualified:

15J1360-02[SB-25-comp]

SW-846 8260C

Qualifications:

PR-03

Sample preserved in the laboratory, not in the field as required by the method.

Analyte & Samples(s) Qualified:

15J1360-01[SB-25-4.0-4.5]

PR-15

According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846 5035-L/5035A-L.

Analyte & Samples(s) Qualified:

15J1360-01[SB-25-4.0-4.5]

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

1,2,3-Trichlorobenzene

15J1360-01[SB-25-4.0-4.5], B134243-BLK1, B134243-BS1, B134243-BSD1

1,2,4-Trichlorobenzene

15J1360-01[SB-25-4.0-4.5], B134243-BLK1, B134243-BS1, B134243-BSD1

Naphthalene

15J1360-01[SB-25-4.0-4.5], B134243-BLK1, B134243-BS1, B134243-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Acetone

B134243-BS1, B134243-BSD1

Carbon Disulfide

B134243-BS1, B134243-BSD1

SW-846 9045C

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:

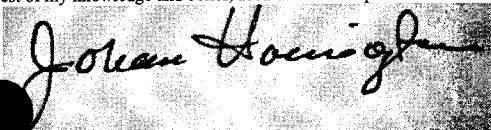
pH

15J1360-02[SB-25-comp]

SW-846 8015C

Gasoline Range Organics (2-Methylpentane through 1,2,4-Trimethylbenzene) is quantitated against a calibration made with an unleaded gasoline composite standard.
Diesel Range Organics (C10-C28) is quantitated against a calibration made with a #2 fuel oil standard.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Johanna K. Harrington
Manager, Laboratory Reporting

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave. Brooklyn, NY

Sample Description:

Work Order: 15J1360

Date Received: 10/28/2015

Field Sample #: SB-25-4.0-4.5

Sampled: 10/23/2015 10:30

Sample ID: 15J1360-01

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.12	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Acrylonitrile	ND	0.0071	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Benzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Bromobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Bromochloromethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Bromodichloromethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Bromoform	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Bromomethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
2-Butanone (MEK)	ND	0.047	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
tert-Butyl Alcohol (TBA)	ND	0.047	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
n-Butylbenzene	ND	0.0047	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
sec-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
tert-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Carbon Disulfide	ND	0.024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Carbon Tetrachloride	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Chlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Chlorodibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Chloroethane	ND	0.024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Chloroform	ND	0.0047	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Chloromethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
2-Chlorotoluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
4-Chlorotoluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Dibromomethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,2-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,3-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,4-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
trans-1,4-Dichloro-2-butene	ND	0.0047	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,1-Dichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,2-Dichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,1-Dichloroethylene	ND	0.0047	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
cis-1,2-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
trans-1,2-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,2-Dichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,3-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
2,2-Dichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,1-Dichloropropene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
cis-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
trans-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Diethyl Ether	ND	0.024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF

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Project Location: Atlantic Ave. Brooklyn, NY

Sample Description:

Work Order: 15J1360

Date Received: 10/28/2015

Field Sample #: SB-25-4.0-4.5

Sampled: 10/23/2015 10:30

Sample ID: 15J1360-01

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,4-Dioxane	ND	0.12	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Ethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Hexachlorobutadiene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
2-Hexanone (MBK)	ND	0.024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Isopropylbenzene (Cumene)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0047	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Methylene Chloride	ND	0.024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Naphthalene	ND	0.0047	mg/Kg dry	1	V-05	SW-846 8260C	10/30/15	10/30/15 14:13	MFF
n-Propylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Styrene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,1,1,2-Tetrachloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Tetrachloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Tetrahydrofuran	ND	0.012	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Toluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,2,3-Trichlorobenzene	ND	0.0024	mg/Kg dry	1	V-05	SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,2,4-Trichlorobenzene	ND	0.0024	mg/Kg dry	1	V-05	SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,3,5-Trichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,1,1-Trichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,1,2-Trichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Trichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,2,3-Trichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.012	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,2,4-Trimethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
1,3,5-Trimethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
Vinyl Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
m+p Xylene	ND	0.0047	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF
o-Xylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	10/30/15	10/30/15 14:13	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	122	70-130	10/30/15 14:13
Toluene-d8	96.0	70-130	10/30/15 14:13
4-Bromofluorobenzene	86.8	70-130	10/30/15 14:13



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Project Location: Atlantic Ave. Brooklyn, NY

Sample Description:

Work Order: 15J1360

Date Received: 10/28/2015

Field Sample #: SB-25-4.0-4.5

Sampled: 10/23/2015 10:30

Sample ID: 15J1360-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.0		% Wt	1		SM 2540G	10/28/15	10/29/15 10:55	MRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave. Brooklyn, NY

Sample Description:

Work Order: 15J1360

Date Received: 10/28/2015

Field Sample #: SB-25-comp

Sampled: 10/23/2015 10:30

Sample ID: 15J1360-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
Acenaphthylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
Anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
Benzo(a)anthracene	0.29	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
Benzo(a)pyrene	0.29	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
Benzo(b)fluoranthene	0.33	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
Benzo(g,h,i)perylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
Benzo(k)fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
Chrysene	0.28	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
Dibenz(a,h)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
Fluoranthene	0.46	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
Indeno(1,2,3-cd)pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
Phenanthrene	0.21	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
rene	0.53	0.19	mg/Kg dry	1		SW-846 8270D	10/30/15	10/31/15 23:07	BGL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Nitrobenzene-d5	80.6		30-130				10/31/15 23:07		
2-Fluorobiphenyl	97.3		30-130				10/31/15 23:07		
p-Terphenyl-d14	123		30-130				10/31/15 23:07		

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Project Location: Atlantic Ave. Brooklyn, NY

Sample Description:

Work Order: 15J1360

Date Received: 10/28/2015

Field Sample #: SB-25-comp

Sampled: 10/23/2015 10:30

Sample ID: 15J1360-02

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date		Analyst
							Prepared	Analyzed	
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	10/29/15	10/31/15 0:26	KAL
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	10/29/15	10/31/15 0:26	KAL
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	10/29/15	10/31/15 0:26	KAL
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	10/29/15	10/31/15 0:26	KAL
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	10/29/15	10/31/15 0:26	KAL
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	10/29/15	10/31/15 0:26	KAL
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	10/29/15	10/31/15 0:26	KAL
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	10/29/15	10/31/15 0:26	KAL
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	10/29/15	10/31/15 0:26	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	84.6	30-150	10/31/15 0:26
Decachlorobiphenyl [2]	88.8	30-150	10/31/15 0:26
Tetrachloro-m-xylene [1]	90.4	30-150	10/31/15 0:26
Tetrachloro-m-xylene [2]	88.8	30-150	10/31/15 0:26

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Project Location: Atlantic Ave. Brooklyn, NY

Sample Description:

Work Order: 15J1360

Date Received: 10/28/2015

Field Sample #: SB-25-comp

Sampled: 10/23/2015 10:30

Sample ID: 15J1360-02

Sample Matrix: Soil

Sample Flags: PR-03

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.3	mg/Kg dry	1		SW-846 8015C	10/29/15	10/29/15 16:22	EEH
Diesel Range Organics	31	9.3	mg/Kg dry	1		SW-846 8015C	10/31/15	11/3/15 21:40	SCS
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	116		70-130			10/29/15 16:22			
o-Terphenyl	71.1		40-140			11/3/15 21:40			

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Project Location: Atlantic Ave. Brooklyn, NY

Sample Description:

Work Order: 15J1360

Date Received: 10/28/2015

Field Sample #: SB-25-comp

Sampled: 10/23/2015 10:30

Sample ID: 15J1360-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Free Liquid	Absent		present/absent	1		SW-846 9095B	10/29/15	10/29/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/2/15	11/2/15 13:45	AG
pH @22.5°C	8.9		pH Units	1	H-03	SW-846 9045C	10/28/15	10/28/15 21:30	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/3/15	11/4/15 13:00	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/3/15	11/4/15 11:50	AG
% Solids	89.0		% Wt	1		SM 2540G	10/28/15	10/29/15 10:55	MRL

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Project Location: Atlantic Ave. Brooklyn, NY

Sample Description:

Work Order: 15J1360

Date Received: 10/28/2015

Field Sample #: SB-25-comp

Sampled: 10/23/2015 10:30

Sample ID: 15J1360-02

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	10/30/15	11/2/15 15:27	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	10/31/15	11/3/15 11:37	SCB
Barium	0.51	0.050	mg/L	1		SW-846 6010C	10/30/15	11/2/15 15:27	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	10/30/15	11/2/15 15:27	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	10/30/15	11/2/15 15:27	AME
Lead	0.038	0.010	mg/L	1		SW-846 6010C	10/30/15	11/2/15 15:27	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	10/30/15	11/2/15 15:27	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	10/30/15	11/2/15 15:27	AME

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
15J1360-01 [SB-25-4.0-4.5]	B134052	10/28/15
15J1360-02 [SB-25-comp]	B134052	10/28/15

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
15J1360-02 [SB-25-comp]	B134351	50.0	11/02/15

Prep Method: SW-846 3010A-SW-846 6010C

Leachates were extracted on 10/29/2015 per SW-846 1311 in Batch B134123

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15J1360-02 [SB-25-comp]	B134218	50.0	50.0	10/30/15

Prep Method: SW-846 7470A Prep-SW-846 7470A

Leachates were extracted on 10/29/2015 per SW-846 1311 in Batch B134123

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15J1360-02 [SB-25-comp]	B134217	6.00	6.00	10/31/15

Prep Method: SW-846 5035/5030B-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15J1360-02 [SB-25-comp]	B134137	15.0	16.8	10/29/15

Prep Method: SW-846 3546-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15J1360-02 [SB-25-comp]	B134293	30.2	1.00	10/31/15

Prep Method: SW-846 3540C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15J1360-02 [SB-25-comp]	B134081	10.4	10.0	10/29/15

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15J1360-01 [SB-25-4.0-4.5]	B134243	4.70	10.0	10/30/15

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15J1360-02 [SB-25-comp]	B134194	30.3	1.00	10/30/15

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Sample Extraction Data**SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15J1360-02 [SB-25-comp]	B134526	25.0	250	11/03/15

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15J1360-02 [SB-25-comp]	B134527	25.0	250	11/03/15

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
15J1360-02 [SB-25-comp]	B134056	20.0	10/28/15

SW-846 9095B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15J1360-02 [SB-25-comp]	B134089	100	100	10/29/15

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B134243 - SW-846 5035										
Blank (B134243-BLK1)										
Prepared & Analyzed: 10/30/15										
Acetone	ND	0.10	mg/Kg wet							
Acrylonitrile	ND	0.0060	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0040	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.020	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B134243 - SW-846 5035										
Blank (B134243-BLK1)										
Prepared & Analyzed: 10/30/15										
Methylene Chloride	ND	0.020	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							V-05
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							V-05
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							V-05
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet							
1,2,4,5-Tetramethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0565		mg/Kg wet	0.0500		113	70-130			
Surrogate: Toluene-d8	0.0484		mg/Kg wet	0.0500		96.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.0460		mg/Kg wet	0.0500		92.0	70-130			
LCS (B134243-BS1)										
Prepared & Analyzed: 10/30/15										
Acetone	0.184	0.10	mg/Kg wet	0.200		92.1	70-160			V-20 †
Acrylonitrile	0.0192	0.0060	mg/Kg wet	0.0200		95.9	70-130			
tert-Amyl Methyl Ether (TAME)	0.0163	0.0010	mg/Kg wet	0.0200		81.5	70-130			
Benzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
Bromobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
Bromochloromethane	0.0229	0.0020	mg/Kg wet	0.0200		115	70-130			
Bromodichloromethane	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
Bromoform	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130			
Bromomethane	0.0111	0.010	mg/Kg wet	0.0200		55.7	40-130			†
2-Butanone (MEK)	0.174	0.040	mg/Kg wet	0.200		87.0	70-160			†
tert-Butyl Alcohol (TBA)	0.175	0.040	mg/Kg wet	0.200		87.5	40-130			†
n-Butylbenzene	0.0213	0.0040	mg/Kg wet	0.0200		107	70-130			
sec-Butylbenzene	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130			
tert-Butylbenzene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-160			†
tert-Butyl Ethyl Ether (TBEE)	0.0169	0.0010	mg/Kg wet	0.0200		84.3	70-130			
Carbon Disulfide	0.0209	0.020	mg/Kg wet	0.0200		104	70-130			V-20
Carbon Tetrachloride	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
Chlorobenzene	0.0227	0.0020	mg/Kg wet	0.0200		113	70-130			
1,1-Dibromomethane	0.0199	0.0010	mg/Kg wet	0.0200		99.4	70-130			
1,1-Dichloroethane	0.0165	0.020	mg/Kg wet	0.0200		82.7	70-130			
Chloroform	0.0218	0.0040	mg/Kg wet	0.0200		109	70-130			
Chloromethane	0.0149	0.010	mg/Kg wet	0.0200		74.6	70-130			
2-Chlorotoluene	0.0241	0.0020	mg/Kg wet	0.0200		121	70-130			

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B134243 - SW-846 5035										
LCS (B134243-BS1)										
Prepared & Analyzed: 10/30/15										
4-Chlorotoluene	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0176	0.0020	mg/Kg wet	0.0200		88.1	70-130			
1,2-Dibromoethane (EDB)	0.0227	0.0010	mg/Kg wet	0.0200		113	70-130			
Dibromomethane	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130			
1,2-Dichlorobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
1,3-Dichlorobenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
1,4-Dichlorobenzene	0.0227	0.0020	mg/Kg wet	0.0200		113	70-130			
trans-1,4-Dichloro-2-butene	0.0187	0.0040	mg/Kg wet	0.0200		93.5	70-130			
Dichlorodifluoromethane (Freon 12)	0.00944	0.020	mg/Kg wet	0.0200		47.2	40-160			†
1,1-Dichloroethane	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
1,2-Dichloroethane	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
1,1-Dichloroethylene	0.0216	0.0040	mg/Kg wet	0.0200		108	70-130			
cis-1,2-Dichloroethylene	0.0199	0.0020	mg/Kg wet	0.0200		99.4	70-130			
trans-1,2-Dichloroethylene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
1,2-Dichloropropane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
1,3-Dichloropropane	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130			
2,2-Dichloropropane	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130			
1,1-Dichloropropene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130			
cis-1,3-Dichloropropene	0.0182	0.0010	mg/Kg wet	0.0200		91.1	70-130			
trans-1,3-Dichloropropene	0.0195	0.0010	mg/Kg wet	0.0200		97.7	70-130			
Diethyl Ether	0.0191	0.020	mg/Kg wet	0.0200		95.3	70-130			
Diisopropyl Ether (DIPE)	0.0185	0.0010	mg/Kg wet	0.0200		92.6	70-130			
1,4-Dioxane	0.166	0.10	mg/Kg wet	0.200		82.8	40-160			†
Ethylbenzene	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130			
Hexachlorobutadiene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-160			
2-Hexanone (MBK)	0.190	0.020	mg/Kg wet	0.200		94.9	70-160			†
Isopropylbenzene (Cumene)	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130			
p-Isopropyltoluene (p-Cymene)	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0179	0.0040	mg/Kg wet	0.0200		89.4	70-130			
Methylene Chloride	0.0190	0.020	mg/Kg wet	0.0200		94.9	40-160			†
4-Methyl-2-pentanone (MIBK)	0.190	0.020	mg/Kg wet	0.200		94.9	70-160			†
Naphthalene	0.0149	0.0040	mg/Kg wet	0.0200		74.5	40-130			V-05 †
n-Propylbenzene	0.0244	0.0020	mg/Kg wet	0.0200		122	70-130			
Styrene	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130			
1,1,1,2-Tetrachloroethane	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130			
1,1,2,2-Tetrachloroethane	0.0219	0.0010	mg/Kg wet	0.0200		109	70-130			
Tetrachloroethylene	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			
Tetrahydrofuran	0.0173	0.010	mg/Kg wet	0.0200		86.3	70-130			
Toluene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130			
1,2,3-Trichlorobenzene	0.0161	0.0020	mg/Kg wet	0.0200		80.7	70-130			V-05
1,2,4-Trichlorobenzene	0.0153	0.0020	mg/Kg wet	0.0200		76.4	70-130			V-05
1,3,5-Trichlorobenzene	0.0182	0.0020	mg/Kg wet	0.0200		91.0	70-130			
1,1,1-Trichloroethane	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
1,1,2-Trichloroethane	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
Trichloroethylene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
Trichlorofluoromethane (Freon 11)	0.0208	0.010	mg/Kg wet	0.0200		104	70-130			
1,2,3-Trichloropropane	0.0241	0.0020	mg/Kg wet	0.0200		120	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0200	0.010	mg/Kg wet	0.0200		100	70-130			
1,2,4-Trimethylbenzene	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130			
1,3,5-Trimethylbenzene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130			
Vinyl Chloride	0.0152	0.010	mg/Kg wet	0.0200		76.0	40-130			†

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B134243 - SW-846 5035										
LCS (B134243-BS1)										
Prepared & Analyzed: 10/30/15										
m+p Xylene	0.0470	0.0040	mg/Kg wet	0.0400		118	70-130			
o-Xylene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0514		mg/Kg wet	0.0500		103	70-130			
Surrogate: Toluene-d8	0.0499		mg/Kg wet	0.0500		99.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.0509		mg/Kg wet	0.0500		102	70-130			
LCS Dup (B134243-BSD1)										
Prepared & Analyzed: 10/30/15										
Acetone	0.203	0.10	mg/Kg wet	0.200		102	70-160	9.91	25	V-20 †
Acrylonitrile	0.0205	0.0060	mg/Kg wet	0.0200		102	70-130	6.46	25	
tert-Amyl Methyl Ether (TAME)	0.0174	0.0010	mg/Kg wet	0.0200		87.0	70-130	6.53	25	
Benzene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130	8.90	25	
Bromobenzene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	8.15	25	
Bromochloromethane	0.0245	0.0020	mg/Kg wet	0.0200		123	70-130	6.83	25	
Bromodichloromethane	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	5.41	25	
Bromoform	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	9.96	25	
Bromomethane	0.0137	0.010	mg/Kg wet	0.0200		68.5	40-130	20.6	25	†
2-Butanone (MEK)	0.187	0.040	mg/Kg wet	0.200		93.3	70-160	7.01	25	†
tert-Butyl Alcohol (TBA)	0.196	0.040	mg/Kg wet	0.200		98.2	40-130	11.6	25	†
n-Butylbenzene	0.0231	0.0040	mg/Kg wet	0.0200		115	70-130	7.93	25	
sec-Butylbenzene	0.0254	0.0020	mg/Kg wet	0.0200		127	70-130	7.02	25	
tert-Butylbenzene	0.0240	0.0020	mg/Kg wet	0.0200		120	70-160	6.02	25	†
tert-Butyl Ethyl Ether (TBEE)	0.0182	0.0010	mg/Kg wet	0.0200		91.1	70-130	7.75	25	
Carbon Disulfide	0.0228	0.020	mg/Kg wet	0.0200		114	70-130	8.87	25	V-20
Carbon Tetrachloride	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130	9.05	25	
Chlorobenzene	0.0235	0.0020	mg/Kg wet	0.0200		118	70-130	3.64	25	
Chlorodibromomethane	0.0218	0.0010	mg/Kg wet	0.0200		109	70-130	9.12	25	
Chloroethane	0.0182	0.020	mg/Kg wet	0.0200		91.1	70-130	9.67	25	
Chloroform	0.0232	0.0040	mg/Kg wet	0.0200		116	70-130	6.23	25	
Chloromethane	0.0158	0.010	mg/Kg wet	0.0200		79.2	70-130	5.98	25	
2-Chlorotoluene	0.0254	0.0020	mg/Kg wet	0.0200		127	70-130	5.17	25	
4-Chlorotoluene	0.0241	0.0020	mg/Kg wet	0.0200		120	70-130	6.78	25	
1,2-Dibromo-3-chloropropane (DBCP)	0.0187	0.0020	mg/Kg wet	0.0200		93.6	70-130	6.05	25	
1,2-Dibromoethane (EDB)	0.0241	0.0010	mg/Kg wet	0.0200		120	70-130	6.07	25	
Dibromomethane	0.0241	0.0020	mg/Kg wet	0.0200		121	70-130	3.12	25	
1,2-Dichlorobenzene	0.0233	0.0020	mg/Kg wet	0.0200		116	70-130	7.59	25	
1,3-Dichlorobenzene	0.0235	0.0020	mg/Kg wet	0.0200		118	70-130	6.50	25	
1,4-Dichlorobenzene	0.0242	0.0020	mg/Kg wet	0.0200		121	70-130	6.57	25	
trans-1,4-Dichloro-2-butene	0.0181	0.0040	mg/Kg wet	0.0200		90.7	70-130	3.04	25	
Dichlorodifluoromethane (Freon 12)	0.0104	0.020	mg/Kg wet	0.0200		52.0	40-160	9.68	25	†
1,1-Dichloroethane	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130	9.82	25	
1,2-Dichloroethane	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130	4.81	25	
1,1-Dichloroethylene	0.0242	0.0040	mg/Kg wet	0.0200		121	70-130	11.7	25	
cis-1,2-Dichloroethylene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	8.20	25	
trans-1,2-Dichloroethylene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	8.30	25	
1,2-Dichloropropane	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130	6.77	25	
1,3-Dichloropropane	0.0215	0.0010	mg/Kg wet	0.0200		108	70-130	5.73	25	
2,2-Dichloropropane	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130	8.44	25	
1,1-Dichloropropene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	6.77	25	
trans-1,2-Dichloropropene	0.0191	0.0010	mg/Kg wet	0.0200		95.5	70-130	4.72	25	
trans-1,3-Dichloropropene	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130	5.38	25	
Diethyl Ether	0.0205	0.020	mg/Kg wet	0.0200		102	70-130	7.09	25	
Diisopropyl Ether (DIPE)	0.0200	0.0010	mg/Kg wet	0.0200		100	70-130	7.78	25	

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B134243 - SW-846 5035										
LCS Dup (B134243-BSD1)										
Prepared & Analyzed: 10/30/15										
1,4-Dioxane	0.204	0.10	mg/Kg wet	0.200		102	40-160	20.8	50	† ‡
Ethylbenzene	0.0244	0.0020	mg/Kg wet	0.0200		122	70-130	5.65	25	
Hexachlorobutadiene	0.0244	0.0020	mg/Kg wet	0.0200		122	70-160	8.73	25	
2-Hexanone (MBK)	0.206	0.020	mg/Kg wet	0.200		103	70-160	7.98	25	†
Isopropylbenzene (Cumene)	0.0247	0.0020	mg/Kg wet	0.0200		123	70-130	6.27	25	
p-Isopropyltoluene (p-Cymene)	0.0248	0.0020	mg/Kg wet	0.0200		124	70-130	4.96	25	
Methyl tert-Butyl Ether (MTBE)	0.0199	0.0040	mg/Kg wet	0.0200		99.4	70-130	10.6	25	
Methylene Chloride	0.0215	0.020	mg/Kg wet	0.0200		108	40-160	12.6	25	†
4-Methyl-2-pentanone (MIBK)	0.210	0.020	mg/Kg wet	0.200		105	70-160	9.95	25	†
Naphthalene	0.0165	0.0040	mg/Kg wet	0.0200		82.5	40-130	10.2	25	V-05 †
n-Propylbenzene	0.0258	0.0020	mg/Kg wet	0.0200		129	70-130	5.50	25	
Styrene	0.0243	0.0020	mg/Kg wet	0.0200		122	70-130	6.88	25	
1,1,1,2-Tetrachloroethane	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130	3.99	25	
1,1,2,2-Tetrachloroethane	0.0243	0.0010	mg/Kg wet	0.0200		121	70-130	10.4	25	
Tetrachloroethylene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130	4.35	25	
Tetrahydrofuran	0.0218	0.010	mg/Kg wet	0.0200		109	70-130	23.2	25	
Toluene	0.0233	0.0020	mg/Kg wet	0.0200		116	70-130	5.20	25	
1,2,3-Trichlorobenzene	0.0173	0.0020	mg/Kg wet	0.0200		86.7	70-130	7.17	25	V-05
1,2,4-Trichlorobenzene	0.0172	0.0020	mg/Kg wet	0.0200		86.2	70-130	12.1	25	V-05
1,3,5-Trichlorobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130	6.79	25	
1,1,1-Trichloroethane	0.0241	0.0020	mg/Kg wet	0.0200		120	70-130	5.55	25	
1,1,2-Trichloroethane	0.0243	0.0020	mg/Kg wet	0.0200		122	70-130	10.1	25	
Trichloroethylene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	5.22	25	
Trichlorofluoromethane (Freon 11)	0.0222	0.010	mg/Kg wet	0.0200		111	70-130	6.24	25	
1,2,3-Trichloropropane	0.0233	0.0020	mg/Kg wet	0.0200		116	70-130	3.38	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0220	0.010	mg/Kg wet	0.0200		110	70-130	9.43	25	
1,2,4-Trimethylbenzene	0.0239	0.0020	mg/Kg wet	0.0200		120	70-130	4.27	25	
1,3,5-Trimethylbenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	4.23	25	
Vinyl Chloride	0.0170	0.010	mg/Kg wet	0.0200		85.0	40-130	11.2	25	†
m+p Xylene	0.0495	0.0040	mg/Kg wet	0.0400		124	70-130	5.22	25	
o-Xylene	0.0233	0.0020	mg/Kg wet	0.0200		117	70-130	5.64	25	
Surrogate: 1,2-Dichloroethane-d4	0.0530		mg/Kg wet	0.0500		106	70-130			
Surrogate: Toluene-d8	0.0497		mg/Kg wet	0.0500		99.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.0502		mg/Kg wet	0.0500		100	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B134194 - SW-846 3546										
Blank (B134194-BLK1)										
Prepared: 10/30/15 Analyzed: 10/31/15										
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Surrogate: Nitrobenzene-d5	2.80		mg/Kg wet	3.33		84.0	30-130			
Surrogate: 2-Fluorobiphenyl	3.43		mg/Kg wet	3.33		103	30-130			
Surrogate: p-Terphenyl-d14	3.92		mg/Kg wet	3.33		118	30-130			
LCS (B134194-BS1)										
Prepared: 10/30/15 Analyzed: 10/31/15										
Acenaphthene	1.46	0.17	mg/Kg wet	1.67		87.3	40-140			
Acenaphthylene	1.52	0.17	mg/Kg wet	1.67		91.4	40-140			
Anthracene	1.63	0.17	mg/Kg wet	1.67		97.7	40-140			
Benzo(a)anthracene	1.60	0.17	mg/Kg wet	1.67		96.1	40-140			
Benzo(a)pyrene	1.60	0.17	mg/Kg wet	1.67		96.0	40-140			
Benzo(b)fluoranthene	1.53	0.17	mg/Kg wet	1.67		91.6	40-140			
Benzo(g,h,i)perylene	1.64	0.17	mg/Kg wet	1.67		98.5	40-140			
Benzo(k)fluoranthene	1.57	0.17	mg/Kg wet	1.67		94.4	40-140			
Chrysene	1.54	0.17	mg/Kg wet	1.67		92.6	40-140			
Dibenz(a,h)anthracene	1.63	0.17	mg/Kg wet	1.67		97.9	40-140			
Fluoranthene	1.49	0.17	mg/Kg wet	1.67		89.5	40-140			
Fluorene	1.56	0.17	mg/Kg wet	1.67		93.5	40-140			
Indeno(1,2,3-cd)pyrene	1.65	0.17	mg/Kg wet	1.67		98.9	40-140			
2-Methylnaphthalene	1.54	0.17	mg/Kg wet	1.67		92.3	40-140			
Naphthalene	1.42	0.17	mg/Kg wet	1.67		85.2	40-140			
Phenanthrene	1.63	0.17	mg/Kg wet	1.67		98.0	40-140			
Pyrene	1.64	0.17	mg/Kg wet	1.67		98.7	40-140			
Surrogate: Nitrobenzene-d5	2.92		mg/Kg wet	3.33		87.6	30-130			
Surrogate: 2-Fluorobiphenyl	3.64		mg/Kg wet	3.33		109	30-130			
Surrogate: p-Terphenyl-d14	3.60		mg/Kg wet	3.33		108	30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B134194 - SW-846 3546										
LCS Dup (B134194-BSD1)										
					Prepared: 10/30/15 Analyzed: 10/31/15					
Acenaphthene	1.49	0.17	mg/Kg wet	1.67		89.4	40-140	2.35	30	
Acenaphthylene	1.56	0.17	mg/Kg wet	1.67		93.8	40-140	2.57	30	
Anthracene	1.69	0.17	mg/Kg wet	1.67		102	40-140	3.85	30	
Benzo(a)anthracene	1.68	0.17	mg/Kg wet	1.67		101	40-140	4.74	30	
Benzo(a)pyrene	1.68	0.17	mg/Kg wet	1.67		101	40-140	5.14	30	
Benzo(b)fluoranthene	1.62	0.17	mg/Kg wet	1.67		97.2	40-140	5.85	30	
Benzo(g,h,i)perylene	1.73	0.17	mg/Kg wet	1.67		104	40-140	4.97	30	
Benzo(k)fluoranthene	1.63	0.17	mg/Kg wet	1.67		97.9	40-140	3.64	30	
Chrysene	1.63	0.17	mg/Kg wet	1.67		98.1	40-140	5.73	30	
Dibenz(a,h)anthracene	1.70	0.17	mg/Kg wet	1.67		102	40-140	4.22	30	
Fluoranthene	1.56	0.17	mg/Kg wet	1.67		93.5	40-140	4.39	30	
Fluorene	1.65	0.17	mg/Kg wet	1.67		99.2	40-140	5.83	30	
Indeno(1,2,3-cd)pyrene	1.72	0.17	mg/Kg wet	1.67		103	40-140	4.41	30	
2-Methylnaphthalene	1.56	0.17	mg/Kg wet	1.67		93.4	40-140	1.21	30	
Naphthalene	1.42	0.17	mg/Kg wet	1.67		85.2	40-140	0.00	30	
Phenanthrene	1.70	0.17	mg/Kg wet	1.67		102	40-140	3.88	30	
Pyrene	1.74	0.17	mg/Kg wet	1.67		105	40-140	5.77	30	
Surrogate: Nitrobenzene-d5	2.86		mg/Kg wet	3.33		85.9	30-130			
Surrogate: 2-Fluorobiphenyl	3.49		mg/Kg wet	3.33		105	30-130			
Surrogate: p-Terphenyl-d14	3.74		mg/Kg wet	3.33		112	30-130			

QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B134081 - SW-846 3540C										
Blank (B134081-BLK1)										
Prepared: 10/29/15 Analyzed: 10/30/15										
Aroclor-1016	ND	0.019	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.019	mg/Kg wet							
Aroclor-1221	ND	0.019	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.019	mg/Kg wet							
Aroclor-1232	ND	0.019	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.019	mg/Kg wet							
Aroclor-1242	ND	0.019	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.019	mg/Kg wet							
Aroclor-1248	ND	0.019	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.019	mg/Kg wet							
Aroclor-1254	ND	0.019	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.019	mg/Kg wet							
Aroclor-1260	ND	0.019	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.019	mg/Kg wet							
Aroclor-1262	ND	0.019	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.019	mg/Kg wet							
Aroclor-1268	ND	0.019	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.019	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.169		mg/Kg wet	0.194		87.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.192		mg/Kg wet	0.194		99.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.157		mg/Kg wet	0.194		81.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.165		mg/Kg wet	0.194		85.0	30-150			
LCS (B134081-BS1)										
Prepared: 10/29/15 Analyzed: 10/30/15										
Aroclor-1016	0.17	0.020	mg/Kg wet	0.195		87.7	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.195		88.1	40-140			
Aroclor-1260	0.17	0.020	mg/Kg wet	0.195		87.4	40-140			
Aroclor-1260 [2C]	0.18	0.020	mg/Kg wet	0.195		93.2	40-140			
Surrogate: Decachlorobiphenyl	0.173		mg/Kg wet	0.195		88.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.196		mg/Kg wet	0.195		100	30-150			
Surrogate: Tetrachloro-m-xylene	0.161		mg/Kg wet	0.195		82.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.168		mg/Kg wet	0.195		86.2	30-150			
LCS Dup (B134081-BSD1)										
Prepared: 10/29/15 Analyzed: 10/30/15										
Aroclor-1016	0.18	0.020	mg/Kg wet	0.198		89.2	40-140	3.19	30	
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.198		87.9	40-140	1.29	30	
Aroclor-1260	0.17	0.020	mg/Kg wet	0.198		87.9	40-140	2.00	30	
Aroclor-1260 [2C]	0.19	0.020	mg/Kg wet	0.198		93.6	40-140	1.89	30	
Surrogate: Decachlorobiphenyl	0.174		mg/Kg wet	0.198		88.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.198		mg/Kg wet	0.198		100	30-150			
Surrogate: Tetrachloro-m-xylene	0.158		mg/Kg wet	0.198		79.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.165		mg/Kg wet	0.198		83.5	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B134137 - SW-846 5035/5030B										
Blank (B134137-BLK1) Prepared & Analyzed: 10/29/15										
Gasoline Range Organics (GRO)	ND	0.010	mg/Kg wet							
Surrogate: 1-Chloro-3-fluorobenzene	0.0171		mg/Kg wet	0.0150		114	70-130			
LCS (B134137-BS1) Prepared & Analyzed: 10/29/15										
Gasoline Range Organics (GRO)	0.207	0.010	mg/Kg wet	0.250		83.0	80-120			
Surrogate: 1-Chloro-3-fluorobenzene	0.0165		mg/Kg wet	0.0150		110	70-130			
LCS Dup (B134137-BSD1) Prepared & Analyzed: 10/29/15										
Gasoline Range Organics (GRO)	0.203	0.010	mg/Kg wet	0.250		81.3	80-120	2.05	30	
Surrogate: 1-Chloro-3-fluorobenzene	0.0169		mg/Kg wet	0.0150		113	70-130			
Batch B134293 - SW-846 3546										
Blank (B134293-BLK1) Prepared: 10/31/15 Analyzed: 11/02/15										
Diesel Range Organics	ND	8.3	mg/Kg wet							
Surrogate: o-Terphenyl	2.78		mg/Kg wet	3.33		83.5	40-140			
LCS (B134293-BS1) Prepared: 10/31/15 Analyzed: 11/02/15										
Diesel Range Organics	22.0	8.3	mg/Kg wet	33.3		66.1	40-140			
Surrogate: o-Terphenyl	2.52		mg/Kg wet	3.33		75.6	40-140			
LCS Dup (B134293-BSD1) Prepared: 10/31/15 Analyzed: 11/02/15										
Diesel Range Organics	23.0	8.3	mg/Kg wet	33.3		69.1	40-140	4.45		
Surrogate: o-Terphenyl	2.60		mg/Kg wet	3.33		78.0	40-140			
Matrix Spike (B134293-MS1) Source: 15J1360-02 Prepared: 10/31/15 Analyzed: 11/02/15										
Diesel Range Organics	69.3	47	mg/Kg dry	37.3	30.6	104	40-140			
Surrogate: o-Terphenyl	3.10		mg/Kg dry	3.73		83.0	40-140			
Matrix Spike Dup (B134293-MSD1) Source: 15J1360-02 Prepared: 10/31/15 Analyzed: 11/02/15										
Diesel Range Organics	78.0	47	mg/Kg dry	37.3	30.6	127	40-140	11.8	30	
Surrogate: o-Terphenyl	3.24		mg/Kg dry	3.73		86.7	40-140			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B134056 - SW-846 9045C										
LCS (B134056-BS1)				Prepared & Analyzed: 10/28/15						
pH	6.00		pH Units	6.00		100	98.6-102			
LCS Dup (B134056-BSD1)				Prepared & Analyzed: 10/28/15						
pH	6.01		pH Units	6.00		100	98.6-102	0.167	20	
Batch B134526 - SW-846 9014										
Blank (B134526-BLK1)				Prepared: 11/03/15 Analyzed: 11/04/15						
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B134526-BS1)				Prepared: 11/03/15 Analyzed: 11/04/15						
Reactive Cyanide	9.6	0.40	mg/Kg	10.0		95.9	86.4-107			
Batch B134527 - SW-846 9030A										
Blank (B134527-BLK1)				Prepared: 11/03/15 Analyzed: 11/04/15						
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B134527-BS1)				Prepared: 11/03/15 Analyzed: 11/04/15						
Reactive Sulfide	14	2.0	mg/Kg	14.8		97.3	42.9-132			



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QUALITY CONTROL

TCLP - Metals Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B134217 - SW-846 7470A Prep										
Blank (B134217-BLK1) Prepared: 10/31/15 Analyzed: 11/03/15										
Mercury	ND	0.00010	mg/L							
LCS (B134217-BS1) Prepared: 10/31/15 Analyzed: 11/03/15										
Mercury	0.00193	0.00010	mg/L	0.00200		96.5	80-120			
LCS Dup (B134217-BSD1) Prepared: 10/31/15 Analyzed: 11/03/15										
Mercury	0.00192	0.00010	mg/L	0.00200		95.8	80-120	0.701	20	
Matrix Spike (B134217-MS1) Source: 15J1360-02 Prepared: 10/31/15 Analyzed: 11/03/15										
Mercury	0.00199	0.00010	mg/L	0.00200	0.0000628	96.6	75-125			
Batch B134218 - SW-846 3010A										
Blank (B134218-BLK1) Prepared: 10/30/15 Analyzed: 11/02/15										
Arsenic	ND	0.010	mg/L							
Barium	ND	0.050	mg/L							
Cadmium	ND	0.0040	mg/L							
Chromium	ND	0.010	mg/L							
Lead	ND	0.010	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.0050	mg/L							
LCS (B134218-BS1) Prepared: 10/30/15 Analyzed: 11/02/15										
Arsenic	0.541	0.010	mg/L	0.500		108	80-120			
Barium	0.502	0.050	mg/L	0.500		100	80-120			
Cadmium	0.510	0.0040	mg/L	0.500		102	80-120			
Chromium	0.475	0.010	mg/L	0.500		95.0	80-120			
Lead	0.462	0.010	mg/L	0.500		92.4	80-120			
Selenium	0.561	0.050	mg/L	0.500		112	80-120			
Silver	0.489	0.0050	mg/L	0.500		97.8	80-120			
LCS Dup (B134218-BSD1) Prepared: 10/30/15 Analyzed: 11/02/15										
Arsenic	0.527	0.010	mg/L	0.500		105	80-120	2.61	20	
Barium	0.486	0.050	mg/L	0.500		97.2	80-120	3.16	20	
Cadmium	0.496	0.0040	mg/L	0.500		99.1	80-120	2.90	20	
Chromium	0.462	0.010	mg/L	0.500		92.5	80-120	2.74	20	
Lead	0.451	0.010	mg/L	0.500		90.3	80-120	2.34	20	
Selenium	0.539	0.050	mg/L	0.500		108	80-120	4.00	20	
Silver	0.477	0.0050	mg/L	0.500		95.4	80-120	2.43	20	

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS

Lab Sample ID: B134081-BS1 Date(s) Analyzed: 10/30/2015 10/30/2015

Instrument ID (1): _____ Instrument ID (2): _____

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	-0.03	0.03	0.17	
	2	0.00	-0.03	0.03	0.17	1
Aroclor-1260	1	0.00	-0.03	0.03	0.17	
	2	0.00	-0.03	0.03	0.18	5

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS Dup

Lab Sample ID: B134081-BSD1 Date(s) Analyzed: 10/30/2015 10/30/2015
 Instrument ID (1): _____ Instrument ID (2): _____
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	-0.03	0.03	0.18	
	2	0.00	-0.03	0.03	0.17	4
Aroclor-1260	1	0.00	-0.03	0.03	0.17	
	2	0.00	-0.03	0.03	0.19	9

FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
 - † Wide recovery limits established for difficult compound.
 - ‡ Wide RPD limits established for difficult compound.
 - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
No results have been blank subtracted unless specified in the case narrative section.
- H-03 Sample received after recommended holding time was exceeded.
 - PR-03 Sample preserved in the laboratory, not in the field as required by the method.
 - PR-15 According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846 5035-L/5035A-L.
 - V-05 Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
 - V-20 Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 1030 in Soil	
Ignitability	NY,NH,CT,NC,ME,VA
SW-846 6010C in Water	
Arsenic	NY,CT,NC,ME,NH,VA
Barium	NY,CT,ME,NC,NH,VA
Cadmium	NY,CT,ME,NC,NH,VA
Chromium	NY,CT,ME,NC,NH,VA
Lead	NY,CT,ME,NC,NH,VA
Selenium	CT,ME,NC,NH,NY,VA
Silver	CT,ME,NC,NH,NY,VA
SW-846 7470A in Water	
Mercury	CT,ME,NC,NH,NY,VA
SW-846 8015C in Soil	
Gasoline Range Organics (GRO)	NY,VA,NH
Diesel Range Organics	NY,VA,NH
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC
Aroclor-1262 [2C]	NY,NC
Aroclor-1268	NY,NC
Aroclor-1268 [2C]	NY,NC
SW-846 8260C in Soil	
Acetone	CT,NH,NY,ME,VA
Acrylonitrile	CT,NH,NY,ME,VA
Benzene	CT,NH,NY,ME,VA
Bromobenzene	NH,NY,ME,VA
Bromochloromethane	NH,NY,ME,VA
Bromodichloromethane	CT,NH,NY,ME,VA
Bromoform	CT,NH,NY,ME,VA
Bromomethane	CT,NH,NY,ME,VA
2-Butanone (MEK)	CT,NH,NY,ME,VA
n-Butylbenzene	CT,NH,NY,ME,VA
sec-Butylbenzene	CT,NH,NY,ME,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
tert-Butylbenzene	CT,NH,NY,ME,VA
Carbon Disulfide	CT,NH,NY,ME,VA
Carbon Tetrachloride	CT,NH,NY,ME,VA
Chlorobenzene	CT,NH,NY,ME,VA
Chlorodibromomethane	CT,NH,NY,ME,VA
Chloroethane	CT,NH,NY,ME,VA
Chloroform	CT,NH,NY,ME,VA
Chloromethane	CT,NH,NY,ME,VA
2-Chlorotoluene	CT,NH,NY,ME,VA
4-Chlorotoluene	CT,NH,NY,ME,VA
Dibromomethane	NH,NY,ME,VA
1,2-Dichlorobenzene	CT,NH,NY,ME,VA
1,3-Dichlorobenzene	CT,NH,NY,ME,VA
1,4-Dichlorobenzene	CT,NH,NY,ME,VA
Dichlorodifluoromethane (Freon 12)	NH,NY,ME,VA
1,1-Dichloroethane	CT,NH,NY,ME,VA
1,2-Dichloroethane	CT,NH,NY,ME,VA
1,1-Dichloroethylene	CT,NH,NY,ME,VA
cis-1,2-Dichloroethylene	CT,NH,NY,ME,VA
trans-1,2-Dichloroethylene	CT,NH,NY,ME,VA
1,2-Dichloropropane	CT,NH,NY,ME,VA
1,3-Dichloropropane	NH,NY,ME,VA
2,2-Dichloropropane	NH,NY,ME,VA
1,1-Dichloropropene	NH,NY,ME,VA
cis-1,3-Dichloropropene	CT,NH,NY,ME,VA
trans-1,3-Dichloropropene	CT,NH,NY,ME,VA
Ethylbenzene	CT,NH,NY,ME,VA
Hexachlorobutadiene	NH,NY,ME,VA
2-Hexanone (MBK)	CT,NH,NY,ME,VA
Isopropylbenzene (Cumene)	CT,NH,NY,ME,VA
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl tert-Butyl Ether (MTBE)	NY,VA
Methylene Chloride	CT,NH,NY,ME,VA
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,VA
Naphthalene	NH,NY,ME,VA
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME,VA
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME,VA
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME,VA
Tetrachloroethylene	CT,NH,NY,ME,VA
Toluene	CT,NH,NY,ME,VA
1,2,3-Trichlorobenzene	ME
1,2,4-Trichlorobenzene	NH,NY,ME,VA
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NH,NY,ME,VA
1,1,2-Trichloroethane	CT,NH,NY,ME,VA
Trichloroethylene	CT,NH,NY,ME,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME,VA
1,2,3-Trichloropropane	NH,NY,ME,VA
1,2,4-Trimethylbenzene	CT,NH,NY,ME,VA
1,3,5-Trimethylbenzene	CT,NH,NY,ME,VA
Vinyl Chloride	CT,NH,NY,ME,VA
m+p Xylene	CT,NH,NY,ME,VA
o-Xylene	CT,NH,NY,ME,VA
<i>SW-846 8270D in Soil</i>	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2016
MA	Massachusetts DEP	M-MA100	06/30/2016
CT	Connecticut Department of Public Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2016
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2016
RI	Rhode Island Department of Health	LAO00112	12/30/2015
NC	North Carolina Div. of Water Quality	652	12/31/2015
NJ	New Jersey DEP	MA007 NELAP	06/30/2016
FL	Florida Department of Health	E871027 NELAP	06/30/2016
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2016
WA	State of Washington Department of Ecology	C2065	02/23/2016
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2015
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2016



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 www.contestlabs.com

CHAIN OF STUDY RECORD

39 Spruce Street
 East longmeadow, MA 01028

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Company Name: Leo Engineers, Inc.
 Address: 703 Corlimer Street
Brooklyn, NY 11211
 Attention: Amy Lewison
 Project Location: Atlantic Ave, Brooklyn, NY
 Sampled By: Eva Jakubowska

Telephone: 716 882-9645
 Project # 15-008-0265
 Client PO# -

DATA DELIVERY (check all that apply)
 FAX EMAIL WEBSITE
 Fax # -
 Email: lewisona@lro.com
 Format: PDF EXCEL GIS OTHER

Project Proposal Provided? (for billing purposes)
 Yes proposal date

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection		Composite	Grab	"Enhanced Data Package"	
		Beginning Date/Time	Ending Date/Time			Matrix	Cont Code
<u>01</u>	<u>SB-25-4.0-4.5</u>	<u>10/23/15</u>	<u>1030</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>S</u>	<u>U</u>
<u>02</u>	<u>SB-25-4.0-4.5</u>	<u>11/11</u>	<u>1030</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>S</u>	<u>U</u>
<u>HAZ</u>	<u>88</u>						

Comments:
 Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
 H - High; M - Medium; L - Low; C - Clean; U - Unknown

Requisitioned by: (signature) [Signature] Date/Time: 10/28/15
 Received by: (signature) [Signature] Date/Time: 10/28/15
 Dispatched by: (signature) [Signature] Date/Time: 10/28/15
 Arrived by: (signature) [Signature] Date/Time: 10/28/15

Turnaround ^{††}
 7-Day
 10-Day
 Other 5 day
 RUSH [†]
 24-Hr 48-Hr
 72-Hr 14-Day
 Require lab approval Other:

Detection Limit Requirements
 Massachusetts:
 Connecticut:
 Other:

# of Containers	** Preservation	*** Container Code	Disolved Metals	*** Cont. Code:	** Preservation	Matrix Codes:	PROJECT ID
			<input type="radio"/> Field Filtered <input type="radio"/> Lab to Filter	A=amber glass G=glass P=plastic ST=sterile V= vial S=summa can T=teflon bag O=Other	<input type="checkbox"/> Ice H=HCL M= Methanol N= Nitric Acid S= Sulfuric Acid B= Sodium bisulfate X= Na hydroxide T= Na thiosulfate O= Other	M= Matrix Code GW= ground water WW= waste water DW= drinking water A= air S= soil/solid SL= sludge O= other	HW10105

ANALYSIS REQUESTED
TL VOCs 8260B
PATHS 8270C
TCL PCBs 3550B/8082
TPHC PRO/GRO 8015B
RCA character sw 8015B
TL RCA metals sw 8015B

Is your project MCP or RCP?
 MCP Form Required
 RCP Form Required
 MA State DW Form Required PWSID # NELAC & AIHA-LAP, LLC
 Accredited
 WBE/DBE Certified

URNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.
 PLEASE BE CAREFUL, NOT TO CONTAMINATE THIS DOCUMENT

39 Spruce St.
 East Longmeadow, MA. 01028
 P: 413-525-2332
 F: 413-525-6405
 www.contestlabs.com



Sample Receipt Checklist

CLIENT NAME: Liro Engineers, Inc. RECEIVED BY: VP DATE: 10/28/15

- 1) Was the chain(s) of custody relinquished and signed? Yes No No CoC Included
- 2) Does the chain agree with the samples? Yes No
If not, explain:
- 3) Are all the samples in good condition? Yes No
If not, explain:

4) How were the samples received:
 On Ice Direct from Sampling Ambient In Cooler(s)

Were the samples received in Temperature Compliance of (2-6°C)? Yes No N/A

Temperature °C by Temp blank _____ Temperature °C by Temp gun 3.1

5) Are there Dissolved samples for the lab to filter? Yes No
 Who was notified _____ Date _____ Time _____

6) Are there any RUSH or SHORT HOLDING TIME samples? Yes No
 Who was notified Dave Date 10/28/15 Time 1715

7) Location where samples are stored:
 Permission to subcontract samples? Yes No
 (Walk-in clients only) if not already approved
 Client Signature: _____

8) Do all samples have the proper Acid pH: Yes No N/A

9) Do all samples have the proper Base pH: Yes No N/A

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	1
500 mL Amber		4 oz amber/clear jar	1
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Plastic Bag / Ziploc	
500 mL Plastic		SOC Kit	
250 mL plastic		Non-ConTest Container	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other: 16 oz amber	1

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol _____
 # Bisulfate _____ # DI Water _____
 # Thiosulfate _____ Unpreserved _____
 Time and Date Frozen: _____

Login Sample Receipt Checklist
 (Rejection Criteria Listing - Using Sample Acceptance Policy)
 Any False statement will be brought to the attention of Client

Question	Answer (True/False)	Comment
	T/F/NA	
1) The cooler's custody seal, if present, is intact.	NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	F	pH
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.	T	

Doc #277 Rev. 4 August 2013

Who notified of False statements?
 Log-In Technician Initials: VP

Date/Time:
 Date/Time: 10/28/15 1715

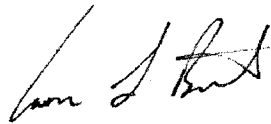
November 13, 2015

Steve Frank
LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202

Project Location: Atlantic Ave/ Georgia St. Brooklyn
Client Job Number:
Project Number: 15-008-0265
Laboratory Work Order Number: 15K0292

Enclosed are results of analyses for samples received by the laboratory on November 6, 2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Aaron L. Benoit
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Steve Frank

REPORT DATE: 11/13/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 15-008-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15K0292

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave/ Georgia St. Brooklyn

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-02-14.5-15.0	15K0292-01	Soil		SM 2540G	
				SW-846 8260C	
SB-02 comp	15K0292-02	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
SB-04-11.0-11.5	15K0292-03	Soil		SM 2540G	
				SW-846 8260C	
SB-04 comp	15K0292-04	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
SB-05-14.5-15.0	15K0292-05	Soil		SM 2540G	
				SW-846 8260C	



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ANALYTICAL SUMMARY

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PROJECT LOCATION: Atlantic Ave/ Georgia St. Brooklyn

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-05 comp	15K0292-06	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-07-14.5-15.0	15K0292-07
SW-846 8260C					
SB-07 comp	15K0292-08	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-09-14.5-15.0	15K0292-09
SW-846 8260C					
SB-09 comp	15K0292-10	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	



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ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15K0292

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave/ Georgia St. Brooklyn

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-12-14.5-15.0	15K0292-11	Soil		SM 2540G SW-846 8260C	
SB-12 comp	15K0292-12	Soil		SM 2540G SW-846 1030 SW-846 1311 SW-846 6010C SW-846 7470A SW-846 8015C SW-846 8082A SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C SW-846 9095B	
SB-14-14.5-15.0	15K0292-13	Soil		SM 2540G SW-846 8260C	
SB-14 comp	15K0292-14	Soil		SM 2540G SW-846 1030 SW-846 1311 SW-846 6010C SW-846 7470A SW-846 8015C SW-846 8082A SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C SW-846 9095B	
SB-15-14.5-15.0	15K0292-15	Soil		SM 2540G SW-846 8260C	



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REPORT DATE: 11/13/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 15-008-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15K0292

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave/ Georgia St. Brooklyn

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-15 comp	15K0292-16	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-17-14.5-15.0	15K0292-17
SW-846 8260C					
SB-17 comp	15K0292-18	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-19-14.5-15.0	15K0292-19
SW-846 8260C					
SB-19 comp	15K0292-20	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	



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REPORT DATE: 11/13/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 15-008-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15K0292

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave/ Georgia St. Brooklyn

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-26-14.5-15.0	15K0292-21	Soil		SM 2540G SW-846 8260C	
SB-26 comp	15K0292-22	Soil		SM 2540G SW-846 1030 SW-846 1311 SW-846 6010C SW-846 7470A SW-846 8015C SW-846 8082A SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C SW-846 9095B	
SB-28-14.5-15.0	15K0292-23	Soil		SM 2540G SW-846 8260C	
SB-28 comp	15K0292-24	Soil		SM 2540G SW-846 1030 SW-846 1311 SW-846 6010C SW-846 7470A SW-846 8015C SW-846 8082A SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C SW-846 9095B	
SB-30-14.5-15.0	15K0292-25	Soil		SM 2540G SW-846 8260C	



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REPORT DATE: 11/13/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 15-008-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15K0292

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave/ Georgia St. Brooklyn

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-30 comp	15K0292-26	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332
SW-846 8015C

Qualifications:**PR-03**

Sample preserved in the laboratory, not in the field as required by the method.

Analyte & Samples(s) Qualified:

15K0292-02[SB-02 comp], 15K0292-04[SB-04 comp], 15K0292-06[SB-05 comp], 15K0292-08[SB-07 comp], 15K0292-10[SB-09 comp], 15K0292-12[SB-12 comp],
15K0292-14[SB-14 comp], 15K0292-16[SB-15 comp], 15K0292-18[SB-17 comp], 15K0292-20[SB-19 comp], 15K0292-22[SB-26 comp], 15K0292-24[SB-28 comp],
15K0292-26[SB-30 comp]

SW-846 8260C

Qualifications:**B-01**

Methylene chloride is a common laboratory contaminant.

Analyte & Samples(s) Qualified:**Methylene Chloride**

15K0292-07[SB-07-14.5-15.0]

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Chloromethane**

15K0292-23[SB-28-14.5-15.0], 15K0292-25[SB-30-14.5-15.0], B135096-BLK1, B135096-BS1, B135096-BSD1

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**tetrachloroethylene**

B135062-BSD1

trans-1,3-Dichloropropene

B135062-BSD1

PR-03

Sample preserved in the laboratory, not in the field as required by the method.

Analyte & Samples(s) Qualified:

15K0292-01[SB-02-14.5-15.0], 15K0292-03[SB-04-11.0-11.5], 15K0292-05[SB-05-14.5-15.0], 15K0292-07[SB-07-14.5-15.0], 15K0292-09[SB-09-14.5-15.0],
15K0292-11[SB-12-14.5-15.0], 15K0292-13[SB-14-14.5-15.0], 15K0292-15[SB-15-14.5-15.0], 15K0292-17[SB-17-14.5-15.0], 15K0292-19[SB-19-14.5-15.0],
15K0292-21[SB-26-14.5-15.0], 15K0292-23[SB-28-14.5-15.0], 15K0292-25[SB-30-14.5-15.0]

PR-15

According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846 5035-L/5035A-L.

Analyte & Samples(s) Qualified:

15K0292-01[SB-02-14.5-15.0], 15K0292-03[SB-04-11.0-11.5], 15K0292-05[SB-05-14.5-15.0], 15K0292-07[SB-07-14.5-15.0], 15K0292-09[SB-09-14.5-15.0],
15K0292-11[SB-12-14.5-15.0], 15K0292-13[SB-14-14.5-15.0], 15K0292-15[SB-15-14.5-15.0], 15K0292-17[SB-17-14.5-15.0], 15K0292-19[SB-19-14.5-15.0],
15K0292-21[SB-26-14.5-15.0], 15K0292-23[SB-28-14.5-15.0], 15K0292-25[SB-30-14.5-15.0]

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:**Bromomethane**

15K0292-01[SB-02-14.5-15.0], 15K0292-03[SB-04-11.0-11.5], 15K0292-05[SB-05-14.5-15.0], 15K0292-07[SB-07-14.5-15.0], 15K0292-09[SB-09-14.5-15.0], 15K0292-11[SB-12-14.5-15.0], 15K0292-13[SB-14-14.5-15.0], 15K0292-15[SB-15-14.5-15.0], 15K0292-17[SB-17-14.5-15.0], 15K0292-19[SB-19-14.5-15.0], 15K0292-21[SB-26-14.5-15.0], B135062-BLK1, B135062-BS1, B135062-BSD1

Dichlorodifluoromethane (Freon 1)

15K0292-01[SB-02-14.5-15.0], 15K0292-03[SB-04-11.0-11.5], 15K0292-05[SB-05-14.5-15.0], 15K0292-07[SB-07-14.5-15.0], 15K0292-09[SB-09-14.5-15.0], 15K0292-11[SB-12-14.5-15.0], 15K0292-13[SB-14-14.5-15.0], 15K0292-15[SB-15-14.5-15.0], 15K0292-17[SB-17-14.5-15.0], 15K0292-19[SB-19-14.5-15.0], 15K0292-21[SB-26-14.5-15.0], B135062-BLK1, B135062-BS1, B135062-BSD1

Vinyl Chloride

15K0292-01[SB-02-14.5-15.0], 15K0292-03[SB-04-11.0-11.5], 15K0292-05[SB-05-14.5-15.0], 15K0292-07[SB-07-14.5-15.0], 15K0292-09[SB-09-14.5-15.0], 15K0292-11[SB-12-14.5-15.0], 15K0292-13[SB-14-14.5-15.0], 15K0292-15[SB-15-14.5-15.0], 15K0292-17[SB-17-14.5-15.0], 15K0292-19[SB-19-14.5-15.0], 15K0292-21[SB-26-14.5-15.0], B135062-BLK1, B135062-BS1, B135062-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**1,2,4-Trichlorobenzene**

15K0292-01[SB-02-14.5-15.0], 15K0292-03[SB-04-11.0-11.5], 15K0292-05[SB-05-14.5-15.0], 15K0292-07[SB-07-14.5-15.0], 15K0292-09[SB-09-14.5-15.0], 15K0292-11[SB-12-14.5-15.0], 15K0292-13[SB-14-14.5-15.0], 15K0292-15[SB-15-14.5-15.0], 15K0292-17[SB-17-14.5-15.0], 15K0292-19[SB-19-14.5-15.0], 15K0292-21[SB-26-14.5-15.0], 15K0292-23[SB-28-14.5-15.0], 15K0292-25[SB-30-14.5-15.0], B135062-BLK1, B135062-BS1, B135062-BSD1, B135096-BLK1, B135096-BS1, B135096-BSD1

Naphthalene

15K0292-01[SB-02-14.5-15.0], 15K0292-03[SB-04-11.0-11.5], 15K0292-05[SB-05-14.5-15.0], 15K0292-07[SB-07-14.5-15.0], 15K0292-09[SB-09-14.5-15.0], 15K0292-11[SB-12-14.5-15.0], 15K0292-13[SB-14-14.5-15.0], 15K0292-15[SB-15-14.5-15.0], 15K0292-17[SB-17-14.5-15.0], 15K0292-19[SB-19-14.5-15.0], 15K0292-21[SB-26-14.5-15.0], 15K0292-23[SB-28-14.5-15.0], 15K0292-25[SB-30-14.5-15.0], B135062-BLK1, B135062-BS1, B135062-BSD1, B135096-BLK1, B135096-BS1, B135096-BSD1

Tetrahydrofuran

15K0292-23[SB-28-14.5-15.0], 15K0292-25[SB-30-14.5-15.0], B135096-BLK1, B135096-BS1, B135096-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**Bromomethane**

15K0292-01[SB-02-14.5-15.0], 15K0292-03[SB-04-11.0-11.5], 15K0292-05[SB-05-14.5-15.0], 15K0292-07[SB-07-14.5-15.0], 15K0292-09[SB-09-14.5-15.0], 15K0292-11[SB-12-14.5-15.0], 15K0292-13[SB-14-14.5-15.0], 15K0292-15[SB-15-14.5-15.0], 15K0292-17[SB-17-14.5-15.0], 15K0292-19[SB-19-14.5-15.0], 15K0292-21[SB-26-14.5-15.0], B135062-BLK1, B135062-BS1, B135062-BSD1, B135096-BS1, B135096-BSD1

Carbon Disulfide

15K0292-01[SB-02-14.5-15.0], 15K0292-03[SB-04-11.0-11.5], 15K0292-05[SB-05-14.5-15.0], 15K0292-07[SB-07-14.5-15.0], 15K0292-09[SB-09-14.5-15.0], 15K0292-11[SB-12-14.5-15.0], 15K0292-13[SB-14-14.5-15.0], 15K0292-15[SB-15-14.5-15.0], 15K0292-17[SB-17-14.5-15.0], 15K0292-19[SB-19-14.5-15.0], 15K0292-21[SB-26-14.5-15.0], B135062-BLK1, B135062-BS1, B135062-BSD1, B135096-BS1, B135096-BSD1

Dichlorodifluoromethane (Freon 1)

B135062-BS1, B135062-BSD1, B135096-BS1, B135096-BSD1

Hexachlorobutadiene

15K0292-01[SB-02-14.5-15.0], 15K0292-03[SB-04-11.0-11.5], 15K0292-05[SB-05-14.5-15.0], 15K0292-07[SB-07-14.5-15.0], 15K0292-09[SB-09-14.5-15.0], 15K0292-11[SB-12-14.5-15.0], 15K0292-13[SB-14-14.5-15.0], 15K0292-15[SB-15-14.5-15.0], 15K0292-17[SB-17-14.5-15.0], 15K0292-19[SB-19-14.5-15.0], 15K0292-21[SB-26-14.5-15.0], B135062-BLK1, B135062-BS1, B135062-BSD1

Z-01

Acetone is a common laboratory contaminant.

Analyte & Samples(s) Qualified:**Acetone**

15K0292-23[SB-28-14.5-15.0]

SW-846 8270D**Qualifications:****S-07**

One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.

Analyte & Samples(s) Qualified:**p-Terphenyl-d14**

15K0292-18[SB-17 comp], 15K0292-26[SB-30 comp]

SW-846 9045C**HAZ - 204**

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:

pH

15K0292-02[SB-02 comp], 15K0292-04[SB-04 comp], 15K0292-06[SB-05 comp], 15K0292-08[SB-07 comp], 15K0292-10[SB-09 comp], 15K0292-12[SB-12 comp], 15K0292-14[SB-14 comp], 15K0292-16[SB-15 comp], 15K0292-18[SB-17 comp], 15K0292-20[SB-19 comp]

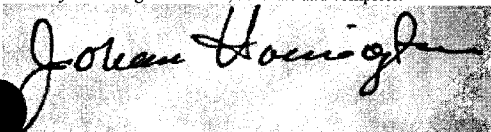
SW-846 8015C

Gasoline Range Organics (2-Methylpentane through 1,2,4-Trimethylbenzene) is quantitated against a calibration made with an unleaded gasoline composite standard.

Diesel Range Organics (C10-C28) is quantitated against a calibration made with a #2 fuel oil standard.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Johanna K. Harrington
Manager, Laboratory Reporting

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-02-14.5-15.0

Sampled: 11/4/2015 10:10

Sample ID: 15K0292-01

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Acrylonitrile	ND	0.0065	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Benzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Bromobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Bromochloromethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Bromodichloromethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Bromoform	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Bromomethane	ND	0.011	mg/Kg dry	1	R-05, V-20	SW-846 8260C	11/10/15	11/10/15 8:52	MFF
2-Butanone (MEK)	ND	0.043	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
tert-Butyl Alcohol (TBA)	ND	0.043	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
n-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
sec-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
tert-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Carbon Disulfide	ND	0.0065	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Carbon Tetrachloride	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Chlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Chlorodibromomethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Chloroethane	ND	0.022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Chloroform	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Chloromethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
2-Chlorotoluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
4-Chlorotoluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Dibromomethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,2-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,3-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,4-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
trans-1,4-Dichloro-2-butene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.022	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,1-Dichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,2-Dichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,1-Dichloroethylene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
cis-1,2-Dichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
trans-1,2-Dichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,2-Dichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,3-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
2,2-Dichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,1-Dichloropropene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
cis-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
trans-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Diethyl Ether	ND	0.022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF

HAZ - 206

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-02-14.5-15.0

Sampled: 11/4/2015 10:10

Sample ID: 15K0292-01

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,4-Dioxane	ND	0.11	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Ethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Hexachlorobutadiene	ND	0.0022	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 8:52	MFF
2-Hexanone (MBK)	ND	0.022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Isopropylbenzene (Cumene)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Methylene Chloride	ND	0.022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Naphthalene	ND	0.0043	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 8:52	MFF
n-Propylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Styrene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,1,1,2-Tetrachloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Tetrachloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Tetrahydrofuran	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Toluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,2,3-Trichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,2,4-Trichlorobenzene	ND	0.0022	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,3,5-Trichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,1,1-Trichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,1,2-Trichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Trichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,2,3-Trichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,2,4-Trimethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
1,3,5-Trimethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
Vinyl Chloride	ND	0.011	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 8:52	MFF
m+p Xylene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF
o-Xylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 8:52	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	114	70-130	11/10/15 8:52
Toluene-d8	99.3	70-130	11/10/15 8:52
4-Bromofluorobenzene	87.1	70-130	11/10/15 8:52



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-02-14.5-15.0

Sampled: 11/4/2015 10:10

Sample ID: 15K0292-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.4		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-02 comp

Sampled: 11/4/2015 10:10

Sample ID: 15K0292-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:58	CMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		87.4	30-130					11/11/15 23:58	
2-Fluorobiphenyl		98.6	30-130					11/11/15 23:58	
p-Terphenyl-d14		103	30-130					11/11/15 23:58	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-02 comp

Sampled: 11/4/2015 10:10

Sample ID: 15K0292-02

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:05	KAL
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:05	KAL
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:05	KAL
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:05	KAL
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:05	KAL
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:05	KAL
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:05	KAL
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:05	KAL
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:05	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	78.7	30-150	
Decachlorobiphenyl [2]	83.5	30-150	
Tetrachloro-m-xylene [1]	88.1	30-150	
Tetrachloro-m-xylene [2]	92.0	30-150	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-02 comp

Sampled: 11/4/2015 10:10

Sample ID: 15K0292-02

Sample Matrix: Soil

Sample Flags: PR-03

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg dry	1		SW-846 8015C	11/11/15	11/11/15 14:48	EEH
Diesel Range Organics	180	43	mg/Kg dry	5		SW-846 8015C	11/9/15	11/12/15 12:08	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	90.1		70-130					11/11/15 14:48	
o-Terphenyl	70.0		40-140					11/12/15 12:08	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-02 comp

Sampled: 11/4/2015 10:10

Sample ID: 15K0292-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/10/15	11/10/15 13:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/9/15	11/9/15 21:20	DJM
pH @22.4°C	6.8		pH Units	1	H-03	SW-846 9045C	11/7/15	11/7/15 13:45	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/10/15	11/11/15 14:52	AMM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/11/15	11/11/15 14:30	AG
% Solids	95.8		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-02 comp

Sampled: 11/4/2015 10:10

Sample ID: 15K0292-02

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:19	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/10/15	11/11/15 11:25	SCB
Barium	0.39	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:19	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:19	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:19	AME
Lead	0.011	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:19	AME
Selenium	0.052	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:19	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:19	AME

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-04-11.0-11.5

Sampled: 11/4/2015 11:45

Sample ID: 15K0292-03

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Acrylonitrile	ND	0.0057	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Bromomethane	ND	0.0094	mg/Kg dry	1	R-05, V-20	SW-846 8260C	11/10/15	11/10/15 9:24	MFF
2-Butanone (MEK)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
tert-Butyl Alcohol (TBA)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Carbon Disulfide	ND	0.0057	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Chlorodibromomethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Chloroethane	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Chloroform	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Chloromethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,2-Dibromoethane (EDB)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
trans-1,4-Dichloro-2-butene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.019	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,1-Dichloroethylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,3-Dichloropropane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
cis-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
trans-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Diethyl Ether	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-04-11.0-11.5

Sampled: 11/4/2015 11:45

Sample ID: 15K0292-03

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,4-Dioxane	ND	0.094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 9:24	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Methylene Chloride	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Naphthalene	ND	0.0038	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 9:24	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,1,2,2-Tetrachloroethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Tetrahydrofuran	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,3,5-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Vinyl Chloride	ND	0.0094	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 9:24	MFF
m+p Xylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:24	MFF
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
1,2-Dichloroethane-d4		108	70-130					11/10/15 9:24	
Toluene-d8		102	70-130					11/10/15 9:24	
4-Bromofluorobenzene		97.4	70-130					11/10/15 9:24	

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-04-11.0-11.5

Sampled: 11/4/2015 11:45

Sample ID: 15K0292-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
% Solids	96.5		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-04 comp

Sampled: 11/4/2015 11:45

Sample ID: 15K0292-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
rene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 22:42	CMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		87.9	30-130					11/11/15 22:42	
2-Fluorobiphenyl		98.6	30-130					11/11/15 22:42	
p-Terphenyl-d14		102	30-130					11/11/15 22:42	

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-04 comp

Sampled: 11/4/2015 11:45

Sample ID: 15K0292-04

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:18	KAL
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:18	KAL
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:18	KAL
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:18	KAL
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:18	KAL
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:18	KAL
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:18	KAL
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:18	KAL
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:18	KAL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		70.9	30-150					11/11/15 21:18	
Decachlorobiphenyl [2]		76.6	30-150					11/11/15 21:18	
Tetrachloro-m-xylene [1]		74.2	30-150					11/11/15 21:18	
Tetrachloro-m-xylene [2]		80.1	30-150					11/11/15 21:18	

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-04 comp

Sampled: 11/4/2015 11:45

Sample ID: 15K0292-04

Sample Matrix: Soil

Sample Flags: PR-03

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/11/15	11/11/15 15:24	EEH
Diesel Range Organics	9.5	8.7	mg/Kg dry	1		SW-846 8015C	11/9/15	11/12/15 12:08	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	90.6		70-130				11/11/15 15:24		
o-Terphenyl	81.1		40-140				11/12/15 12:08		



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-04 comp

Sampled: 11/4/2015 11:45

Sample ID: 15K0292-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/10/15	11/10/15 13:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/9/15	11/9/15 21:20	DJM
pH @21.8°C	7.4		pH Units	1	H-03	SW-846 9045C	11/7/15	11/7/15 13:45	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/10/15	11/11/15 14:52	AMM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/11/15	11/11/15 14:30	AG
% Solids	95.9		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-04 comp

Sampled: 11/4/2015 11:45

Sample ID: 15K0292-04

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:23	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/10/15	11/11/15 11:26	SCB
Barium	0.30	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:23	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:23	AME
Chromium	0.015	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:23	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:23	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:23	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:23	AME

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-05-14.5-15.0

Sampled: 11/4/2015 14:15

Sample ID: 15K0292-05

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Acrylonitrile	ND	0.0054	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Bromomethane	ND	0.0090	mg/Kg dry	1	R-05, V-20	SW-846 8260C	11/10/15	11/10/15 9:56	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
tert-Butyl Alcohol (TBA)	ND	0.036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Carbon Disulfide	ND	0.0054	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Chlorodibromomethane	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Chloroethane	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Chloromethane	ND	0.0090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,2-Dibromoethane (EDB)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
trans-1,4-Dichloro-2-butene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.018	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,3-Dichloropropane	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
cis-1,3-Dichloropropene	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
trans-1,3-Dichloropropene	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Diethyl Ether	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-05-14.5-15.0

Sampled: 11/4/2015 14:15

Sample ID: 15K0292-05

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,4-Dioxane	ND	0.090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 9:56	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Methylene Chloride	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Naphthalene	ND	0.0036	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 9:56	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,1,2,2-Tetrachloroethane	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Tetrahydrofuran	ND	0.0090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,3,5-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Vinyl Chloride	ND	0.0090	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 9:56	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 9:56	MFF
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
1,2-Dichloroethane-d4		109	70-130				11/10/15	9:56	
Toluene-d8		103	70-130				11/10/15	9:56	
4-Bromofluorobenzene		98.4	70-130				11/10/15	9:56	



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-05-14.5-15.0

Sampled: 11/4/2015 14:15

Sample ID: 15K0292-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.1		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-05 comp

Sampled: 11/4/2015 14:15

Sample ID: 15K0292-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
rene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:08	CMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		85.9	30-130					11/11/15 23:08	
2-Fluorobiphenyl		100	30-130					11/11/15 23:08	
p-Terphenyl-d14		109	30-130					11/11/15 23:08	



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-05 comp

Sampled: 11/4/2015 14:15

Sample ID: 15K0292-06

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:31	KAL
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:31	KAL
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:31	KAL
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:31	KAL
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:31	KAL
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:31	KAL
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:31	KAL
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:31	KAL
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:31	KAL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		77.0	30-150					11/11/15 21:31	
Decachlorobiphenyl [2]		82.6	30-150					11/11/15 21:31	
Tetrachloro-m-xylene [1]		83.5	30-150					11/11/15 21:31	
Tetrachloro-m-xylene [2]		89.0	30-150					11/11/15 21:31	

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-05 comp

Sampled: 11/4/2015 14:15

Sample ID: 15K0292-06

Sample Matrix: Soil

Sample Flags: PR-03

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/11/15	11/11/15 16:00	EEH
Diesel Range Organics	ND	8.8	mg/Kg dry	1		SW-846 8015C	11/9/15	11/12/15 12:26	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	89.4		70-130				11/11/15 16:00		
o-Terphenyl	71.8		40-140				11/12/15 12:26		



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-05 comp

Sampled: 11/4/2015 14:15

Sample ID: 15K0292-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/10/15	11/10/15 13:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/9/15	11/9/15 21:20	DJM
pH @21.5°C	8.0		pH Units	1	H-03	SW-846 9045C	11/7/15	11/7/15 13:45	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/10/15	11/11/15 14:52	AMM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	11/11/15	11/11/15 14:30	AG
% Solids	94.6		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-05 comp

Sampled: 11/4/2015 14:15

Sample ID: 15K0292-06

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:28	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/10/15	11/11/15 11:28	SCB
Barium	0.44	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:28	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:28	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:28	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:28	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:28	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:28	AME

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-07-14.5-15.0

Sampled: 11/4/2015 13:30

Sample ID: 15K0292-07

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Acrylonitrile	ND	0.0053	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Bromomethane	ND	0.0089	mg/Kg dry	1	R-05, V-20	SW-846 8260C	11/10/15	11/10/15 10:29	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
tert-Butyl Alcohol (TBA)	ND	0.036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Carbon Disulfide	ND	0.0053	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Chlorodibromomethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Chloroethane	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Chloromethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,2-Dibromoethane (EDB)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
trans-1,4-Dichloro-2-butene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.018	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,3-Dichloropropane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
cis-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
trans-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Diethyl Ether	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-07-14.5-15.0

Sampled: 11/4/2015 13:30

Sample ID: 15K0292-07

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,4-Dioxane	ND	0.089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 10:29	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Methylene Chloride	0.026	0.018	mg/Kg dry	1	B-01	SW-846 8260C	11/10/15	11/10/15 10:29	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Naphthalene	ND	0.0036	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 10:29	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,1,2,2-Tetrachloroethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Tetrahydrofuran	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,3,5-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
Vinyl Chloride	ND	0.0089	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 10:29	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 10:29	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	108	70-130	11/10/15 10:29
Toluene-d8	101	70-130	11/10/15 10:29
4-Bromofluorobenzene	101	70-130	11/10/15 10:29



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-07-14.5-15.0

Sampled: 11/4/2015 13:30

Sample ID: 15K0292-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.1		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-07 comp

Sampled: 11/4/2015 13:30

Sample ID: 15K0292-08

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 23:33	CMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		81.2	30-130					11/11/15 23:33	
2-Fluorobiphenyl		94.8	30-130					11/11/15 23:33	
p-Terphenyl-d14		101	30-130					11/11/15 23:33	



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-07 comp

Sampled: 11/4/2015 13:30

Sample ID: 15K0292-08

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 11:14	KAL
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 11:14	KAL
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 11:14	KAL
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 11:14	KAL
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 11:14	KAL
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 11:14	KAL
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 11:14	KAL
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 11:14	KAL
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 11:14	KAL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	95.4		30-150						11/12/15 11:14
Decachlorobiphenyl [2]	103		30-150						11/12/15 11:14
Tetrachloro-m-xylene [1]	90.4		30-150						11/12/15 11:14
Tetrachloro-m-xylene [2]	101		30-150						11/12/15 11:14

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-07 comp

Sampled: 11/4/2015 13:30

Sample ID: 15K0292-08

Sample Matrix: Soil

Sample Flags: PR-03

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/11/15	11/11/15 16:36	EEH
Diesel Range Organics	ND	8.7	mg/Kg dry	1		SW-846 8015C	11/9/15	11/12/15 12:43	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1-Chloro-3-fluorobenzene	90.6	70-130	
o-Terphenyl	73.9	40-140	

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-07 comp

Sampled: 11/4/2015 13:30

Sample ID: 15K0292-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/10/15	11/10/15 13:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/9/15	11/9/15 21:20	DJM
pH @21.4°C	7.6		pH Units	1	H-03	SW-846 9045C	11/7/15	11/7/15 13:45	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/10/15	11/11/15 14:52	AMM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/11/15	11/11/15 14:30	AG
% Solids	95.9		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-07 comp

Sampled: 11/4/2015 13:30

Sample ID: 15K0292-08

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:33	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/10/15	11/11/15 11:29	SCB
Barium	0.46	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:33	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:33	AME
Chromium	0.074	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:33	AME
Lead	0.019	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:33	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:33	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:33	AME

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-09-14.5-15.0

Sampled: 11/5/2015 09:30

Sample ID: 15K0292-09

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Acrylonitrile	ND	0.0053	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Bromomethane	ND	0.0089	mg/Kg dry	1	R-05, V-20	SW-846 8260C	11/10/15	11/10/15 11:01	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
tert-Butyl Alcohol (TBA)	ND	0.036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Carbon Disulfide	ND	0.0053	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Chlorodibromomethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Chloroethane	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Chloromethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,2-Dibromoethane (EDB)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
trans-1,4-Dichloro-2-butene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.018	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,3-Dichloropropane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
cis-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
trans-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Diethyl Ether	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-09-14.5-15.0

Sampled: 11/5/2015 09:30

Sample ID: 15K0292-09

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,4-Dioxane	ND	0.089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 11:01	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Methylene Chloride	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Naphthalene	ND	0.0036	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 11:01	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,1,2,2-Tetrachloroethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Tetrahydrofuran	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,3,5-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
Vinyl Chloride	ND	0.0089	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 11:01	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:01	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	108	70-130	11/10/15 11:01
Toluene-d8	101	70-130	11/10/15 11:01
4-Bromofluorobenzene	97.7	70-130	11/10/15 11:01



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-09-14.5-15.0

Sampled: 11/5/2015 09:30

Sample ID: 15K0292-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.2		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-09 comp

Sampled: 11/5/2015 09:30

Sample ID: 15K0292-10

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:28	CMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Nitrobenzene-d5	92.1	30-130	
2-Fluorobiphenyl	102	30-130	
p-Terphenyl-d14	124	30-130	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-09 comp

Sampled: 11/5/2015 09:30

Sample ID: 15K0292-10

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:57	KAL
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:57	KAL
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:57	KAL
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:57	KAL
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:57	KAL
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:57	KAL
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:57	KAL
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:57	KAL
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 21:57	KAL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		83.8	30-150					11/11/15 21:57	
Decachlorobiphenyl [2]		89.7	30-150					11/11/15 21:57	
Tetrachloro-m-xylene [1]		87.0	30-150					11/11/15 21:57	
Tetrachloro-m-xylene [2]		92.4	30-150					11/11/15 21:57	

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-09 comp

Sampled: 11/5/2015 09:30

Sample ID: 15K0292-10

Sample Matrix: Soil

Sample Flags: PR-03

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/11/15	11/11/15 17:11	EEH
Diesel Range Organics	ND	8.8	mg/Kg dry	1		SW-846 8015C	11/9/15	11/12/15 13:01	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	89.8		70-130					11/11/15 17:11	
o-Terphenyl	79.1		40-140					11/12/15 13:01	



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-09 comp

Sampled: 11/5/2015 09:30

Sample ID: 15K0292-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/10/15	11/10/15 13:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/9/15	11/9/15 21:20	DJM
pH @23.9°C	6.9		pH Units	1	H-03	SW-846 9045C	11/7/15	11/7/15 13:45	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/10/15	11/11/15 14:52	AMM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/11/15	11/11/15 14:30	AG
% Solids	93.9		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-09 comp

Sampled: 11/5/2015 09:30

Sample ID: 15K0292-10

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:38	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/10/15	11/11/15 11:31	SCB
Barium	0.31	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:38	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:38	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:38	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:38	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:38	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:38	AME

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-12-14.5-15.0

Sampled: 11/5/2015 10:30

Sample ID: 15K0292-11

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Sample Flags: PR-03, PR-15

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Acrylonitrile	ND	0.0056	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Bromomethane	ND	0.0094	mg/Kg dry	1	R-05, V-20	SW-846 8260C	11/10/15	11/10/15 11:33	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
tert-Butyl Alcohol (TBA)	ND	0.037	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Carbon Disulfide	ND	0.0056	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Chlorodibromomethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Chloroethane	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Chloromethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,2-Dibromoethane (EDB)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
trans-1,4-Dichloro-2-butene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.019	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,3-Dichloropropane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
cis-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
trans-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Diethyl Ether	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-12-14.5-15.0

Sampled: 11/5/2015 10:30

Sample ID: 15K0292-11

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,4-Dioxane	ND	0.094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 11:33	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Methylene Chloride	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 11:33	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,1,2,2-Tetrachloroethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Tetrahydrofuran	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,3,5-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
Vinyl Chloride	ND	0.0094	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 11:33	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 11:33	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	110	70-130	11/10/15 11:33
Toluene-d8	102	70-130	11/10/15 11:33
4-Bromofluorobenzene	97.9	70-130	11/10/15 11:33



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-12-14.5-15.0

Sampled: 11/5/2015 10:30

Sample ID: 15K0292-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.1		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-12 comp

Sampled: 11/5/2015 10:30

Sample ID: 15K0292-12

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
rene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 17:55	CMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		78.1	30-130					11/11/15 17:55	
2-Fluorobiphenyl		89.1	30-130					11/11/15 17:55	
p-Terphenyl-d14		108	30-130					11/11/15 17:55	

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-12 comp

Sampled: 11/5/2015 10:30

Sample ID: 15K0292-12

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:10	KAL
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:10	KAL
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:10	KAL
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:10	KAL
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:10	KAL
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:10	KAL
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:10	KAL
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:10	KAL
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:10	KAL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		95.6	30-150					11/11/15 22:10	
Decachlorobiphenyl [2]		102	30-150					11/11/15 22:10	
Tetrachloro-m-xylene [1]		99.9	30-150					11/11/15 22:10	
Tetrachloro-m-xylene [2]		104	30-150					11/11/15 22:10	

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-12 comp

Sampled: 11/5/2015 10:30

Sample ID: 15K0292-12

Sample Matrix: Soil

Sample Flags: PR-03

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/11/15	11/11/15 17:47	EEH
Diesel Range Organics	ND	8.6	mg/Kg dry	1		SW-846 8015C	11/9/15	11/12/15 13:19	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	90.9		70-130				11/11/15 17:47		
o-Terphenyl	72.7		40-140				11/12/15 13:19		



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-12 comp

Sampled: 11/5/2015 10:30

Sample ID: 15K0292-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/10/15	11/10/15 13:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/9/15	11/9/15 21:20	DJM
pH @22.3°C	7.4		pH Units	1	H-03	SW-846 9045C	11/7/15	11/7/15 13:45	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/10/15	11/11/15 14:52	AMM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/11/15	11/11/15 14:30	AG
% Solids	95.8		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-12 comp

Sampled: 11/5/2015 10:30

Sample ID: 15K0292-12

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:42	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/10/15	11/11/15 11:32	SCB
Barium	0.38	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:42	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:42	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:42	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:42	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:42	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:42	AME

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-14-14.5-15.0

Sampled: 11/5/2015 11:30

Sample ID: 15K0292-13

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.099	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Acrylonitrile	ND	0.0059	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Bromomethane	ND	0.0099	mg/Kg dry	1	R-05, V-20	SW-846 8260C	11/10/15	11/10/15 12:06	MFF
2-Butanone (MEK)	ND	0.039	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
tert-Butyl Alcohol (TBA)	ND	0.039	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
n-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Carbon Disulfide	ND	0.0059	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Chlorodibromomethane	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Chloroethane	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Chloroform	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Chloromethane	ND	0.0099	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,2-Dibromoethane (EDB)	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
trans-1,4-Dichloro-2-butene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,1-Dichloroethylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,3-Dichloropropane	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
cis-1,3-Dichloropropene	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
trans-1,3-Dichloropropene	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Diethyl Ether	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-14-14.5-15.0

Sampled: 11/5/2015 11:30

Sample ID: 15K0292-13

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,4-Dioxane	ND	0.099	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 12:06	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Methylene Chloride	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Naphthalene	ND	0.0039	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 12:06	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,1,2,2-Tetrachloroethane	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Tetrahydrofuran	ND	0.0099	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Toluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0099	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0099	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
Vinyl Chloride	ND	0.0099	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 12:06	MFF
m+p Xylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:06	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	110	70-130	11/10/15 12:06
Toluene-d8	101	70-130	11/10/15 12:06
4-Bromofluorobenzene	97.6	70-130	11/10/15 12:06



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-14-14.5-15.0

Sampled: 11/5/2015 11:30

Sample ID: 15K0292-13

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.0		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-14 comp

Sampled: 11/5/2015 11:30

Sample ID: 15K0292-14

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:22	CMR
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Nitrobenzene-d5	93.3		30-130				11/11/15 18:22		
2-Fluorobiphenyl	99.6		30-130				11/11/15 18:22		
p-Terphenyl-d14	112		30-130				11/11/15 18:22		



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-14 comp

Sampled: 11/5/2015 11:30

Sample ID: 15K0292-14

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:23	KAL
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:23	KAL
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:23	KAL
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:23	KAL
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:23	KAL
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:23	KAL
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:23	KAL
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:23	KAL
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:23	KAL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		91.7	30-150					11/11/15 22:23	
Decachlorobiphenyl [2]		97.8	30-150					11/11/15 22:23	
Tetrachloro-m-xylene [1]		97.4	30-150					11/11/15 22:23	
Tetrachloro-m-xylene [2]		103	30-150					11/11/15 22:23	

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-14 comp

Sampled: 11/5/2015 11:30

Sample ID: 15K0292-14

Sample Matrix: Soil

Sample Flags: PR-03

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg dry	1		SW-846 8015C	11/11/15	11/11/15 18:23	EEH
Diesel Range Organics	ND	8.8	mg/Kg dry	1		SW-846 8015C	11/9/15	11/12/15 13:37	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	87.1		70-130				11/11/15 18:23		
o-Terphenyl	83.9		40-140				11/12/15 13:37		

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-14 comp

Sampled: 11/5/2015 11:30

Sample ID: 15K0292-14

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/10/15	11/10/15 13:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/9/15	11/9/15 21:20	DJM
pH @22.4°C	7.4		pH Units	1	H-03	SW-846 9045C	11/7/15	11/7/15 13:45	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/10/15	11/11/15 14:52	AMM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/11/15	11/11/15 14:30	AG
% Solids	94.8		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-14 comp

Sampled: 11/5/2015 11:30

Sample ID: 15K0292-14

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:47	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/10/15	11/11/15 11:33	SCB
Barium	0.29	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:47	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:47	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:47	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:47	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:47	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:47	AME

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-15-14.5-15.0

Sampled: 11/5/2015 13:15

Sample ID: 15K0292-15

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Acrylonitrile	ND	0.0067	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Benzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Bromobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Bromochloromethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Bromodichloromethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Bromoform	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Bromomethane	ND	0.011	mg/Kg dry	1	R-05, V-20	SW-846 8260C	11/10/15	11/10/15 12:38	MFF
2-Butanone (MEK)	ND	0.045	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
tert-Butyl Alcohol (TBA)	ND	0.045	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
n-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
sec-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
tert-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Carbon Disulfide	ND	0.0067	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Carbon Tetrachloride	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Chlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Chlorodibromomethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Chloroethane	ND	0.022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Chloroform	ND	0.0045	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Chloromethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
2-Chlorotoluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
4-Chlorotoluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Dibromomethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,2-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,3-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,4-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
trans-1,4-Dichloro-2-butene	ND	0.0045	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.022	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,1-Dichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,2-Dichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,1-Dichloroethylene	ND	0.0045	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
cis-1,2-Dichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
trans-1,2-Dichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,2-Dichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,3-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
2,2-Dichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,1-Dichloropropene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
cis-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
trans-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Diethyl Ether	ND	0.022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-15-14.5-15.0

Sampled: 11/5/2015 13:15

Sample ID: 15K0292-15

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,4-Dioxane	ND	0.11	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Ethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Hexachlorobutadiene	ND	0.0022	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 12:38	MFF
2-Hexanone (MBK)	ND	0.022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Isopropylbenzene (Cumene)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0045	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Methylene Chloride	ND	0.022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Naphthalene	ND	0.0045	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 12:38	MFF
n-Propylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Styrene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,1,1,2-Tetrachloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Tetrachloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Tetrahydrofuran	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Toluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,2,3-Trichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,2,4-Trichlorobenzene	ND	0.0022	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,3,5-Trichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,1,1-Trichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,1,2-Trichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Trichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,2,3-Trichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,2,4-Trimethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
1,3,5-Trimethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
Vinyl Chloride	ND	0.011	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 12:38	MFF
m+p Xylene	ND	0.0045	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF
o-Xylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 12:38	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	107	70-130	11/10/15 12:38
Toluene-d8	104	70-130	11/10/15 12:38
4-Bromofluorobenzene	104	70-130	11/10/15 12:38



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-15-14.5-15.0

Sampled: 11/5/2015 13:15

Sample ID: 15K0292-15

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.1		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

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Project Location: Atlantic Ave/ Georgia St. Brookly Sample Description: Work Order: 15K0292
 Date Received: 11/6/2015
 Field Sample #: SB-15 comp Sampled: 11/5/2015 13:15
 Sample ID: 15K0292-16
 Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 18:49	CMR
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
Nitrobenzene-d5	105		30-130					11/11/15 18:49	
2-Fluorobiphenyl	114		30-130					11/11/15 18:49	
p-Terphenyl-d14	129		30-130					11/11/15 18:49	

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-15 comp

Sampled: 11/5/2015 13:15

Sample ID: 15K0292-16

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:36	KAL
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:36	KAL
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:36	KAL
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:36	KAL
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:36	KAL
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:36	KAL
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:36	KAL
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:36	KAL
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 22:36	KAL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	79.6		30-150						11/11/15 22:36
Decachlorobiphenyl [2]	85.8		30-150						11/11/15 22:36
Tetrachloro-m-xylene [1]	78.1		30-150						11/11/15 22:36
Tetrachloro-m-xylene [2]	84.3		30-150						11/11/15 22:36

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-15 comp

Sampled: 11/5/2015 13:15

Sample ID: 15K0292-16

Sample Matrix: Soil

Sample Flags: PR-03

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg dry	1		SW-846 8015C	11/11/15	11/11/15 18:59	EEH
Diesel Range Organics	ND	8.7	mg/Kg dry	1		SW-846 8015C	11/9/15	11/12/15 14:48	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	91.6		70-130					11/11/15 18:59	
o-Terphenyl	74.7		40-140					11/12/15 14:48	



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-15 comp

Sampled: 11/5/2015 13:15

Sample ID: 15K0292-16

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/10/15	11/10/15 13:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/9/15	11/9/15 21:20	DJM
pH @21.8°C	7.7		pH Units	1	H-03	SW-846 9045C	11/7/15	11/7/15 13:45	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/10/15	11/11/15 14:52	AMM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	11/11/15	11/11/15 14:30	AG
% Solids	95.4		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL



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Subject Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-15 comp

Sampled: 11/5/2015 13:15

Sample ID: 15K0292-16

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:52	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/10/15	11/11/15 11:35	SCB
Barium	0.38	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:52	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:52	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:52	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:52	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:52	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:52	AME

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-17-14.5-15.0

Sampled: 11/5/2015 14:15

Sample ID: 15K0292-17

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Acrylonitrile	ND	0.0053	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Bromomethane	ND	0.0089	mg/Kg dry	1	R-05, V-20	SW-846 8260C	11/10/15	11/10/15 13:11	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
tert-Butyl Alcohol (TBA)	ND	0.036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Carbon Disulfide	ND	0.0053	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Chlorodibromomethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Chloroethane	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Chloromethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,2-Dibromoethane (EDB)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
trans-1,4-Dichloro-2-butene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.018	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,3-Dichloropropane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
cis-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
trans-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Diethyl Ether	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF

HAZ - 270

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-17-14.5-15.0

Sampled: 11/5/2015 14:15

Sample ID: 15K0292-17

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,4-Dioxane	ND	0.089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 13:11	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Methylene Chloride	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Naphthalene	ND	0.0036	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 13:11	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,1,2,2-Tetrachloroethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Tetrahydrofuran	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,3,5-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
Vinyl Chloride	ND	0.0089	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 13:11	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:11	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	106	70-130	11/10/15 13:11
Toluene-d8	99.0	70-130	11/10/15 13:11
4-Bromofluorobenzene	80.2	70-130	11/10/15 13:11



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-17-14.5-15.0

Sampled: 11/5/2015 14:15

Sample ID: 15K0292-17

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
% Solids	95.2		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-17 comp

Sampled: 11/5/2015 14:15

Sample ID: 15K0292-18

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
Benzo(a)anthracene	0.24	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
Benzo(b)fluoranthene	0.18	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
Chrysene	0.23	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
Fluoranthene	0.47	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
Phenanthrene	0.81	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
Pyrene	0.62	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 19:16	CMR
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
Nitrobenzene-d5	92.6	30-130						11/11/15 19:16	
2-Fluorobiphenyl	105	30-130						11/11/15 19:16	
p-Terphenyl-d14	131 *	30-130			S-07			11/11/15 19:16	



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-17 comp

Sampled: 11/5/2015 14:15

Sample ID: 15K0292-18

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:27	KAL
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:27	KAL
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:27	KAL
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:27	KAL
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:27	KAL
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:27	KAL
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:27	KAL
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:27	KAL
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:27	KAL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	92.1		30-150				11/11/15 23:27		
Decachlorobiphenyl [2]	97.9		30-150				11/11/15 23:27		
Tetrachloro-m-xylene [1]	94.6		30-150				11/11/15 23:27		
Tetrachloro-m-xylene [2]	99.0		30-150				11/11/15 23:27		

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-17 comp

Sampled: 11/5/2015 14:15

Sample ID: 15K0292-18

Sample Matrix: Soil

Sample Flags: PR-03

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/11/15	11/11/15 19:35	EEH
Diesel Range Organics	15	8.9	mg/Kg dry	1		SW-846 8015C	11/9/15	11/12/15 13:01	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	89.9		70-130				11/11/15 19:35		
o-Terphenyl	81.1		40-140				11/12/15 13:01		

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-17 comp

Sampled: 11/5/2015 14:15

Sample ID: 15K0292-18

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/10/15	11/10/15 13:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/9/15	11/9/15 21:20	DJM
pH @23.5°C	8.2		pH Units	1	H-03	SW-846 9045C	11/7/15	11/7/15 13:45	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/11/15	11/12/15 14:40	AMM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/11/15	11/12/15 17:15	AG
% Solids	93.6		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-17 comp

Sampled: 11/5/2015 14:15

Sample ID: 15K0292-18

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:57	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/10/15	11/11/15 11:36	SCB
Barium	0.40	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:57	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:57	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:57	AME
Lead	0.039	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:57	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:57	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 21:57	AME

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-19-14.5-15.0

Sampled: 11/5/2015 15:00

Sample ID: 15K0292-19

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Acrylonitrile	ND	0.0064	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Benzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Bromobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Bromochloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Bromodichloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Bromoform	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Bromomethane	ND	0.011	mg/Kg dry	1	R-05, V-20	SW-846 8260C	11/10/15	11/10/15 13:43	MFF
2-Butanone (MEK)	ND	0.043	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
tert-Butyl Alcohol (TBA)	ND	0.043	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
n-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
sec-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
tert-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Carbon Disulfide	ND	0.0064	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Carbon Tetrachloride	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Chlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Chlorodibromomethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Chloroethane	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Chloroform	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Chloromethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
2-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
4-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Dibromomethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,2-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,3-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,4-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
trans-1,4-Dichloro-2-butene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.021	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,1-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,2-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,1-Dichloroethylene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
cis-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
trans-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,3-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
2,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,1-Dichloropropene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
cis-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
trans-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Diethyl Ether	ND	0.021	mg/Kg dry	1	HAZ - 278	SW-846 8260C	11/10/15	11/10/15 13:43	MFF

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-19-14.5-15.0

Sampled: 11/5/2015 15:00

Sample ID: 15K0292-19

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,4-Dioxane	ND	0.11	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Ethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Hexachlorobutadiene	ND	0.0021	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 13:43	MFF
2-Hexanone (MBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Isopropylbenzene (Cumene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Methylene Chloride	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Naphthalene	ND	0.0043	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 13:43	MFF
n-Propylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Styrene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Tetrachloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Tetrahydrofuran	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Toluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,2,3-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,2,4-Trichlorobenzene	ND	0.0021	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,3,5-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,1,1-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,1,2-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Trichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,2,3-Trichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,2,4-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
1,3,5-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
Vinyl Chloride	ND	0.011	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 13:43	MFF
m+p Xylene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF
o-Xylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 13:43	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	110	70-130	11/10/15 13:43
Toluene-d8	124	70-130	11/10/15 13:43
4-Bromofluorobenzene	94.9	70-130	11/10/15 13:43



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-19-14.5-15.0

Sampled: 11/5/2015 15:00

Sample ID: 15K0292-19

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
% Solids	92.0		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-19 comp

Sampled: 11/5/2015 15:00

Sample ID: 15K0292-20

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 15:42	CMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		86.7	30-130					11/12/15 15:42	
2-Fluorobiphenyl		99.1	30-130					11/12/15 15:42	
p-Terphenyl-d14		104	30-130					11/12/15 15:42	

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-19 comp

Sampled: 11/5/2015 15:00

Sample ID: 15K0292-20

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:41	KAL
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:41	KAL
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:41	KAL
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:41	KAL
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:41	KAL
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:41	KAL
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:41	KAL
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:41	KAL
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:41	KAL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		95.5	30-150					11/11/15 23:41	
Decachlorobiphenyl [2]		102	30-150					11/11/15 23:41	
Tetrachloro-m-xylene [1]		94.5	30-150					11/11/15 23:41	
Tetrachloro-m-xylene [2]		99.8	30-150					11/11/15 23:41	

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Subject Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-19 comp

Sampled: 11/5/2015 15:00

Sample ID: 15K0292-20

Sample Matrix: Soil

Sample Flags: PR-03

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/11/15	11/11/15 20:11	EEH
Diesel Range Organics	ND	8.8	mg/Kg dry	1		SW-846 8015C	11/9/15	11/12/15 13:55	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	90.0		70-130					11/11/15 20:11	
o-Terphenyl	70.7		40-140					11/12/15 13:55	

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-19 comp

Sampled: 11/5/2015 15:00

Sample ID: 15K0292-20

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/10/15	11/10/15 13:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/9/15	11/9/15 21:20	DJM
pH @24.3°C	7.8		pH Units	1	H-03	SW-846 9045C	11/7/15	11/7/15 13:45	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/11/15	11/12/15 14:40	AMM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/11/15	11/12/15 17:15	AG
% Solids	94.8		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-19 comp

Sampled: 11/5/2015 15:00

Sample ID: 15K0292-20

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:01	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/10/15	11/11/15 11:42	SCB
Barium	0.27	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:01	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:01	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:01	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:01	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:01	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:01	AME

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-26-14.5-15.0

Sampled: 11/6/2015 09:45

Sample ID: 15K0292-21

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Acrylonitrile	ND	0.0054	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Bromomethane	ND	0.0090	mg/Kg dry	1	R-05, V-20	SW-846 8260C	11/10/15	11/10/15 14:15	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
tert-Butyl Alcohol (TBA)	ND	0.036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Carbon Disulfide	ND	0.0054	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Chlorodibromomethane	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Chloroethane	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Chloromethane	ND	0.0090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,2-Dibromoethane (EDB)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
trans-1,4-Dichloro-2-butene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.018	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,3-Dichloropropane	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
cis-1,3-Dichloropropene	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
trans-1,3-Dichloropropene	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Diethyl Ether	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-26-14.5-15.0

Sampled: 11/6/2015 09:45

Sample ID: 15K0292-21

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,4-Dioxane	ND	0.090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1	V-20	SW-846 8260C	11/10/15	11/10/15 14:15	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Methylene Chloride	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Naphthalene	ND	0.0036	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 14:15	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,1,2,2-Tetrachloroethane	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Tetrahydrofuran	ND	0.0090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,3,5-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0090	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
Vinyl Chloride	ND	0.0090	mg/Kg dry	1	R-05	SW-846 8260C	11/10/15	11/10/15 14:15	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/10/15 14:15	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	107	70-130	11/10/15 14:15
Toluene-d8	114	70-130	11/10/15 14:15
4-Bromofluorobenzene	114	70-130	11/10/15 14:15



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-26-14.5-15.0

Sampled: 11/6/2015 09:45

Sample ID: 15K0292-21

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.4		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-26 comp

Sampled: 11/6/2015 09:45

Sample ID: 15K0292-22

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/12/15 16:07	CMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		96.2	30-130					11/12/15 16:07	
2-Fluorobiphenyl		110	30-130					11/12/15 16:07	
p-Terphenyl-d14		122	30-130					11/12/15 16:07	

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-26 comp

Sampled: 11/6/2015 09:45

Sample ID: 15K0292-22

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:53	KAL
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:53	KAL
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:53	KAL
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:53	KAL
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:53	KAL
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:53	KAL
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:53	KAL
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:53	KAL
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/10/15	11/11/15 23:53	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	94.1	30-150	
Decachlorobiphenyl [2]	101	30-150	
Tetrachloro-m-xylene [1]	93.4	30-150	
Tetrachloro-m-xylene [2]	98.5	30-150	

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-26 comp

Sampled: 11/6/2015 09:45

Sample ID: 15K0292-22

Sample Matrix: Soil

Sample Flags: PR-03

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/11/15	11/11/15 20:47	EEH
Diesel Range Organics	ND	9.0	mg/Kg dry	1		SW-846 8015C	11/9/15	11/12/15 14:13	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	88.3		70-130					11/11/15 20:47	
o-Terphenyl	73.5		40-140					11/12/15 14:13	

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-26 comp

Sampled: 11/6/2015 09:45

Sample ID: 15K0292-22

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/10/15	11/10/15 13:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/9/15	11/9/15 21:20	DJM
pH @24.6°C	6.2		pH Units	1		SW-846 9045C	11/7/15	11/7/15 9:15	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/11/15	11/12/15 14:40	AMM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	11/11/15	11/12/15 17:15	AG
% Solids	93.0		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-26 comp

Sampled: 11/6/2015 09:45

Sample ID: 15K0292-22

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:23	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/10/15	11/11/15 11:43	SCB
Barium	0.45	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:23	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:23	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:23	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:23	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:23	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:23	AME

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-28-14.5-15.0

Sampled: 11/6/2015 10:45

Sample ID: 15K0292-23

Sample Matrix: Soil

Sample Flags: PR-15, PR-03

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.11	0.10	mg/Kg dry	1	Z-01	SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Acrylonitrile	ND	0.0060	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Bromomethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
2-Butanone (MEK)	ND	0.040	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
n-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Carbon Disulfide	ND	0.0060	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Chloroethane	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Chloroform	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Chloromethane	ND	0.010	mg/Kg dry	1	L-04	SW-846 8260C	11/10/15	11/11/15 10:16	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,1-Dichloroethylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Diethyl Ether	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-28-14.5-15.0

Sampled: 11/6/2015 10:45

Sample ID: 15K0292-23

Sample Matrix: Soil

Sample Flags: PR-15, PR-03

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Methylene Chloride	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Naphthalene	ND	0.0040	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/11/15 10:16	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Toluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
m+p Xylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:16	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	109	70-130	11/11/15 10:16
Toluene-d8	101	70-130	11/11/15 10:16
4-Bromofluorobenzene	96.9	70-130	11/11/15 10:16



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-28-14.5-15.0

Sampled: 11/6/2015 10:45

Sample ID: 15K0292-23

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.3		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-28 comp

Sampled: 11/6/2015 10:45

Sample ID: 15K0292-24

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 20:37	CMR
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Nitrobenzene-d5	98.5	30-130						11/11/15 20:37	
2-Fluorobiphenyl	106	30-130						11/11/15 20:37	
p-Terphenyl-d14	125	30-130						11/11/15 20:37	

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-28 comp

Sampled: 11/6/2015 10:45

Sample ID: 15K0292-24

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date		Analyst
							Prepared	Analyzed	
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:06	KAL
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:06	KAL
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:06	KAL
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:06	KAL
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:06	KAL
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:06	KAL
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:06	KAL
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:06	KAL
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:06	KAL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	88.4		30-150				11/12/15 0:06		
Decachlorobiphenyl [2]	94.9		30-150				11/12/15 0:06		
Tetrachloro-m-xylene [1]	91.8		30-150				11/12/15 0:06		
Tetrachloro-m-xylene [2]	96.4		30-150				11/12/15 0:06		



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-28 comp

Sampled: 11/6/2015 10:45

Sample ID: 15K0292-24

Sample Matrix: Soil

Sample Flags: PR-03

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg dry	1		SW-846 8015C	11/11/15	11/11/15 21:23	EEH
Diesel Range Organics	ND	8.6	mg/Kg dry	1		SW-846 8015C	11/9/15	11/12/15 14:30	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	88.0		70-130				11/11/15 21:23		
o-Terphenyl	73.7		40-140				11/12/15 14:30		



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-28 comp

Sampled: 11/6/2015 10:45

Sample ID: 15K0292-24

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date		Analyst
							Prepared	Analyzed	
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/10/15	11/10/15 13:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/9/15	11/9/15 21:20	DJM
pH @23.2°C	7.4		pH Units	1		SW-846 9045C	11/7/15	11/7/15 9:15	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/11/15	11/12/15 14:40	AMM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/11/15	11/12/15 17:15	AG
% Solids	96.5		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-28 comp

Sampled: 11/6/2015 10:45

Sample ID: 15K0292-24

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:28	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/10/15	11/11/15 11:45	SCB
Barium	0.31	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:28	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:28	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:28	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:28	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:28	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:28	AME

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-30-14.5-15.0

Sampled: 11/6/2015 11:30

Sample ID: 15K0292-25

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.092	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Acrylonitrile	ND	0.0055	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Bromomethane	ND	0.0092	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
tert-Butyl Alcohol (TBA)	ND	0.037	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Carbon Disulfide	ND	0.0055	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Chlorodibromomethane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Chloroethane	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Chloromethane	ND	0.0092	mg/Kg dry	1	L-04	SW-846 8260C	11/10/15	11/11/15 10:48	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,2-Dibromoethane (EDB)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
trans-1,4-Dichloro-2-butene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,3-Dichloropropane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
cis-1,3-Dichloropropene	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
trans-1,3-Dichloropropene	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Diethyl Ether	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-30-14.5-15.0

Sampled: 11/6/2015 11:30

Sample ID: 15K0292-25

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,4-Dioxane	ND	0.092	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Methylene Chloride	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/11/15 10:48	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,1,2,2-Tetrachloroethane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Tetrahydrofuran	ND	0.0092	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1	V-05	SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,3,5-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0092	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0092	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
Vinyl Chloride	ND	0.0092	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/10/15	11/11/15 10:48	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	109	70-130	11/11/15 10:48
Toluene-d8	102	70-130	11/11/15 10:48
4-Bromofluorobenzene	98.4	70-130	11/11/15 10:48



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-30-14.5-15.0

Sampled: 11/6/2015 11:30

Sample ID: 15K0292-25

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.7		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-30 comp

Sampled: 11/6/2015 11:30

Sample ID: 15K0292-26

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/9/15	11/11/15 21:04	CMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		98.8	30-130					11/11/15 21:04	
2-Fluorobiphenyl		108	30-130					11/11/15 21:04	
p-Terphenyl-d14		131 *	30-130		S-07			11/11/15 21:04	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-30 comp

Sampled: 11/6/2015 11:30

Sample ID: 15K0292-26

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:19	KAL
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:19	KAL
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:19	KAL
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:19	KAL
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:19	KAL
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:19	KAL
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:19	KAL
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:19	KAL
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/10/15	11/12/15 0:19	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	94.9	30-150	
Decachlorobiphenyl [2]	102	30-150	
Tetrachloro-m-xylene [1]	97.2	30-150	
Tetrachloro-m-xylene [2]	102	30-150	



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Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-30 comp

Sampled: 11/6/2015 11:30

Sample ID: 15K0292-26

Sample Matrix: Soil

Sample Flags: PR-03

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/11/15	11/11/15 21:59	EEH
Diesel Range Organics	ND	8.7	mg/Kg dry	1		SW-846 8015C	11/9/15	11/12/15 14:48	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1-Chloro-3-fluorobenzene	88.8	70-130	
o-Terphenyl	71.5	40-140	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-30 comp

Sampled: 11/6/2015 11:30

Sample ID: 15K0292-26

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/10/15	11/10/15 13:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/11/15	11/11/15 21:45	DJM
pH @22.7°C	7.1		pH Units	1		SW-846 9045C	11/7/15	11/7/15 9:15	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/11/15	11/12/15 14:40	AMM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/11/15	11/12/15 17:15	AG
% Solids	96.0		% Wt	1		SM 2540G	11/7/15	11/9/15 9:28	MRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave/ Georgia St. Brookly

Sample Description:

Work Order: 15K0292

Date Received: 11/6/2015

Field Sample #: SB-30 comp

Sampled: 11/6/2015 11:30

Sample ID: 15K0292-26

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:33	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/10/15	11/11/15 11:46	SCB
Barium	0.18	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:33	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:33	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:33	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:33	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:33	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/10/15	11/12/15 22:33	AME

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
15K0292-01 [SB-02-14.5-15.0]	B134878	11/07/15
15K0292-02 [SB-02 comp]	B134878	11/07/15
15K0292-03 [SB-04-11.0-11.5]	B134878	11/07/15
15K0292-04 [SB-04 comp]	B134878	11/07/15
15K0292-05 [SB-05-14.5-15.0]	B134878	11/07/15
15K0292-06 [SB-05 comp]	B134878	11/07/15
15K0292-07 [SB-07-14.5-15.0]	B134878	11/07/15
15K0292-08 [SB-07 comp]	B134878	11/07/15
15K0292-09 [SB-09-14.5-15.0]	B134878	11/07/15
15K0292-10 [SB-09 comp]	B134878	11/07/15
15K0292-11 [SB-12-14.5-15.0]	B134878	11/07/15
15K0292-12 [SB-12 comp]	B134878	11/07/15
15K0292-13 [SB-14-14.5-15.0]	B134878	11/07/15
15K0292-14 [SB-14 comp]	B134878	11/07/15
15K0292-15 [SB-15-14.5-15.0]	B134878	11/07/15
15K0292-16 [SB-15 comp]	B134878	11/07/15
15K0292-17 [SB-17-14.5-15.0]	B134878	11/07/15
15K0292-18 [SB-17 comp]	B134878	11/07/15
15K0292-19 [SB-19-14.5-15.0]	B134878	11/07/15
15K0292-20 [SB-19 comp]	B134878	11/07/15
15K0292-21 [SB-26-14.5-15.0]	B134878	11/07/15
15K0292-22 [SB-26 comp]	B134878	11/07/15
15K0292-23 [SB-28-14.5-15.0]	B134878	11/07/15
15K0292-24 [SB-28 comp]	B134878	11/07/15
15K0292-25 [SB-30-14.5-15.0]	B134878	11/07/15
15K0292-26 [SB-30 comp]	B134878	11/07/15

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
15K0292-02 [SB-02 comp]	B134999	50.0	11/09/15
15K0292-04 [SB-04 comp]	B134999	50.0	11/09/15
15K0292-06 [SB-05 comp]	B134999	50.0	11/09/15
15K0292-08 [SB-07 comp]	B134999	50.0	11/09/15
15K0292-10 [SB-09 comp]	B134999	50.0	11/09/15
15K0292-12 [SB-12 comp]	B134999	50.0	11/09/15
15K0292-14 [SB-14 comp]	B134999	50.0	11/09/15
15K0292-16 [SB-15 comp]	B134999	50.0	11/09/15
15K0292-18 [SB-17 comp]	B134999	50.0	11/09/15
15K0292-20 [SB-19 comp]	B134999	50.0	11/09/15
15K0292-22 [SB-26 comp]	B134999	50.0	11/09/15
15K0292-24 [SB-28 comp]	B134999	50.0	11/09/15

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
15K0292-26 [SB-30 comp]	B135202	50.0	11/11/15

Prep Method: SW-846 3010A-SW-846 6010C

Leachates were extracted on 11/9/2015 per SW-846 1311 in Batch B134925

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3010A-SW-846 6010C

Leachates were extracted on 11/9/2015 per SW-846 1311 in Batch B134925

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15K0292-02 [SB-02 comp]	B135050	50.0	50.0	11/10/15
15K0292-04 [SB-04 comp]	B135050	50.0	50.0	11/10/15
15K0292-06 [SB-05 comp]	B135050	50.0	50.0	11/10/15
15K0292-08 [SB-07 comp]	B135050	50.0	50.0	11/10/15
15K0292-10 [SB-09 comp]	B135050	50.0	50.0	11/10/15
15K0292-12 [SB-12 comp]	B135050	50.0	50.0	11/10/15
15K0292-14 [SB-14 comp]	B135050	50.0	50.0	11/10/15
15K0292-16 [SB-15 comp]	B135050	50.0	50.0	11/10/15
15K0292-18 [SB-17 comp]	B135050	50.0	50.0	11/10/15
15K0292-20 [SB-19 comp]	B135050	50.0	50.0	11/10/15
15K0292-22 [SB-26 comp]	B135050	50.0	50.0	11/10/15
15K0292-24 [SB-28 comp]	B135050	50.0	50.0	11/10/15
15K0292-26 [SB-30 comp]	B135050	50.0	50.0	11/10/15

Prep Method: SW-846 7470A Prep-SW-846 7470A

Leachates were extracted on 11/9/2015 per SW-846 1311 in Batch B134925

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15K0292-02 [SB-02 comp]	B135051	6.00	6.00	11/10/15
15K0292-04 [SB-04 comp]	B135051	6.00	6.00	11/10/15
15K0292-06 [SB-05 comp]	B135051	6.00	6.00	11/10/15
15K0292-08 [SB-07 comp]	B135051	6.00	6.00	11/10/15
15K0292-10 [SB-09 comp]	B135051	6.00	6.00	11/10/15
15K0292-12 [SB-12 comp]	B135051	6.00	6.00	11/10/15
15K0292-14 [SB-14 comp]	B135051	6.00	6.00	11/10/15
15K0292-16 [SB-15 comp]	B135051	6.00	6.00	11/10/15
15K0292-18 [SB-17 comp]	B135051	6.00	6.00	11/10/15
15K0292-20 [SB-19 comp]	B135051	6.00	6.00	11/10/15
15K0292-22 [SB-26 comp]	B135051	6.00	6.00	11/10/15
15K0292-24 [SB-28 comp]	B135051	6.00	6.00	11/10/15
15K0292-26 [SB-30 comp]	B135051	6.00	6.00	11/10/15

Prep Method: SW-846 3546-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0292-02 [SB-02 comp]	B134892	30.0	1.00	11/09/15
15K0292-04 [SB-04 comp]	B134892	30.0	1.00	11/09/15
15K0292-06 [SB-05 comp]	B134892	30.0	1.00	11/09/15
15K0292-08 [SB-07 comp]	B134892	30.0	1.00	11/09/15
15K0292-10 [SB-09 comp]	B134892	30.1	1.00	11/09/15
15K0292-12 [SB-12 comp]	B134892	30.2	1.00	11/09/15
15K0292-14 [SB-14 comp]	B134892	30.0	1.00	11/09/15
15K0292-16 [SB-15 comp]	B134892	30.0	1.00	11/09/15
15K0292-18 [SB-17 comp]	B134892	30.0	1.00	11/09/15
15K0292-20 [SB-19 comp]	B134892	30.0	1.00	11/09/15
15K0292-22 [SB-26 comp]	B134892	30.0	1.00	11/09/15
15K0292-24 [SB-28 comp]	B134892	30.1	1.00	11/09/15
15K0292-26 [SB-30 comp]	B134892	30.0	1.00	11/09/15

Prep Method: SW-846 5035/5030B-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
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Sample Extraction Data

Prep Method: SW-846 5035/5030B-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0292-02 [SB-02 comp]	B135154	15.8	15.7	11/11/15
15K0292-04 [SB-04 comp]	B135154	15.1	15.6	11/11/15
15K0292-06 [SB-05 comp]	B135154	15.1	15.8	11/11/15
15K0292-08 [SB-07 comp]	B135154	15.2	15.6	11/11/15
15K0292-10 [SB-09 comp]	B135154	15.5	15.9	11/11/15
15K0292-12 [SB-12 comp]	B135154	15.3	15.6	11/11/15
15K0292-14 [SB-14 comp]	B135154	15.9	15.8	11/11/15
15K0292-16 [SB-15 comp]	B135154	15.8	15.7	11/11/15
15K0292-18 [SB-17 comp]	B135154	15.4	16.0	11/11/15
15K0292-20 [SB-19 comp]	B135154	15.3	15.8	11/11/15
15K0292-22 [SB-26 comp]	B135154	15.1	16.1	11/11/15
15K0292-24 [SB-28 comp]	B135154	15.6	15.5	11/11/15
15K0292-26 [SB-30 comp]	B135154	15.3	15.6	11/11/15

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0292-02 [SB-02 comp]	B135005	10.0	10.0	11/10/15
15K0292-04 [SB-04 comp]	B135005	10.0	10.0	11/10/15
15K0292-06 [SB-05 comp]	B135005	10.0	10.0	11/10/15
15K0292-08 [SB-07 comp]	B135005	10.0	10.0	11/10/15
15K0292-10 [SB-09 comp]	B135005	10.0	10.0	11/10/15
15K0292-12 [SB-12 comp]	B135005	10.0	10.0	11/10/15
15K0292-14 [SB-14 comp]	B135005	10.0	10.0	11/10/15
15K0292-16 [SB-15 comp]	B135005	10.0	10.0	11/10/15
15K0292-18 [SB-17 comp]	B135005	10.0	10.0	11/10/15
15K0292-20 [SB-19 comp]	B135005	10.1	10.0	11/10/15
15K0292-22 [SB-26 comp]	B135005	10.0	10.0	11/10/15
15K0292-24 [SB-28 comp]	B135005	10.1	10.0	11/10/15
15K0292-26 [SB-30 comp]	B135005	10.0	10.0	11/10/15

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0292-01 [SB-02-14.5-15.0]	B135062	5.10	10.0	11/10/15
15K0292-03 [SB-04-11.0-11.5]	B135062	5.50	10.0	11/10/15
15K0292-05 [SB-05-14.5-15.0]	B135062	5.80	10.0	11/10/15
15K0292-07 [SB-07-14.5-15.0]	B135062	5.90	10.0	11/10/15
15K0292-09 [SB-09-14.5-15.0]	B135062	5.90	10.0	11/10/15
15K0292-11 [SB-12-14.5-15.0]	B135062	5.50	10.0	11/10/15
15K0292-13 [SB-14-14.5-15.0]	B135062	5.40	10.0	11/10/15
15K0292-15 [SB-15-14.5-15.0]	B135062	5.30	10.0	11/10/15
15K0292-17 [SB-17-14.5-15.0]	B135062	5.90	10.0	11/10/15
15K0292-19 [SB-19-14.5-15.0]	B135062	5.10	10.0	11/10/15
15K0292-21 [SB-26-14.5-15.0]	B135062	5.80	10.0	11/10/15

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0292-23 [SB-28-14.5-15.0]	B135096	5.20	10.0	11/10/15
15K0292-25 [SB-30-14.5-15.0]	B135096	5.70	10.0	11/10/15

Sample Extraction Data

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0292-02 [SB-02 comp]	B134893	30.0	1.00	11/09/15
15K0292-04 [SB-04 comp]	B134893	30.0	1.00	11/09/15
15K0292-06 [SB-05 comp]	B134893	30.0	1.00	11/09/15
15K0292-08 [SB-07 comp]	B134893	30.0	1.00	11/09/15
15K0292-10 [SB-09 comp]	B134893	30.0	1.00	11/09/15
15K0292-12 [SB-12 comp]	B134893	30.1	1.00	11/09/15
15K0292-14 [SB-14 comp]	B134893	30.0	1.00	11/09/15
15K0292-16 [SB-15 comp]	B134893	30.0	1.00	11/09/15
15K0292-18 [SB-17 comp]	B134893	30.0	1.00	11/09/15
15K0292-20 [SB-19 comp]	B134893	30.0	1.00	11/09/15
15K0292-22 [SB-26 comp]	B134893	30.2	1.00	11/09/15
15K0292-24 [SB-28 comp]	B134893	30.0	1.00	11/09/15
15K0292-26 [SB-30 comp]	B134893	30.0	1.00	11/09/15

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0292-02 [SB-02 comp]	B135037	25.1	250	11/10/15
15K0292-04 [SB-04 comp]	B135037	25.2	250	11/10/15
15K0292-06 [SB-05 comp]	B135037	25.7	250	11/10/15
15K0292-08 [SB-07 comp]	B135037	25.5	250	11/10/15
15K0292-10 [SB-09 comp]	B135037	25.2	250	11/10/15
15K0292-12 [SB-12 comp]	B135037	25.3	250	11/10/15
15K0292-14 [SB-14 comp]	B135037	25.1	250	11/10/15
15K0292-16 [SB-15 comp]	B135037	26.0	250	11/10/15

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0292-18 [SB-17 comp]	B135142	25.0	250	11/11/15
15K0292-20 [SB-19 comp]	B135142	25.2	250	11/11/15
15K0292-22 [SB-26 comp]	B135142	25.9	250	11/11/15
15K0292-24 [SB-28 comp]	B135142	25.0	250	11/11/15
15K0292-26 [SB-30 comp]	B135142	25.4	250	11/11/15

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0292-02 [SB-02 comp]	B135153	25.1	250	11/11/15
15K0292-04 [SB-04 comp]	B135153	25.2	250	11/11/15
15K0292-06 [SB-05 comp]	B135153	25.7	250	11/11/15
15K0292-08 [SB-07 comp]	B135153	25.5	250	11/11/15
15K0292-10 [SB-09 comp]	B135153	25.2	250	11/11/15
15K0292-12 [SB-12 comp]	B135153	25.3	250	11/11/15
15K0292-14 [SB-14 comp]	B135153	25.1	250	11/11/15
15K0292-16 [SB-15 comp]	B135153	26.0	250	11/11/15

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Sample Extraction Data

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0292-18 [SB-17 comp]	B135183	25.0	250	11/11/15
15K0292-20 [SB-19 comp]	B135183	25.2	250	11/11/15
15K0292-22 [SB-26 comp]	B135183	25.9	250	11/11/15
15K0292-24 [SB-28 comp]	B135183	25.0	250	11/11/15
15K0292-26 [SB-30 comp]	B135183	25.4	250	11/11/15

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
15K0292-22 [SB-26 comp]	B134876	20.0	11/07/15
15K0292-24 [SB-28 comp]	B134876	20.0	11/07/15
15K0292-26 [SB-30 comp]	B134876	20.0	11/07/15

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
15K0292-02 [SB-02 comp]	B134886	20.0	11/07/15
15K0292-04 [SB-04 comp]	B134886	20.0	11/07/15
15K0292-06 [SB-05 comp]	B134886	20.0	11/07/15
15K0292-08 [SB-07 comp]	B134886	20.0	11/07/15
15K0292-10 [SB-09 comp]	B134886	20.0	11/07/15
15K0292-12 [SB-12 comp]	B134886	20.0	11/07/15
15K0292-14 [SB-14 comp]	B134886	20.0	11/07/15
15K0292-16 [SB-15 comp]	B134886	20.0	11/07/15
15K0292-18 [SB-17 comp]	B134886	20.0	11/07/15
15K0292-20 [SB-19 comp]	B134886	20.0	11/07/15

SW-846 9095B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0292-02 [SB-02 comp]	B135015	100	100	11/10/15
15K0292-04 [SB-04 comp]	B135015	100	100	11/10/15
15K0292-06 [SB-05 comp]	B135015	100	100	11/10/15
15K0292-08 [SB-07 comp]	B135015	100	100	11/10/15
15K0292-10 [SB-09 comp]	B135015	100	100	11/10/15
15K0292-12 [SB-12 comp]	B135015	100	100	11/10/15
15K0292-14 [SB-14 comp]	B135015	100	100	11/10/15
15K0292-16 [SB-15 comp]	B135015	100	100	11/10/15
15K0292-18 [SB-17 comp]	B135015	100	100	11/10/15
15K0292-20 [SB-19 comp]	B135015	100	100	11/10/15
15K0292-22 [SB-26 comp]	B135015	100	100	11/10/15
15K0292-24 [SB-28 comp]	B135015	100	100	11/10/15
15K0292-26 [SB-30 comp]	B135015	100	100	11/10/15

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135062 - SW-846 5035										
Blank (B135062-BLK1)										
Prepared & Analyzed: 11/10/15										
Acetone	ND	0.10	mg/Kg wet							
Acrylonitrile	ND	0.0060	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							R-05, V-20
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							V-20
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							R-05
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							V-20
Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135062 - SW-846 5035										
Blank (B135062-BLK1)										
Prepared & Analyzed: 11/10/15										
Methylene Chloride	ND	0.020	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							V-05
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							V-05
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							R-05
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0529		mg/Kg wet	0.0500		106	70-130			
Surrogate: Toluene-d8	0.0521		mg/Kg wet	0.0500		104	70-130			
Surrogate: 4-Bromofluorobenzene	0.0548		mg/Kg wet	0.0500		110	70-130			
LCS (B135062-BS1)										
Prepared & Analyzed: 11/10/15										
Acetone	0.154	0.10	mg/Kg wet	0.200		76.9	70-160			†
Acrylonitrile	0.0160	0.0060	mg/Kg wet	0.0200		80.2	70-130			
tert-Amyl Methyl Ether (TAME)	0.0192	0.0010	mg/Kg wet	0.0200		95.8	70-130			
Benzene	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130			
Bromobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130			
Bromochloromethane	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130			
Bromodichloromethane	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130			
Bromoform	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130			
Bromomethane	0.0151	0.010	mg/Kg wet	0.0200		75.7	40-130			R-05, V-20 †
2-Butanone (MEK)	0.157	0.040	mg/Kg wet	0.200		78.7	70-160			†
tert-Butyl Alcohol (TBA)	0.177	0.040	mg/Kg wet	0.200		88.7	40-130			†
n-Butylbenzene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130			
sec-Butylbenzene	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130			
tert-Butylbenzene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-160			†
tert-Butyl Ethyl Ether (TBEE)	0.0196	0.0010	mg/Kg wet	0.0200		97.9	70-130			
Carbon Disulfide	0.0239	0.0060	mg/Kg wet	0.0200		120	70-130			V-20
Carbon Tetrachloride	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Chlorobenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
Chlorodibromomethane	0.0217	0.0010	mg/Kg wet	0.0200		109	70-130			
Chloroethane	0.0203	0.020	mg/Kg wet	0.0200		101	70-130			
Chloroform	0.0203	0.0040	mg/Kg wet	0.0200		102	70-130			
Chloromethane	0.0144	0.010	mg/Kg wet	0.0200		71.9	70-130			
2-Chlorotoluene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			

HAZ-316

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135062 - SW-846 5035										
LCS (B135062-BS1)										
Prepared & Analyzed: 11/10/15										
4-Chlorotoluene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0172	0.0020	mg/Kg wet	0.0200		86.1	70-130			
1,2-Dibromoethane (EDB)	0.0214	0.0010	mg/Kg wet	0.0200		107	70-130			
Dibromomethane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
1,2-Dichlorobenzene	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
1,3-Dichlorobenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
1,4-Dichlorobenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
trans-1,4-Dichloro-2-butene	0.0175	0.0040	mg/Kg wet	0.0200		87.4	70-130			
Dichlorodifluoromethane (Freon 12)	0.00850	0.020	mg/Kg wet	0.0200		42.5	40-160			R-05, V-20 †
1,1-Dichloroethane	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
1,2-Dichloroethane	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130			
1,1-Dichloroethylene	0.0227	0.0040	mg/Kg wet	0.0200		113	70-130			
cis-1,2-Dichloroethylene	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130			
trans-1,2-Dichloroethylene	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130			
1,2-Dichloropropane	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130			
1,3-Dichloropropane	0.0204	0.0010	mg/Kg wet	0.0200		102	70-130			
2,2-Dichloropropane	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130			
1,1-Dichloropropene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
cis-1,3-Dichloropropene	0.0218	0.0010	mg/Kg wet	0.0200		109	70-130			
trans-1,3-Dichloropropene	0.0238	0.0010	mg/Kg wet	0.0200		119	70-130			
Methyl Ether	0.0194	0.020	mg/Kg wet	0.0200		97.1	70-130			
Diisopropyl Ether (DIPE)	0.0177	0.0010	mg/Kg wet	0.0200		88.7	70-130			
1,4-Dioxane	0.179	0.10	mg/Kg wet	0.200		89.4	40-160			†
Ethylbenzene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130			
Hexachlorobutadiene	0.0235	0.0020	mg/Kg wet	0.0200		118	70-160			V-20
2-Hexanone (MBK)	0.175	0.020	mg/Kg wet	0.200		87.6	70-160			†
Isopropylbenzene (Cumene)	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130			
p-Isopropyltoluene (p-Cymene)	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0179	0.0040	mg/Kg wet	0.0200		89.4	70-130			
Methylene Chloride	0.0184	0.020	mg/Kg wet	0.0200		91.9	40-160			†
4-Methyl-2-pentanone (MIBK)	0.187	0.020	mg/Kg wet	0.200		93.4	70-160			†
Naphthalene	0.0153	0.0040	mg/Kg wet	0.0200		76.7	40-130			V-05 †
n-Propylbenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
Styrene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
1,1,1,2-Tetrachloroethane	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
1,1,2,2-Tetrachloroethane	0.0176	0.0010	mg/Kg wet	0.0200		88.1	70-130			
Tetrachloroethylene	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130			
Tetrahydrofuran	0.0150	0.010	mg/Kg wet	0.0200		75.2	70-130			
Toluene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
1,2,3-Trichlorobenzene	0.0170	0.0020	mg/Kg wet	0.0200		85.1	70-130			
1,2,4-Trichlorobenzene	0.0162	0.0020	mg/Kg wet	0.0200		81.1	70-130			V-05
1,3,5-Trichlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130			
1,1,1-Trichloroethane	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
1,1,2-Trichloroethane	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130			
Trichloroethylene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
Trichlorofluoromethane (Freon 11)	0.0198	0.010	mg/Kg wet	0.0200		99.0	70-130			
1,2,3-Trichloropropane	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0216	0.010	mg/Kg wet	0.0200		108	70-130			
1,2,4-Trimethylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.4	70-130			
1,3,5-Trimethylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
Vinyl Chloride	0.0148	0.010	mg/Kg wet	0.0200		74.1	40-130			R-05 †

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135062 - SW-846 5035										
LCS (B135062-BS1)										
Prepared & Analyzed: 11/10/15										
m+p Xylene	0.0431	0.0040	mg/Kg wet	0.0400		108	70-130			
o-Xylene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0524		mg/Kg wet	0.0500		105	70-130			
Surrogate: Toluene-d8	0.0528		mg/Kg wet	0.0500		106	70-130			
Surrogate: 4-Bromofluorobenzene	0.0477		mg/Kg wet	0.0500		95.4	70-130			
LCS Dup (B135062-BSD1)										
Prepared & Analyzed: 11/10/15										
Acetone	0.166	0.10	mg/Kg wet	0.200		83.2	70-160	7.89	25	†
Acrylonitrile	0.0174	0.0060	mg/Kg wet	0.0200		87.2	70-130	8.36	25	
tert-Amyl Methyl Ether (TAME)	0.0196	0.0010	mg/Kg wet	0.0200		98.1	70-130	2.37	25	
Benzene	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130	0.943	25	
Bromobenzene	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130	2.58	25	
Bromochloromethane	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	4.94	25	
Bromodichloromethane	0.0233	0.0020	mg/Kg wet	0.0200		116	70-130	4.48	25	
Bromoform	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130	1.71	25	
Bromomethane	0.0197	0.010	mg/Kg wet	0.0200		98.3	40-130	26.0 *	25	R-05, V-20 †
2-Butanone (MEK)	0.170	0.040	mg/Kg wet	0.200		84.8	70-160	7.41	25	†
tert-Butyl Alcohol (TBA)	0.194	0.040	mg/Kg wet	0.200		97.1	40-130	9.06	25	†
n-Butylbenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	1.28	25	
sec-Butylbenzene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	6.80	25	
tert-Butylbenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-160	6.02	25	†
tert-Butyl Ethyl Ether (TBEE)	0.0193	0.0010	mg/Kg wet	0.0200		96.7	70-130	1.23	25	
Carbon Disulfide	0.0226	0.0060	mg/Kg wet	0.0200		113	70-130	5.77	25	V-20
Carbon Tetrachloride	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130	1.30	25	
Chlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130	3.36	25	
Chlorodibromomethane	0.0246	0.0010	mg/Kg wet	0.0200		123	70-130	12.4	25	
Chloroethane	0.0198	0.020	mg/Kg wet	0.0200		98.9	70-130	2.40	25	
Chloroform	0.0208	0.0040	mg/Kg wet	0.0200		104	70-130	2.53	25	
Chloromethane	0.0163	0.010	mg/Kg wet	0.0200		81.4	70-130	12.4	25	
2-Chlorotoluene	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130	4.78	25	
4-Chlorotoluene	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130	2.73	25	
1,2-Dibromo-3-chloropropane (DBCP)	0.0181	0.0020	mg/Kg wet	0.0200		90.3	70-130	4.76	25	
1,2-Dibromoethane (EDB)	0.0245	0.0010	mg/Kg wet	0.0200		122	70-130	13.5	25	
Dibromomethane	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130	6.99	25	
1,2-Dichlorobenzene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130	1.93	25	
1,3-Dichlorobenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	0.574	25	
1,4-Dichlorobenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.4	70-130	12.3	25	
trans-1,4-Dichloro-2-butene	0.0173	0.0040	mg/Kg wet	0.0200		86.5	70-130	1.04	25	
Dichlorodifluoromethane (Freon 12)	0.0162	0.020	mg/Kg wet	0.0200		80.8	40-160	62.1 *	25	R-05, V-20 †
1,1-Dichloroethane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	0.878	25	
1,2-Dichloroethane	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130	2.23	25	
1,1-Dichloroethylene	0.0225	0.0040	mg/Kg wet	0.0200		112	70-130	0.709	25	
cis-1,2-Dichloroethylene	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130	0.920	25	
trans-1,2-Dichloroethylene	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130	0.00	25	
1,2-Dichloropropane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	1.50	25	
1,3-Dichloropropane	0.0226	0.0010	mg/Kg wet	0.0200		113	70-130	10.2	25	
2,2-Dichloropropane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	0.658	25	
1,1-Dichloropropene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	3.55	25	
cis-1,3-Dichloropropene	0.0234	0.0010	mg/Kg wet	0.0200		117	70-130	7.25	25	
trans-1,3-Dichloropropene	0.0265	0.0010	mg/Kg wet	0.0200		133 *	70-130	11.0	25	L-07
Diethyl Ether	0.0204	0.020	mg/Kg wet	0.0200		102	70-130	4.73	25	
Diisopropyl Ether (DIPE)	0.0178	0.0010	mg/Kg wet	0.0200		88.8	70-130	0.113	25	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135062 - SW-846 5035										
LCS Dup (B135062-BSD1)										
Prepared & Analyzed: 11/10/15										
1,4-Dioxane	0.189	0.10	mg/Kg wet	0.200		94.4	40-160	5.34	50	† ‡
Ethylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	4.03	25	
Hexachlorobutadiene	0.0229	0.0020	mg/Kg wet	0.0200		114	70-160	2.76	25	V-20
2-Hexanone (MBK)	0.200	0.020	mg/Kg wet	0.200		100	70-160	13.4	25	†
Isopropylbenzene (Cumene)	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130	8.40	25	
p-Isopropyltoluene (p-Cymene)	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	0.780	25	
Methyl tert-Butyl Ether (MTBE)	0.0179	0.0040	mg/Kg wet	0.0200		89.4	70-130	0.00	25	
Methylene Chloride	0.0186	0.020	mg/Kg wet	0.0200		93.0	40-160	1.19	25	†
4-Methyl-2-pentanone (MIBK)	0.215	0.020	mg/Kg wet	0.200		108	70-160	14.1	25	†
Naphthalene	0.0131	0.0040	mg/Kg wet	0.0200		65.3	40-130	16.1	25	V-05 †
n-Propylbenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130	8.94	25	
Styrene	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130	1.61	25	
1,1,1,2-Tetrachloroethane	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	3.91	25	
1,1,2,2-Tetrachloroethane	0.0190	0.0010	mg/Kg wet	0.0200		94.9	70-130	7.43	25	
Tetrachloroethylene	0.0267	0.0020	mg/Kg wet	0.0200		134 *	70-130	12.5	25	L-07
Tetrahydrofuran	0.0162	0.010	mg/Kg wet	0.0200		80.8	70-130	7.18	25	
Toluene	0.0237	0.0020	mg/Kg wet	0.0200		118	70-130	10.1	25	
1,2,3-Trichlorobenzene	0.0164	0.0020	mg/Kg wet	0.0200		82.1	70-130	3.59	25	
1,2,4-Trichlorobenzene	0.0144	0.0020	mg/Kg wet	0.0200		72.1	70-130	11.7	25	V-05
1,3,5-Trichlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	2.88	25	
1,1,1-Trichloroethane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	0.683	25	
1,1,2-Trichloroethane	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130	17.5	25	
Trichloroethylene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	3.16	25	
Trichlorofluoromethane (Freon 11)	0.0211	0.010	mg/Kg wet	0.0200		105	70-130	6.26	25	
1,2,3-Trichloropropane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	6.34	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0208	0.010	mg/Kg wet	0.0200		104	70-130	3.77	25	
1,2,4-Trimethylbenzene	0.0180	0.0020	mg/Kg wet	0.0200		89.9	70-130	4.88	25	
1,3,5-Trimethylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130	1.20	25	
Vinyl Chloride	0.0191	0.010	mg/Kg wet	0.0200		95.5	40-130	25.2 *	25	R-05 †
m+p Xylene	0.0426	0.0040	mg/Kg wet	0.0400		106	70-130	1.17	25	
o-Xylene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130	3.32	25	
Surrogate: 1,2-Dichloroethane-d4	0.0532		mg/Kg wet	0.0500		106	70-130			
Surrogate: Toluene-d8	0.0568		mg/Kg wet	0.0500		114	70-130			
Surrogate: 4-Bromofluorobenzene	0.0485		mg/Kg wet	0.0500		97.0	70-130			

Batch B135096 - SW-846 5035

Blank (B135096-BLK1)

Prepared & Analyzed: 11/11/15

Acetone	ND	0.10	mg/Kg wet							
Acrylonitrile	ND	0.0060	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							
Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B135096 - SW-846 5035

Blank (B135096-BLK1)

Prepared & Analyzed: 11/11/15

tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							L-04
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methylene Chloride	ND	0.020	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							V-05
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							V-05
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							V-05
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135096 - SW-846 5035										
Blank (B135096-BLK1) Prepared & Analyzed: 11/11/15										
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0533		mg/Kg wet	0.0500		107	70-130			
Surrogate: Toluene-d8	0.0512		mg/Kg wet	0.0500		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.0483		mg/Kg wet	0.0500		96.6	70-130			
LCS (B135096-BS1) Prepared & Analyzed: 11/11/15										
Acetone	0.147	0.10	mg/Kg wet	0.200		73.4	70-160			†
Acrylonitrile	0.0154	0.0060	mg/Kg wet	0.0200		77.1	70-130			
tert-Amyl Methyl Ether (TAME)	0.0182	0.0010	mg/Kg wet	0.0200		91.0	70-130			
Benzene	0.0180	0.0020	mg/Kg wet	0.0200		90.1	70-130			
o-Toluenobenzene	0.0190	0.0020	mg/Kg wet	0.0200		94.8	70-130			
Bromochloromethane	0.0197	0.0020	mg/Kg wet	0.0200		98.6	70-130			
Bromodichloromethane	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
Bromoform	0.0187	0.0020	mg/Kg wet	0.0200		93.4	70-130			
Bromomethane	0.0185	0.010	mg/Kg wet	0.0200		92.7	40-130			V-20 †
2-Butanone (MEK)	0.155	0.040	mg/Kg wet	0.200		77.4	70-160			†
tert-Butyl Alcohol (TBA)	0.176	0.040	mg/Kg wet	0.200		87.8	40-130			†
n-Butylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
sec-Butylbenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
tert-Butylbenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-160			†
tert-Butyl Ethyl Ether (TBEE)	0.0189	0.0010	mg/Kg wet	0.0200		94.7	70-130			
Carbon Disulfide	0.0227	0.0060	mg/Kg wet	0.0200		113	70-130			V-20
Carbon Tetrachloride	0.0196	0.0020	mg/Kg wet	0.0200		98.0	70-130			
Chlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
Chlorodibromomethane	0.0202	0.0010	mg/Kg wet	0.0200		101	70-130			
Chloroethane	0.0186	0.020	mg/Kg wet	0.0200		92.9	70-130			
Chloroform	0.0194	0.0040	mg/Kg wet	0.0200		97.2	70-130			
Chloromethane	0.0133	0.010	mg/Kg wet	0.0200		66.5 *	70-130			L-04
2-Chlorotoluene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
4-Chlorotoluene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0166	0.0020	mg/Kg wet	0.0200		83.1	70-130			
1,2-Dibromoethane (EDB)	0.0193	0.0010	mg/Kg wet	0.0200		96.3	70-130			
Dibromomethane	0.0188	0.0020	mg/Kg wet	0.0200		93.9	70-130			
1,2-Dichlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.6	70-130			
1,3-Dichlorobenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
1,4-Dichlorobenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130			
trans-1,4-Dichloro-2-butene	0.0175	0.0040	mg/Kg wet	0.0200		87.4	70-130			
Dichlorodifluoromethane (Freon 12)	0.00890	0.020	mg/Kg wet	0.0200		44.5	40-160			V-20 †
1,1-Dichloroethane	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
1,2-Dichloroethane	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
1,1-Dichloroethylene	0.0220	0.0040	mg/Kg wet	0.0200		110	70-130			
cis-1,2-Dichloroethylene	0.0188	0.0020	mg/Kg wet	0.0200		93.9	70-130			
trans-1,2-Dichloroethylene	0.0195	0.0020	mg/Kg wet	0.0200		97.3	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135096 - SW-846 5035										
LCS (B135096-BS1) Prepared & Analyzed: 11/11/15										
1,2-Dichloropropane	0.0181	0.0020	mg/Kg wet	0.0200		90.3	70-130			
1,3-Dichloropropane	0.0187	0.0010	mg/Kg wet	0.0200		93.5	70-130			
2,2-Dichloropropane	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
1,1-Dichloropropene	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130			
cis-1,3-Dichloropropene	0.0197	0.0010	mg/Kg wet	0.0200		98.4	70-130			
trans-1,3-Dichloropropene	0.0217	0.0010	mg/Kg wet	0.0200		108	70-130			
Diethyl Ether	0.0198	0.020	mg/Kg wet	0.0200		99.1	70-130			
Diisopropyl Ether (DIPE)	0.0177	0.0010	mg/Kg wet	0.0200		88.6	70-130			
1,4-Dioxane	0.166	0.10	mg/Kg wet	0.200		83.0	40-160			†
Ethylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.4	70-130			
Hexachlorobutadiene	0.0235	0.0020	mg/Kg wet	0.0200		117	70-160			
2-Hexanone (MBK)	0.159	0.020	mg/Kg wet	0.200		79.3	70-160			†
Isopropylbenzene (Cumene)	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
p-Isopropyltoluene (p-Cymene)	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0178	0.0040	mg/Kg wet	0.0200		89.2	70-130			
Methylene Chloride	0.0169	0.020	mg/Kg wet	0.0200		84.3	40-160			†
4-Methyl-2-pentanone (MIBK)	0.170	0.020	mg/Kg wet	0.200		85.0	70-160			†
Naphthalene	0.0144	0.0040	mg/Kg wet	0.0200		71.9	40-130			V-05 †
n-Propylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
Styrene	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130			
1,1,1,2-Tetrachloroethane	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130			
1,1,2,2-Tetrachloroethane	0.0174	0.0010	mg/Kg wet	0.0200		86.8	70-130			
Tetrachloroethylene	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			
Tetrahydrofuran	0.0146	0.010	mg/Kg wet	0.0200		73.0	70-130			V-05
Toluene	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130			
1,2,3-Trichlorobenzene	0.0166	0.0020	mg/Kg wet	0.0200		83.0	70-130			
1,2,4-Trichlorobenzene	0.0150	0.0020	mg/Kg wet	0.0200		75.0	70-130			V-05
1,3,5-Trichlorobenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.4	70-130			
1,1,1-Trichloroethane	0.0196	0.0020	mg/Kg wet	0.0200		97.9	70-130			
1,1,2-Trichloroethane	0.0185	0.0020	mg/Kg wet	0.0200		92.5	70-130			
Trichloroethylene	0.0199	0.0020	mg/Kg wet	0.0200		99.4	70-130			
Trichlorofluoromethane (Freon 11)	0.0204	0.010	mg/Kg wet	0.0200		102	70-130			
1,2,3-Trichloropropane	0.0196	0.0020	mg/Kg wet	0.0200		97.9	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0209	0.010	mg/Kg wet	0.0200		104	70-130			
1,2,4-Trimethylbenzene	0.0186	0.0020	mg/Kg wet	0.0200		92.8	70-130			
1,3,5-Trimethylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
Vinyl Chloride	0.0163	0.010	mg/Kg wet	0.0200		81.6	40-130			†
m+p Xylene	0.0402	0.0040	mg/Kg wet	0.0400		101	70-130			
o-Xylene	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0539		mg/Kg wet	0.0500		108	70-130			
Surrogate: Toluene-d8	0.0501		mg/Kg wet	0.0500		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.0494		mg/Kg wet	0.0500		98.7	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135096 - SW-846 5035										
LCS Dup (B135096-BSD1) Prepared & Analyzed: 11/11/15										
Acetone	0.167	0.10	mg/Kg wet	0.200		83.4	70-160	12.8	25	†
Acrylonitrile	0.0184	0.0060	mg/Kg wet	0.0200		91.8	70-130	17.4	25	
tert-Amyl Methyl Ether (TAME)	0.0194	0.0010	mg/Kg wet	0.0200		97.0	70-130	6.38	25	
Benzene	0.0188	0.0020	mg/Kg wet	0.0200		93.9	70-130	4.13	25	
Bromobenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130	4.23	25	
Bromochloromethane	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130	6.95	25	
Bromodichloromethane	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	5.33	25	
Bromoform	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	7.72	25	
Bromomethane	0.0181	0.010	mg/Kg wet	0.0200		90.5	40-130	2.40	25	V-20 †
2-Butanone (MEK)	0.170	0.040	mg/Kg wet	0.200		85.1	70-160	9.58	25	†
tert-Butyl Alcohol (TBA)	0.209	0.040	mg/Kg wet	0.200		105	40-130	17.5	25	†
n-Butylbenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	4.27	25	
sec-Butylbenzene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	2.86	25	
tert-Butylbenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-160	2.79	25	†
tert-Butyl Ethyl Ether (TBEE)	0.0199	0.0010	mg/Kg wet	0.0200		99.6	70-130	5.04	25	
Carbon Disulfide	0.0239	0.0060	mg/Kg wet	0.0200		119	70-130	5.24	25	V-20
Carbon Tetrachloride	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	2.42	25	
Chlorobenzene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	2.97	25	
Chlorodibromomethane	0.0216	0.0010	mg/Kg wet	0.0200		108	70-130	6.80	25	
Chloroethane	0.0220	0.020	mg/Kg wet	0.0200		110	70-130	17.0	25	
Chloroform	0.0210	0.0040	mg/Kg wet	0.0200		105	70-130	7.81	25	
Chloromethane	0.0131	0.010	mg/Kg wet	0.0200		65.3 *	70-130	1.82	25	L-04
2-Chlorotoluene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	3.39	25	
4-Chlorotoluene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	4.09	25	
1,2-Dibromo-3-chloropropane (DBCP)	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130	9.18	25	
1,2-Dibromoethane (EDB)	0.0205	0.0010	mg/Kg wet	0.0200		103	70-130	6.33	25	
Dibromomethane	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	6.29	25	
1,2-Dichlorobenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	5.47	25	
1,3-Dichlorobenzene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	4.39	25	
1,4-Dichlorobenzene	0.0200	0.0020	mg/Kg wet	0.0200		99.9	70-130	3.77	25	
trans-1,4-Dichloro-2-butene	0.0187	0.0040	mg/Kg wet	0.0200		93.7	70-130	6.96	25	
Dichlorodifluoromethane (Freon 12)	0.00946	0.020	mg/Kg wet	0.0200		47.3	40-160	6.10	25	V-20 †
1,1-Dichloroethane	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	3.61	25	
1,2-Dichloroethane	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130	5.12	25	
1,1-Dichloroethylene	0.0230	0.0040	mg/Kg wet	0.0200		115	70-130	4.44	25	
cis-1,2-Dichloroethylene	0.0199	0.0020	mg/Kg wet	0.0200		99.4	70-130	5.69	25	
trans-1,2-Dichloroethylene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	2.94	25	
1,2-Dichloropropane	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130	5.07	25	
1,3-Dichloropropane	0.0196	0.0010	mg/Kg wet	0.0200		97.8	70-130	4.50	25	
2,2-Dichloropropane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	4.97	25	
1,1-Dichloropropene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	4.67	25	
cis-1,3-Dichloropropene	0.0207	0.0010	mg/Kg wet	0.0200		104	70-130	5.15	25	
trans-1,3-Dichloropropene	0.0232	0.0010	mg/Kg wet	0.0200		116	70-130	6.86	25	
Diethyl Ether	0.0204	0.020	mg/Kg wet	0.0200		102	70-130	2.69	25	
Diisopropyl Ether (DIPE)	0.0182	0.0010	mg/Kg wet	0.0200		91.1	70-130	2.78	25	
1,4-Dioxane	0.187	0.10	mg/Kg wet	0.200		93.7	40-160	12.2	50	† ‡
Ethylbenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	3.75	25	
Hexachlorobutadiene	0.0246	0.0020	mg/Kg wet	0.0200		123	70-160	4.74	25	
Methylcyclohexanone (MBK)	0.177	0.020	mg/Kg wet	0.200		88.6	70-160	11.1	25	†
Isopropylbenzene (Cumene)	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	5.13	25	
p-Isopropyltoluene (p-Cymene)	0.0229	0.0020	mg/Kg wet	0.0200		115	70-130	3.10	25	
Methyl tert-Butyl Ether (MTBE)	0.0185	0.0040	mg/Kg wet	0.0200		92.4	70-130	3.52	25	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135096 - SW-846 5035										
LCS Dup (B135096-BSD1)										
Prepared & Analyzed: 11/11/15										
Methylene Chloride	0.0191	0.020	mg/Kg wet	0.0200		95.5	40-160	12.5	25	†
4-Methyl-2-pentanone (MIBK)	0.189	0.020	mg/Kg wet	0.200		94.6	70-160	10.7	25	†
Naphthalene	0.0155	0.0040	mg/Kg wet	0.0200		77.5	40-130	7.50	25	V-05 †
n-Propylbenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	3.04	25	
Styrene	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130	2.95	25	
1,1,1,2-Tetrachloroethane	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	3.30	25	
1,1,2,2-Tetrachloroethane	0.0187	0.0010	mg/Kg wet	0.0200		93.5	70-130	7.43	25	
Tetrachloroethylene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	4.27	25	
Tetrahydrofuran	0.0164	0.010	mg/Kg wet	0.0200		81.8	70-130	11.4	25	V-05
Toluene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	4.24	25	
1,2,3-Trichlorobenzene	0.0173	0.0020	mg/Kg wet	0.0200		86.6	70-130	4.25	25	
1,2,4-Trichlorobenzene	0.0157	0.0020	mg/Kg wet	0.0200		78.3	70-130	4.31	25	V-05
1,3,5-Trichlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130	5.11	25	
1,1,1-Trichloroethane	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130	4.69	25	
1,1,2-Trichloroethane	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	3.30	25	
Trichloroethylene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	4.91	25	
Trichlorofluoromethane (Freon 11)	0.0200	0.010	mg/Kg wet	0.0200		100	70-130	2.08	25	
1,2,3-Trichloropropane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	5.17	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0216	0.010	mg/Kg wet	0.0200		108	70-130	3.39	25	
1,2,4-Trimethylbenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130	4.43	25	
1,3,5-Trimethylbenzene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	4.76	25	
Vinyl Chloride	0.0167	0.010	mg/Kg wet	0.0200		83.4	40-130	2.18	25	†
m+p Xylene	0.0413	0.0040	mg/Kg wet	0.0400		103	70-130	2.70	25	
o-Xylene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130	3.72	25	
Surrogate: 1,2-Dichloroethane-d4	0.0544		mg/Kg wet	0.0500		109	70-130			
Surrogate: Toluene-d8	0.0505		mg/Kg wet	0.0500		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.0490		mg/Kg wet	0.0500		98.0	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B134893 - SW-846 3546										
Blank (B134893-BLK1)										
Prepared: 11/09/15 Analyzed: 11/11/15										
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Surrogate: Nitrobenzene-d5	2.91		mg/Kg wet	3.33		87.2	30-130			
Surrogate: 2-Fluorobiphenyl	3.19		mg/Kg wet	3.33		95.7	30-130			
Surrogate: p-Terphenyl-d14	3.79		mg/Kg wet	3.33		114	30-130			
LCS (B134893-BS1)										
Prepared: 11/09/15 Analyzed: 11/11/15										
Acenaphthene	1.43	0.17	mg/Kg wet	1.67		85.9	40-140			
Acenaphthylene	1.45	0.17	mg/Kg wet	1.67		86.8	40-140			
Anthracene	1.60	0.17	mg/Kg wet	1.67		95.9	40-140			
Benzo(a)anthracene	1.63	0.17	mg/Kg wet	1.67		97.8	40-140			
Benzo(a)pyrene	1.65	0.17	mg/Kg wet	1.67		98.7	40-140			
Benzo(b)fluoranthene	1.59	0.17	mg/Kg wet	1.67		95.4	40-140			
Benzo(g,h,i)perylene	1.58	0.17	mg/Kg wet	1.67		95.1	40-140			
Benzo(k)fluoranthene	1.60	0.17	mg/Kg wet	1.67		95.7	40-140			
Chrysene	1.58	0.17	mg/Kg wet	1.67		94.7	40-140			
Dibenz(a,h)anthracene	1.56	0.17	mg/Kg wet	1.67		93.6	40-140			
Fluoranthene	1.62	0.17	mg/Kg wet	1.67		97.3	40-140			
Fluorene	1.58	0.17	mg/Kg wet	1.67		94.9	40-140			
Indeno(1,2,3-cd)pyrene	1.54	0.17	mg/Kg wet	1.67		92.6	40-140			
2-Methylnaphthalene	1.39	0.17	mg/Kg wet	1.67		83.5	40-140			
Naphthalene	1.24	0.17	mg/Kg wet	1.67		74.7	40-140			
Phenanthrene	1.63	0.17	mg/Kg wet	1.67		97.6	40-140			
Pyrene	1.60	0.17	mg/Kg wet	1.67		95.9	40-140			
Surrogate: Nitrobenzene-d5	2.84		mg/Kg wet	3.33		85.1	30-130			
Surrogate: 2-Fluorobiphenyl	3.15		mg/Kg wet	3.33		94.5	30-130			
Surrogate: p-Terphenyl-d14	3.82		mg/Kg wet	3.33		115	30-130			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135005 - SW-846 3546										
Blank (B135005-BLK1)										
Prepared: 11/10/15 Analyzed: 11/11/15										
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.162		mg/Kg wet	0.200		80.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.165		mg/Kg wet	0.200		82.6	30-150			
Surrogate: Tetrachloro-m-xylene	0.159		mg/Kg wet	0.200		79.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.158		mg/Kg wet	0.200		79.0	30-150			
LCS (B135005-BS1)										
Prepared: 11/10/15 Analyzed: 11/11/15										
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		76.1	40-140			
Aroclor-1016 [2C]	0.15	0.020	mg/Kg wet	0.200		76.4	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		75.9	40-140			
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		77.6	40-140			
Surrogate: Decachlorobiphenyl	0.144		mg/Kg wet	0.200		72.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.147		mg/Kg wet	0.200		73.7	30-150			
Surrogate: Tetrachloro-m-xylene	0.134		mg/Kg wet	0.200		66.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.134		mg/Kg wet	0.200		67.0	30-150			
LCS Dup (B135005-BSD1)										
Prepared: 11/10/15 Analyzed: 11/11/15										
Aroclor-1016	0.16	0.020	mg/Kg wet	0.200		79.6	40-140	4.53	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		81.9	40-140	6.95	30	
Aroclor-1260	0.16	0.020	mg/Kg wet	0.200		80.4	40-140	5.71	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		81.7	40-140	5.20	30	
Surrogate: Decachlorobiphenyl	0.148		mg/Kg wet	0.200		73.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.151		mg/Kg wet	0.200		75.7	30-150			
Surrogate: Tetrachloro-m-xylene	0.146		mg/Kg wet	0.200		72.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.145		mg/Kg wet	0.200		72.5	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135005 - SW-846 3546										
Matrix Spike (B135005-MS1)		Source: 15K0292-02			Prepared: 11/10/15		Analyzed: 11/12/15			
Aroclor-1016	0.19	0.10	mg/Kg dry	0.209	ND	93.3	40-140			
Aroclor-1016 [2C]	0.21	0.10	mg/Kg dry	0.209	ND	100	40-140			
Aroclor-1260	0.16	0.10	mg/Kg dry	0.209	ND	78.4	40-140			
Aroclor-1260 [2C]	0.18	0.10	mg/Kg dry	0.209	ND	84.3	40-140			
Surrogate: Decachlorobiphenyl	0.152		mg/Kg dry	0.209		72.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.162		mg/Kg dry	0.209		77.6	30-150			
Surrogate: Tetrachloro-m-xylene	0.181		mg/Kg dry	0.209		86.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.195		mg/Kg dry	0.209		93.2	30-150			
Matrix Spike Dup (B135005-MSD1)		Source: 15K0292-02			Prepared: 11/10/15		Analyzed: 11/12/15			
Aroclor-1016	0.16	0.10	mg/Kg dry	0.209	ND	77.7	40-140	18.3	30	
Aroclor-1016 [2C]	0.17	0.10	mg/Kg dry	0.209	ND	81.1	40-140	21.0	30	
Aroclor-1260	0.13	0.10	mg/Kg dry	0.209	ND	63.2	40-140	21.4	30	
Aroclor-1260 [2C]	0.14	0.10	mg/Kg dry	0.209	ND	69.0	40-140	20.0	30	
Surrogate: Decachlorobiphenyl	0.123		mg/Kg dry	0.209		59.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.133		mg/Kg dry	0.209		63.5	30-150			
Surrogate: Tetrachloro-m-xylene	0.143		mg/Kg dry	0.209		68.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.157		mg/Kg dry	0.209		75.2	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B134892 - SW-846 3546										
Blank (B134892-BLK1)										
Prepared: 11/09/15 Analyzed: 11/12/15										
Diesel Range Organics	ND	8.3	mg/Kg wet							
Surrogate: o-Terphenyl	2.55		mg/Kg wet	3.33		76.5	40-140			
LCS (B134892-BS1)										
Prepared: 11/09/15 Analyzed: 11/12/15										
Diesel Range Organics	20.1	8.3	mg/Kg wet	33.3		60.2	40-140			
Surrogate: o-Terphenyl	2.64		mg/Kg wet	3.33		79.2	40-140			
LCS Dup (B134892-BSD1)										
Prepared: 11/09/15 Analyzed: 11/12/15										
Diesel Range Organics	21.5	8.3	mg/Kg wet	33.3		64.6	40-140	7.08		
Surrogate: o-Terphenyl	2.81		mg/Kg wet	3.33		84.2	40-140			
Batch B135154 - SW-846 5035/5030B										
Blank (B135154-BLK1)										
Prepared & Analyzed: 11/11/15										
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg wet							
Surrogate: 1-Chloro-3-fluorobenzene	0.0138		mg/Kg wet	0.0150		91.7	70-130			
LCS (B135154-BS1)										
Prepared & Analyzed: 11/11/15										
Gasoline Range Organics (GRO)	0.260	0.010	mg/Kg wet	0.250		104	80-120			
Surrogate: 1-Chloro-3-fluorobenzene	0.0151		mg/Kg wet	0.0150		101	70-130			
LCS Dup (B135154-BSD1)										
Prepared & Analyzed: 11/11/15										
Gasoline Range Organics (GRO)	0.274	0.010	mg/Kg wet	0.250		110	80-120	5.43	30	
Surrogate: 1-Chloro-3-fluorobenzene	0.0138		mg/Kg wet	0.0150		92.0	70-130			



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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B134876 - SW-846 9045C										
LCS (B134876-BS1) Prepared & Analyzed: 11/07/15										
pH	6.01		pH Units	6.00		100	98.6-102			
Batch B134878 - % Solids										
Duplicate (B134878-DUP3) Source: 15K0292-01 Prepared: 11/07/15 Analyzed: 11/09/15										
% Solids	90.8		% Wt			90.4		0.442	20	
Batch B134886 - SW-846 9045C										
LCS (B134886-BS1) Prepared & Analyzed: 11/07/15										
pH	6.02		pH Units	6.00		100	98.6-102			
LCS Dup (B134886-BSD1) Prepared & Analyzed: 11/07/15										
pH	6.00		pH Units	6.00		100	98.6-102	0.333	20	
Duplicate (B134886-DUP1) Source: 15K0292-02 Prepared & Analyzed: 11/07/15										
pH	6.8		pH Units			6.8		0.147	5	
Batch B135037 - SW-846 9014										
Blank (B135037-BLK1) Prepared: 11/10/15 Analyzed: 11/11/15										
active Cyanide	ND	0.40	mg/Kg							
LCS (B135037-BS1) Prepared: 11/10/15 Analyzed: 11/11/15										
Reactive Cyanide	9.6	0.40	mg/Kg	10.0		95.9	86.4-107			
Batch B135142 - SW-846 9014										
Blank (B135142-BLK1) Prepared: 11/11/15 Analyzed: 11/12/15										
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B135142-BS1) Prepared: 11/11/15 Analyzed: 11/12/15										
Reactive Cyanide	9.6	0.40	mg/Kg	10.0		95.9	86.4-107			
Batch B135153 - SW-846 9030A										
Blank (B135153-BLK1) Prepared & Analyzed: 11/11/15										
Reactive Sulfide	ND	2.0	mg/Kg							

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135153 - SW-846 9030A										
LCS (B135153-BS1)				Prepared & Analyzed: 11/11/15						
Reactive Sulfide	16	2.0	mg/Kg	14.8		105	42.9-132			
Batch B135183 - SW-846 9030A										
Blank (B135183-BLK1)				Prepared: 11/11/15 Analyzed: 11/12/15						
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B135183-BS1)				Prepared: 11/11/15 Analyzed: 11/12/15						
Reactive Sulfide	15	2.0	mg/Kg	14.8		100	42.9-132			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

TCLP - Metals Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135050 - SW-846 3010A										
Blank (B135050-BLK1)										
				Prepared: 11/10/15 Analyzed: 11/12/15						
Arsenic	ND	0.010	mg/L							
Barium	ND	0.050	mg/L							
Cadmium	ND	0.0040	mg/L							
Chromium	ND	0.010	mg/L							
Lead	ND	0.010	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.0050	mg/L							
LCS (B135050-BS1)										
				Prepared: 11/10/15 Analyzed: 11/12/15						
Arsenic	0.553	0.010	mg/L	0.500		111	80-120			
Barium	0.509	0.050	mg/L	0.500		102	80-120			
Cadmium	0.535	0.0040	mg/L	0.500		107	80-120			
Chromium	0.487	0.010	mg/L	0.500		97.5	80-120			
Lead	0.475	0.010	mg/L	0.500		94.9	80-120			
Selenium	0.562	0.050	mg/L	0.500		112	80-120			
Silver	0.478	0.0050	mg/L	0.500		95.6	80-120			
LCS Dup (B135050-BSD1)										
				Prepared: 11/10/15 Analyzed: 11/12/15						
Arsenic	0.551	0.010	mg/L	0.500		110	80-120	0.362	20	
Barium	0.509	0.050	mg/L	0.500		102	80-120	0.116	20	
Cadmium	0.535	0.0040	mg/L	0.500		107	80-120	0.136	20	
Chromium	0.489	0.010	mg/L	0.500		97.8	80-120	0.363	20	
Lead	0.471	0.010	mg/L	0.500		94.2	80-120	0.740	20	
Selenium	0.561	0.050	mg/L	0.500		112	80-120	0.210	20	
Silver	0.479	0.0050	mg/L	0.500		95.8	80-120	0.202	20	
Batch B135051 - SW-846 7470A Prep										
Blank (B135051-BLK1)										
				Prepared: 11/10/15 Analyzed: 11/11/15						
Mercury	ND	0.00010	mg/L							
LCS (B135051-BS1)										
				Prepared: 11/10/15 Analyzed: 11/11/15						
Mercury	0.00182	0.00010	mg/L	0.00200		91.2	80-120			
LCS Dup (B135051-BSD1)										
				Prepared: 11/10/15 Analyzed: 11/11/15						
Mercury	0.00178	0.00010	mg/L	0.00200		88.9	80-120	2.61	20	

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS

Lab Sample ID: B135005-BS1 Date(s) Analyzed: 11/11/2015 11/11/2015
 Instrument ID (1): _____ Instrument ID (2): _____
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.15	
	2	0.00	0.00	0.00	0.15	1
Aroclor-1260	1	0.00	0.00	0.00	0.15	
	2	0.00	0.00	0.00	0.16	5

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS Dup

Lab Sample ID: B135005-BSD1 Date(s) Analyzed: 11/11/2015 11/11/2015

Instrument ID (1): _____ Instrument ID (2): _____

GC Column (1): ID: _____ (mm) GC Column (2): ID: _____ (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.16	
	2	0.00	0.00	0.00	0.16	1
Aroclor-1260	1	0.00	0.00	0.00	0.16	
	2	0.00	0.00	0.00	0.16	1

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

Matrix Spike

Lab Sample ID: B135005-MS1 Date(s) Analyzed: 11/12/2015 11/12/2015
 Instrument ID (1): _____ Instrument ID (2): _____
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.19	
	2	0.00	0.00	0.00	0.21	7
Aroclor-1260	1	0.00	0.00	0.00	0.16	
	2	0.00	0.00	0.00	0.18	9

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

Matrix Spike Dup

SW-846 8082A

Lab Sample ID: B135005-MSD1 Date(s) Analyzed: 11/12/2015 11/12/2015

Instrument ID (1): _____ Instrument ID (2): _____

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.16	
	2	0.00	0.00	0.00	0.17	5
Aroclor-1260	1	0.00	0.00	0.00	0.13	
	2	0.00	0.00	0.00	0.14	6

FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
 - † Wide recovery limits established for difficult compound.
 - ‡ Wide RPD limits established for difficult compound.
 - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
No results have been blank subtracted unless specified in the case narrative section.
- B-01 Methylene chloride is a common laboratory contaminant.
 - H-03 Sample received after recommended holding time was exceeded.
 - L-04 Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
 - L-07 Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
 - PR-03 Sample preserved in the laboratory, not in the field as required by the method.
 - PR-15 According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846 5035-L/5035A-L.
 - R-05 Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
 - S-07 One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.
 - V-05 Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
 - V-20 Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
 - Z-01 Acetone is a common laboratory contaminant.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 1030 in Soil</i>	
Ignitability	NY,NH,CT,NC,ME,VA
<i>SW-846 6010C in Water</i>	
Arsenic	NY,CT,NC,ME,NH,VA
Barium	NY,CT,ME,NC,NH,VA
Cadmium	NY,CT,ME,NC,NH,VA
Chromium	NY,CT,ME,NC,NH,VA
Lead	NY,CT,ME,NC,NH,VA
Selenium	CT,ME,NC,NH,NY,VA
Silver	CT,ME,NC,NH,NY,VA
<i>SW-846 7470A in Water</i>	
Mercury	CT,ME,NC,NH,NY,VA
<i>SW-846 8015C in Soil</i>	
Gasoline Range Organics (GRO)	NY,VA,NH
Diesel Range Organics	NY,VA,NH
<i>SW-846 8082A in Soil</i>	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NY,NC
Aroclor-1262 [2C]	NY,NC
Aroclor-1268	NY,NC
Aroclor-1268 [2C]	NY,NC
<i>SW-846 8260C in Soil</i>	
Acetone	CT,NH,NY,ME,VA
Acrylonitrile	CT,NH,NY,ME,VA
Benzene	CT,NH,NY,ME,VA
Bromobenzene	NH,NY,ME,VA
Bromochloromethane	NH,NY,ME,VA
Bromodichloromethane	CT,NH,NY,ME,VA
Bromoform	CT,NH,NY,ME,VA
Bromomethane	CT,NH,NY,ME,VA
2-Butanone (MEK)	CT,NH,NY,ME,VA
n-Butylbenzene	CT,NH,NY,ME,VA
sec-Butylbenzene	CT,NH,NY,ME,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
tert-Butylbenzene	CT,NH,NY,ME,VA
Carbon Disulfide	CT,NH,NY,ME,VA
Carbon Tetrachloride	CT,NH,NY,ME,VA
Chlorobenzene	CT,NH,NY,ME,VA
Chlorodibromomethane	CT,NH,NY,ME,VA
Chloroethane	CT,NH,NY,ME,VA
Chloroform	CT,NH,NY,ME,VA
Chloromethane	CT,NH,NY,ME,VA
2-Chlorotoluene	CT,NH,NY,ME,VA
4-Chlorotoluene	CT,NH,NY,ME,VA
Dibromomethane	NH,NY,ME,VA
1,2-Dichlorobenzene	CT,NH,NY,ME,VA
1,3-Dichlorobenzene	CT,NH,NY,ME,VA
1,4-Dichlorobenzene	CT,NH,NY,ME,VA
Dichlorodifluoromethane (Freon 12)	NH,NY,ME,VA
1,1-Dichloroethane	CT,NH,NY,ME,VA
1,2-Dichloroethane	CT,NH,NY,ME,VA
1,1-Dichloroethylene	CT,NH,NY,ME,VA
cis-1,2-Dichloroethylene	CT,NH,NY,ME,VA
trans-1,2-Dichloroethylene	CT,NH,NY,ME,VA
1,2-Dichloropropane	CT,NH,NY,ME,VA
1,3-Dichloropropane	NH,NY,ME,VA
2,2-Dichloropropane	NH,NY,ME,VA
1,1-Dichloropropene	NH,NY,ME,VA
cis-1,3-Dichloropropene	CT,NH,NY,ME,VA
trans-1,3-Dichloropropene	CT,NH,NY,ME,VA
Ethylbenzene	CT,NH,NY,ME,VA
Hexachlorobutadiene	NH,NY,ME,VA
2-Hexanone (MBK)	CT,NH,NY,ME,VA
Isopropylbenzene (Cumene)	CT,NH,NY,ME,VA
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl tert-Butyl Ether (MTBE)	NY,VA
Methylene Chloride	CT,NH,NY,ME,VA
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,VA
Naphthalene	NH,NY,ME,VA
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME,VA
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME,VA
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME,VA
Tetrachloroethylene	CT,NH,NY,ME,VA
Toluene	CT,NH,NY,ME,VA
1,2,3-Trichlorobenzene	ME
1,2,4-Trichlorobenzene	NH,NY,ME,VA
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NH,NY,ME,VA
1,1,2-Trichloroethane	CT,NH,NY,ME,VA
Trichloroethylene	CT,NH,NY,ME,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME,VA
1,2,3-Trichloropropane	NH,NY,ME,VA
1,2,4-Trimethylbenzene	CT,NH,NY,ME,VA
1,3,5-Trimethylbenzene	CT,NH,NY,ME,VA
Vinyl Chloride	CT,NH,NY,ME,VA
m+p Xylene	CT,NH,NY,ME,VA
o-Xylene	CT,NH,NY,ME,VA
<i>SW-846 8270D in Soil</i>	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2016
MA	Massachusetts DEP	M-MA100	06/30/2016
CT	Connecticut Department of Public Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2016
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2016
RI	Rhode Island Department of Health	LAO00112	12/30/2015
NC	North Carolina Div. of Water Quality	652	12/31/2015
NJ	New Jersey DEP	MA007 NELAP	06/30/2016
FL	Florida Department of Health	E871027 NELAP	06/30/2016
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2016
WA	State of Washington Department of Ecology	C2065	02/23/2016
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2015
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2016



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 Email: info@ontestlabs.com
 www.ontestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
 East long meadow, MA 01028

Page 1 of 3

Company Name: LIO Engineers LLC Telephone: 468829645

Address: 703 Forimer Street Project # 15-008-0265

Brooklyn NY 11211 Client P.O.#

Attention: Amy Hewson DATA DELIVERY (check all that apply)

Project Location: Atlantic Ave/Georgia St. Brooklyn

Sampled By: Eva Jakubowska Email: hewson@lio.com

Project Proposal Provided? (for billing purposes) Yes No proposal date

Format: PDF EXCEL GIS

Enhanced Data Package* Matrix Code Conc Code

Collection

Client Sample ID / Description SB-02-14.5-15.0 SB-02-comp

SB-04-11.0-11.5 SB-04-comp

SB-05-14.5-15.0 SB-05-comp

SB-07-14.5-15.0 SB-07-comp

SB-09-14.5-15.0 SB-09-comp

SB-09-comp

Analysis Requested: TCL VOCs 8260B

PAHs 8270

PCBs 3550B/8082

PHC PRO/Geo 8015B

PCPA Ground SW-846

TCL PCPA metals sw-8

Matrix Code:

Container Code:

Matrix Code:

Matrix Code:

Matrix Code:

Matrix Code:

Matrix Code:

Con-Test Lab ID	Client Sample ID / Description	Collection Date/Time	Analysis Date/Time	Composite	Grab	Matrix Code	Conc Code
01	SB-02-14.5-15.0	11-4-15	1010	X		S	U
02	SB-02-comp		1010	X		S	U
03	SB-04-11.0-11.5		1145	X		S	U
04	SB-04-comp		1145	X		S	U
05	SB-05-14.5-15.0		1415	X		S	U
06	SB-05-comp		1415	X		S	U
07	SB-07-14.5-15.0		1330	X		S	U
08	SB-07-comp		1330	X		S	U
09	SB-09-14.5-15.0	11-5-15	0930	X		S	U
10	SB-09-comp	11	0930	X		S	U

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:

H - High; M - Medium; L - Low; C - Clean; U - Unknown

Is your project MCP or RCP?

- MCP Form Required
- RCP Form Required
- MA State DW Form Required PWSID #



PROJECT ID: HWD1010

Matrix Code:

Container Code:

Matrix Code:

Matrix Code:

Matrix Code:

Turnaround ^{††}

- 7-Day
- 10-Day
- Other 5day

RUSH [†]

- 12-Hr 148-Hr
- 172-Hr 14-Day
- Require lab approval

Other:

Detection Limit Requirements

Massachusetts:

Connecticut:

Other:

Requisitioned by: (signature) Date/Time: 11/6/15

Specified by: (signature) Date/Time: 11/6/15

Invoiced by: (signature) Date/Time: 11/6/15

Received by: (signature) Date/Time: 11/6/15

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TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR INCORRECTLY, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents



Phone: 413-525-2332
 Fax: 413-525-6405
 Email: info@contestlabs.com
 www.contestlabs.com

CHAIN OF STUDY RECORD

39 Spruce Street
 East longmeadow, MA 01028

Company Name: Lilo Engineers, Inc.
 Address: 703 Forimer St.
Brooklyn, NY 11211
 Attention: Amy Hewson
 Project Location: Atlantic Ave, Brooklyn, NY
 Sampled By: Eva Jakubowska

Telephone: 716 882 9645
 Project #: 15-008-0265
 Client PO#: -

DATA DELIVERY (check all that apply)
 FAX EMAIL WEBSITE

Fax #: -
 Email: hewsona@lilo.com
 Format: PDF EXCEL GIS
 OTHER "Enhanced Data Package"

Project Proposal Provided? (for billing purposes)
 Yes No proposal date

Con-Test Lab ID <small>(laboratory use only)</small>	Client Sample ID / Description	Collection		Composite	Grab	Matrix	Cont. Data
		Begin/End Date/Time	Time				
11	SB-12-14.5-15.0'	11-5-15	1030	X	X	S	U
12	SB-12-COMP		1030	X		S	U
13	SB-14-14.5-15.0'		1130	X		S	U
14	SB-14-COMP		1130	X		S	U
15	SB-15-14.5-15.0'		1315	X		S	U
16	SB-15-COMP		1315	X		S	U
17	SB-17-14.5-15.0'		1415	X		S	U
18	SB-17-COMP		1415	X		S	U
19	SB-19-14.5-15.0'		1500	X		S	U
20	SB-19-COMP		1500	X		S	U

Comments:

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Cont. Code Box:

H - High; M - Medium; L - Low; C - Clean; U - Unknown

Is your project MCP or RCP?

- MCP Form Required
- RCP Form Required
- MA State DW Form Required PWSID #



PROJECT ID: HWD10105

Detection Limit Requirements

Messachusetts:

Turnaround

- 7-Day
- 10-Day
- Other 5 day
- RUSH
- 24-Hr
- 48-Hr
- 72-Hr
- 4-Day
- Require lab approval

Relinquished by: (signature) Eva Jakubowska 11/6/15

Received by: (signature) [Signature] 11/6/15

Relinquished by: (signature) [Signature] 11/6/15

Received by: (signature) [Signature] 11/6/15

Relinquished by: (signature) [Signature] 11/6/15

Received by: (signature) [Signature] 11/6/15

Relinquished by: (signature) [Signature] 11/6/15

Received by: (signature) [Signature] 11/6/15

Relinquished by: (signature) [Signature] 11/6/15

Received by: (signature) [Signature] 11/6/15

URNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT. PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT



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 Fax: 413-525-6405
 Email: info@contestlabs.com
 www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
 East Longmeadow, MA 01028

Company Name: UPO Engineers, Inc. Telephone: 416 882 9645
 Address: 703 Korimer Street Project # 15-008-0265
Brooklyn NY 11211 Client PO# —
 Attention: Amy Hewson
 Project Location: Atlantic Ave, Brooklyn, NY
 Sampled By: Eva Jakuboniska Email: hewsona@lino.com

DATA DELIVERY (check all that apply)
 FAX EMAIL WEBSITE
 Email: hewsona@lino.com
 Format: PDF EXCEL GIS
 OTHER

Project Proposal Provided? (for billing purposes)
 yes proposal date

Con-Test Lab ID <small>(laboratory use only)</small>	Client Sample ID / Description	Collection		Matrix Code
		Beginning Date/Time	Ending Date/Time	
21	SB-26-14.5-15.0	11-6-15 0945	0945	S U
22	SB-26-COMP	1045	1045	S U
23	SB-28-14.5-15.0	1045	1045	S U
24	SB-28-COMP	1130	1130	S U
25	SB-30-14.5-15.0	1130	1130	S U
26	SB-30-COMP			

Comments: _____
 Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
 H - High; M - Medium; L - Low; C - Clean; U - Unknown

Requisitioned by: (signature)	Date/Time	Turnaround	Detection Limit Requirements
<u>[Signature]</u>	<u>11/6/15</u>	<input type="checkbox"/> 7-Day <input type="checkbox"/> 10-Day <input checked="" type="checkbox"/> Other <u>Sday</u>	Massachusetts: _____ Connecticut: _____ Other: _____
Received by: (signature)	Date/Time		
<u>[Signature]</u>	<u>11/6/15</u>		
Requisitioned by: (signature)	Date/Time		
<u>[Signature]</u>	<u>11/6/15</u>		
Shipped by: (signature)	Date/Time		
<u>[Signature]</u>	<u>11/6/15</u>		

# of Containers	Preservation	Container Code	ANALYSIS REQUESTED	Matrix Code
3			TCL VOCs	
5			PAHs	
5			PCBs	
			PHC Profiles	
			PCB characteristics	
			TCL & PCB metals	

PROJECT ID: HWD1010
 Dissolved Metals
 Field Filtered
 Lab to Filter
 Cont. Code:
 A = amber glass
 G = glass
 P = plastic
 ST = sterile
 V = vial
 S = Summatran
 T = redlar bag
 O = Other
 Preservation:
 I = Iced
 H = HCL
 M = Methanol
 N = Nitric Acid
 S = Sulfuric Acid
 B = Sodium bisulfate
 X = Na hydroxide
 T = Na thiosulfate
 O = Other
 Matrix Code:
 GW = groundwater
 WW = wastewater
 DW = drinking water
 A = air
 S = soil/solid
 SL = sludge
 O = other

Is your project MCP or RCP?

- MCP Form Required
- RCP Form Required
- MA State DW Form Required PWSID # NELAC & AIHA-LAP, LLC



WBE/DBE Certified

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

39 Spruce St.
 East Longmeadow, MA. 01028
 P: 413-525-2332
 F: 413-525-6405
 www.contestlabs.com



Sample Receipt Checklist

CLIENT NAME: Lido Engineers, Inc. RECEIVED BY: VP DATE: 11/6/15

- 1) Was the chain(s) of custody relinquished and signed? Yes No No CoC Included
- 2) Does the chain agree with the samples? Yes No
 If not, explain:
- 3) Are all the samples in good condition? Yes No
 If not, explain:

4) How were the samples received:
 On Ice Direct from Sampling Ambient In Cooler(s)

Were the samples received in Temperature Compliance of (2-6°C)? Yes No N/A

Temperature °C by Temp blank _____ Temperature °C by Temp gun 2.1

5) Are there Dissolved samples for the lab to filter? Yes No

Who was notified _____ Date _____ Time _____

6) Are there any RUSH or SHORT HOLDING TIME samples? Yes No

Who was notified _____ Date _____ Time _____

7) Location where samples are stored: 1A

Permission to subcontract samples? Yes No
 (Walk-in clients only) if not already approved
 Client Signature: _____

8) Do all samples have the proper Acid pH: Yes No N/A

9) Do all samples have the proper Base pH: Yes No N/A

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	13
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	13
1 Liter Plastic		Plastic Bag / Ziploc	
500 mL Plastic		SOC Kit	
250 mL plastic		Non-ConTest Container	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other 16 oz amber	13

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol _____
 # Bisulfate _____ # DI Water _____
 # Thiosulfate _____ Unpreserved _____
 HAZ - 345

Time and Date Frozen: _____

Login Sample Receipt Checklist
 (Rejection Criteria Listing - Using Sample Acceptance Policy)
 Any False statement will be brought to the attention of Client

Question	Answer (True/False)	Comment
	T/F/NA	
1) The cooler's custody seal, if present, is intact.	NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	F	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.	T	

Doc #277 Rev. 4 August 2013 Who notified of False statements?
 Log-In Technician Initials: VP

Date/Time: 11/6/15 1533



November 18, 2015

Amy Hewson
LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202

Project Location: Atlantic Ave., Brooklyn, NY
Client Job Number:
Project Number: 15-008-0265
Laboratory Work Order Number: 15K0478

Enclosed are results of analyses for samples received by the laboratory on November 11, 2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Aaron L. Benoit", is written over a horizontal line.

Aaron L. Benoit
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Amy Hewson

REPORT DATE: 11/18/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 15-008-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15K0478

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave., Brooklyn, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-32- 8.5-9.0ft	15K0478-01	Soil		SM 2540G SW-846 8260C	
SB-32- Comp	15K0478-02	Soil		SM 2540G SW-846 1030 SW-846 1311 SW-846 6010C SW-846 7470A SW-846 8015C SW-846 8082A SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C SW-846 9095B	
SB-34- 14.5-15.0ft	15K0478-03	Soil		SM 2540G SW-846 8260C	
SB-34- Comp	15K0478-04	Soil		SM 2540G SW-846 1030 SW-846 1311 SW-846 6010C SW-846 7470A SW-846 8015C SW-846 8082A SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C SW-846 9095B	
SB-36- 14.5-15.0ft	15K0478-05	Soil		SM 2540G SW-846 8260C	



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LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Amy Hewson

REPORT DATE: 11/18/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 15-008-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15K0478

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave., Brooklyn, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-36- Comp	15K0478-06	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-39- 14.5-15.0ft	15K0478-07
SW-846 8260C					
SB-39- Comp	15K0478-08	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-42- 14.5-15.0ft	15K0478-09
SW-846 8260C					
SB-42- Comp	15K0478-10	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	



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LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Amy Hewson

REPORT DATE: 11/18/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 15-008-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15K0478

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave., Brooklyn, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-44- 14.5-15.0ft	15K0478-11	Soil		SM 2540G	
				SW-846 8260C	
SB-44- Comp	15K0478-12	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-47- 14.5-15.0ft	15K0478-13
SW-846 8260C					
SB-47- Comp	15K0478-14	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-43- 14.5-15.0ft	15K0478-15
SW-846 8260C					



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Amy Hewson

REPORT DATE: 11/18/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 15-008-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15K0478

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave., Brooklyn, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-43- Comp	15K0478-16	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-40- 14.5-15.0ft	15K0478-17
SW-846 8260C					
SB-40- Comp	15K0478-18	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-37- 14.5-15.0ft	15K0478-19
SW-846 8260C					
SB-37- Comp	15K0478-20	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

SW-846 8082A

Qualifications:**R-06**

Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.

Analyte & Samples(s) Qualified:**Aroclor-1016**

15K0478-04[SB-34- Comp], B135270-MS1, B135270-MSD1

Aroclor-1016 [2C]

15K0478-04[SB-34- Comp], B135270-MS1, B135270-MSD1

SW-846 8260C

Qualifications:**B-01**

Methylene chloride is a common laboratory contaminant.

Analyte & Samples(s) Qualified:**Methylene Chloride**

15K0478-09[SB-42- 14.5-15.0ft]

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**1,1,2-Trichloroethane**

B135570-BSD1

Toluene

B135570-BSD1

trans-1,3-Dichloropropene

B135570-BSD1

PR-03

Sample preserved in the laboratory, not in the field as required by the method.

Analyte & Samples(s) Qualified:

15K0478-01[SB-32- 8.5-9.0ft], 15K0478-03[SB-34- 14.5-15.0ft], 15K0478-05[SB-36- 14.5-15.0ft], 15K0478-07[SB-39- 14.5-15.0ft], 15K0478-09[SB-42- 14.5-15.0ft], 15K0478-11[SB-44- 14.5-15.0ft], 15K0478-13[SB-47- 14.5-15.0ft], 15K0478-15[SB-43- 14.5-15.0ft], 15K0478-17[SB-40- 14.5-15.0ft], 15K0478-19[SB-37- 14.5-15.0ft]

PR-15

According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846

5035-L/5035A-L.

Analyte & Samples(s) Qualified:

15K0478-01[SB-32- 8.5-9.0ft], 15K0478-03[SB-34- 14.5-15.0ft], 15K0478-05[SB-36- 14.5-15.0ft], 15K0478-07[SB-39- 14.5-15.0ft], 15K0478-09[SB-42- 14.5-15.0ft], 15K0478-11[SB-44- 14.5-15.0ft], 15K0478-13[SB-47- 14.5-15.0ft], 15K0478-15[SB-43- 14.5-15.0ft], 15K0478-17[SB-40- 14.5-15.0ft], 15K0478-19[SB-37- 14.5-15.0ft]

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:**Bromomethane**

15K0478-07[SB-39- 14.5-15.0ft], 15K0478-09[SB-42- 14.5-15.0ft], 15K0478-11[SB-44- 14.5-15.0ft], 15K0478-13[SB-47- 14.5-15.0ft], 15K0478-15[SB-43- 14.5-15.0ft], 15K0478-17[SB-40- 14.5-15.0ft], 15K0478-19[SB-37- 14.5-15.0ft], B135664-BLK1, B135664-BS1, B135664-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**1,2,3-Trichlorobenzene**

15K0478-01[SB-32- 8.5-9.0ft], 15K0478-03[SB-34- 14.5-15.0ft], 15K0478-05[SB-36- 14.5-15.0ft], B135570-BLK1, B135570-BS1, B135570-BSD1

1,2,4-Trichlorobenzene

15K0478-01[SB-32- 8.5-9.0ft], 15K0478-03[SB-34- 14.5-15.0ft], 15K0478-05[SB-36- 14.5-15.0ft], B135570-BLK1, B135570-BS1, B135570-BSD1

Toluene

15K0478-01[SB-32- 8.5-9.0ft], 15K0478-03[SB-34- 14.5-15.0ft], 15K0478-05[SB-36- 14.5-15.0ft], B135570-BLK1, B135570-BS1, B135570-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Acetone

B135664-BS1, B135664-BSD1

Bromomethane

B135570-BS1, B135570-BSD1

Carbon Disulfide

B135664-BS1, B135664-BSD1

Dichlorodifluoromethane (Freon 12)

B135570-BS1, B135570-BSD1

Methylene Chloride

B135570-BS1, B135570-BSD1

tert-Butyl Alcohol (TBA)

B135664-BS1, B135664-BSD1

SW-846 8270D

Qualifications:

S-07

One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.

Analyte & Samples(s) Qualified:

p-Terphenyl-d14

B135190-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Benzo(g,h,i)perylene

15K0478-02[SB-32- Comp]

SW-846 9045C

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:

pH

15K0478-02[SB-32- Comp], 15K0478-04[SB-34- Comp], 15K0478-06[SB-36- Comp], 15K0478-08[SB-39- Comp], 15K0478-10[SB-42- Comp], 15K0478-12[SB-44- Comp], 15K0478-14[SB-47- Comp], 15K0478-16[SB-43- Comp], 15K0478-18[SB-40- Comp], 15K0478-20[SB-37- Comp]

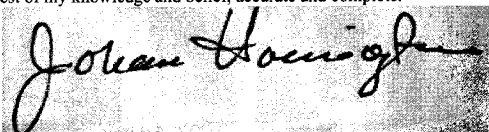
SW-846 8015C

Gasoline Range Organics (2-Methylpentane through 1,2,4-Trimethylbenzene) is quantitated against a calibration made with an unleaded gasoline composite standard.

Diesel Range Organics (C10-C28) is quantitated against a calibration made with a #2 fuel oil standard.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Johanna K. Harrington

Manager, Laboratory Reporting

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-32- 8.5-9.0ft

Sampled: 11/6/2015 13:30

Sample ID: 15K0478-01

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.098	mg/Kg dry	1	V-05	SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Acrylonitrile	ND	0.0059	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Bromomethane	ND	0.0098	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
2-Butanone (MEK)	ND	0.039	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
tert-Butyl Alcohol (TBA)	ND	0.039	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
n-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Carbon Disulfide	ND	0.0059	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Chlorodibromomethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Chloroethane	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Chloroform	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Chloromethane	ND	0.0098	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,2-Dibromoethane (EDB)	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
trans-1,4-Dichloro-2-butene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,1-Dichloroethylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,3-Dichloropropane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
cis-1,3-Dichloropropene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
trans-1,3-Dichloropropene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Diethyl Ether	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-32- 8.5-9.0ft

Sampled: 11/6/2015 13:30

Sample ID: 15K0478-01

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,4-Dioxane	ND	0.098	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Methylene Chloride	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Naphthalene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Tetrahydrofuran	ND	0.0098	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Toluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1	V-05	SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1	V-05	SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0098	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0098	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
Vinyl Chloride	ND	0.0098	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
m+p Xylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/16/15	11/16/15 23:54	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	98.8	70-130	11/16/15 23:54
Toluene-d8	84.7	70-130	11/16/15 23:54
4-Bromofluorobenzene	121	70-130	11/16/15 23:54



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-32- 8.5-9.0ft

Sampled: 11/6/2015 13:30

Sample ID: 15K0478-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.1		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-32- Comp

Sampled: 11/6/2015 13:30

Sample ID: 15K0478-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 10:30	BGL
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 10:30	BGL
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 10:30	BGL
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 10:30	BGL
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 10:30	BGL
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 10:30	BGL
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1	V-05	SW-846 8270D	11/11/15	11/16/15 10:30	BGL
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 10:30	BGL
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 10:30	BGL
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 10:30	BGL
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 10:30	BGL
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 10:30	BGL
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 10:30	BGL
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 10:30	BGL
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 10:30	BGL
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 10:30	BGL
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 10:30	BGL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Nitrobenzene-d5	77.1		30-130			11/16/15 10:30			
2-Fluorobiphenyl	89.9		30-130			11/16/15 10:30			
p-Terphenyl-d14	106		30-130			11/16/15 10:30			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-32- Comp

Sampled: 11/6/2015 13:30

Sample ID: 15K0478-02

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:55	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:55	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:55	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:55	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:55	JMB
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:55	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:55	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:55	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:55	JMB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	76.3		30-150			11/13/15 19:55			
Decachlorobiphenyl [2]	79.3		30-150			11/13/15 19:55			
Tetrachloro-m-xylene [1]	77.3		30-150			11/13/15 19:55			
Tetrachloro-m-xylene [2]	83.3		30-150			11/13/15 19:55			



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-32- Comp

Sampled: 11/6/2015 13:30

Sample ID: 15K0478-02

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/16/15	11/16/15 14:47	EEH
Diesel Range Organics	ND	8.8	mg/Kg dry	1		SW-846 8015C	11/12/15	11/17/15 9:01	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	87.0		70-130				11/16/15 14:47		
o-Terphenyl	75.2		40-140				11/17/15 9:01		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-32- Comp

Sampled: 11/6/2015 13:30

Sample ID: 15K0478-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/16/15	11/16/15 15:10	AG
pH @26.4°C	7.8		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 19:00	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	94.2		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-32- Comp

Sampled: 11/6/2015 13:30

Sample ID: 15K0478-02

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:20	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 11:42	SCB
Barium	0.31	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:20	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:20	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:20	AME
Lead	0.013	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:20	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:20	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:20	AME



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-34-14.5-15.0ft

Sampled: 11/6/2015 14:15

Sample ID: 15K0478-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Sample Flags: PR-03, PR-15

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.095	mg/Kg dry	1	V-05	SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Acrylonitrile	ND	0.0057	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Bromomethane	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
2-Butanone (MEK)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
tert-Butyl Alcohol (TBA)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Carbon Disulfide	ND	0.0057	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Chlorodibromomethane	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Chloroethane	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Chloroform	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Chloromethane	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,2-Dibromoethane (EDB)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
trans-1,4-Dichloro-2-butene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,1-Dichloroethylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,3-Dichloropropane	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
cis-1,3-Dichloropropene	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
trans-1,3-Dichloropropene	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Diethyl Ether	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-34- 14.5-15.0ft

Sampled: 11/6/2015 14:15

Sample ID: 15K0478-03

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,4-Dioxane	ND	0.095	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Methylene Chloride	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Naphthalene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,1,2,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Tetrahydrofuran	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1	V-05	SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1	V-05	SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,3,5-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Vinyl Chloride	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
m+p Xylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:26	MFF
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
1,2-Dichloroethane-d4	100	70-130						11/17/15 0:26	
Toluene-d8	84.8	70-130						11/17/15 0:26	
4-Bromofluorobenzene	119	70-130						11/17/15 0:26	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-34- 14.5-15.0ft

Sampled: 11/6/2015 14:15

Sample ID: 15K0478-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.4		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-34- Comp

Sampled: 11/6/2015 14:15

Sample ID: 15K0478-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
Acenaphthylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
Anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
Benzo(a)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
Benzo(a)pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
Benzo(b)fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
Benzo(g,h,i)perylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
Benzo(k)fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
Chrysene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
Dibenz(a,h)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
Fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
Indeno(1,2,3-cd)pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
Phenanthrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
Pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 21:48	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		84.8	30-130					11/14/15 21:48	
2-Fluorobiphenyl		96.0	30-130					11/14/15 21:48	
p-Terphenyl-d14		127	30-130					11/14/15 21:48	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-34- Comp

Sampled: 11/6/2015 14:15

Sample ID: 15K0478-04

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5	R-06	SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		80.3	30-150					11/13/15 20:07	
Decachlorobiphenyl [2]		83.4	30-150					11/13/15 20:07	
Tetrachloro-m-xylene [1]		80.3	30-150					11/13/15 20:07	
Tetrachloro-m-xylene [2]		86.7	30-150					11/13/15 20:07	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-34- Comp

Sampled: 11/6/2015 14:15

Sample ID: 15K0478-04

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Gasoline Range Organics (GRO)	ND	1.2	mg/Kg dry	1		SW-846 8015C	11/16/15	11/16/15 15:23	EEH
Diesel Range Organics	ND	9.3	mg/Kg dry	1		SW-846 8015C	11/12/15	11/17/15 8:44	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual		Date	Date/Time	
1-Chloro-3-fluorobenzene	92.0		70-130				11/16/15	15:23	
o-Terphenyl	88.6		40-140				11/17/15	8:44	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-34- Comp

Sampled: 11/6/2015 14:15

Sample ID: 15K0478-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/16/15	11/16/15 15:10	AG
pH @22.5°C	7.1		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 19:00	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	89.2		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-34- Comp

Sampled: 11/6/2015 14:15

Sample ID: 15K0478-04

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:25	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 11:43	SCB
Barium	0.17	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:25	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:25	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:25	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:25	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:25	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:25	AME

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-36-14.5-15.0ft

Sampled: 11/9/2015 09:30

Sample ID: 15K0478-05

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.097	mg/Kg dry	1	V-05	SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Acrylonitrile	ND	0.0058	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Bromomethane	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
2-Butanone (MEK)	ND	0.039	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
tert-Butyl Alcohol (TBA)	ND	0.039	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Carbon Disulfide	ND	0.0058	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Chlorodibromomethane	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Chloroethane	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Chloroform	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Chloromethane	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,2-Dibromoethane (EDB)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
trans-1,4-Dichloro-2-butene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,1-Dichloroethylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,3-Dichloropropane	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
cis-1,3-Dichloropropene	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
trans-1,3-Dichloropropene	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Diethyl Ether	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-36-14.5-15.0ft

Sampled: 11/9/2015 09:30

Sample ID: 15K0478-05

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,4-Dioxane	ND	0.097	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Methylene Chloride	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Naphthalene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,1,2,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Tetrahydrofuran	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1	V-05	SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1	V-05	SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,3,5-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
Vinyl Chloride	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
m+p Xylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/16/15	11/17/15 0:58	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	100	70-130	11/17/15 0:58
Toluene-d8	85.6	70-130	11/17/15 0:58
4-Bromofluorobenzene	119	70-130	11/17/15 0:58



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-36- 14.5-15.0ft

Sampled: 11/9/2015 09:30

Sample ID: 15K0478-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.0		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-36- Comp

Sampled: 11/9/2015 09:30

Sample ID: 15K0478-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL
Acenaphthylene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL
Anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL
Benzo(a)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL
Benzo(a)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL
Benzo(b)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL
Benzo(g,h,i)perylene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL
Benzo(k)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL
Chrysene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL
Dibenz(a,h)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL
Fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL
Fluorene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL
2-Methylnaphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL
Naphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL
Phenanthrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL
Pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:14	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Nitrobenzene-d5	53.8	30-130	11/14/15 22:14
2-Fluorobiphenyl	65.8	30-130	11/14/15 22:14
p-Terphenyl-d14	117	30-130	11/14/15 22:14



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-36- Comp

Sampled: 11/9/2015 09:30

Sample ID: 15K0478-06

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	87.8	30-150	
Decachlorobiphenyl [2]	90.9	30-150	
Tetrachloro-m-xylene [1]	88.6	30-150	
Tetrachloro-m-xylene [2]	95.8	30-150	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-36- Comp

Sampled: 11/9/2015 09:30

Sample ID: 15K0478-06

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg dry	1		SW-846 8015C	11/16/15	11/16/15 15:59	EEH
Diesel Range Organics	ND	8.7	mg/Kg dry	1		SW-846 8015C	11/12/15	11/17/15 8:09	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1-Chloro-3-fluorobenzene	90.3	70-130	
o-Terphenyl	84.2	40-140	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-36- Comp

Sampled: 11/9/2015 09:30

Sample ID: 15K0478-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/16/15	11/16/15 15:10	AG
pH @23.7°C	7.6		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 19:00	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	96.0		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-36- Comp

Sampled: 11/9/2015 09:30

Sample ID: 15K0478-06

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:29	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 11:45	SCB
Barium	0.26	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:29	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:29	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:29	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:29	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:29	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:29	AME



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-39-14.5-15.0ft

Sampled: 11/9/2015 10:30

Sample ID: 15K0478-07

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Acrylonitrile	ND	0.0057	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Bromomethane	ND	0.0095	mg/Kg dry	1	R-05	SW-846 8260C	11/17/15	11/17/15 12:49	MFF
2-Butanone (MEK)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
tert-Butyl Alcohol (TBA)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
n-Butylbenzene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Carbon Disulfide	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Chlorodibromomethane	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Chloroethane	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Chloroform	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Chloromethane	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,2-Dibromoethane (EDB)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
trans-1,4-Dichloro-2-butene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,1-Dichloroethylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,3-Dichloropropane	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
cis-1,3-Dichloropropene	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
trans-1,3-Dichloropropene	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Diethyl Ether	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-39- 14.5-15.0ft

Sampled: 11/9/2015 10:30

Sample ID: 15K0478-07

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,4-Dioxane	ND	0.095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Methylene Chloride	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Naphthalene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,1,2,2-Tetrachloroethane	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Tetrahydrofuran	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,3,5-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
Vinyl Chloride	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
m+p Xylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 12:49	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	105	70-130	11/17/15 12:49
Toluene-d8	96.6	70-130	11/17/15 12:49
4-Bromofluorobenzene	90.7	70-130	11/17/15 12:49



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-39- 14.5-15.0ft

Sampled: 11/9/2015 10:30

Sample ID: 15K0478-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.2		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-39- Comp

Sampled: 11/9/2015 10:30

Sample ID: 15K0478-08

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Acenaphthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
Acenaphthylene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
Anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
Benzo(a)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
Benzo(a)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
Benzo(b)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
Benzo(g,h,i)perylene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
Benzo(k)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
Chrysene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
Dibenz(a,h)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
Fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
Fluorene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
2-Methylnaphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
Naphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
Phenanthrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
Pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 22:39	BGL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Nitrobenzene-d5	76.4		30-130						11/14/15 22:39
2-Fluorobiphenyl	89.1		30-130						11/14/15 22:39
p-Terphenyl-d14	115		30-130						11/14/15 22:39

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-39- Comp

Sampled: 11/9/2015 10:30

Sample ID: 15K0478-08

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:32	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:32	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:32	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:32	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:32	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:32	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:32	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:32	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:32	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	78.2	30-150	
Decachlorobiphenyl [2]	80.9	30-150	
Tetrachloro-m-xylene [1]	76.0	30-150	
Tetrachloro-m-xylene [2]	82.3	30-150	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-39- Comp

Sampled: 11/9/2015 10:30

Sample ID: 15K0478-08

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg dry	1		SW-846 8015C	11/16/15	11/16/15 16:35	EEH
Diesel Range Organics	ND	8.6	mg/Kg dry	1		SW-846 8015C	11/12/15	11/17/15 2:24	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	88.8		70-130				11/16/15 16:35		
o-Terphenyl	92.2		40-140				11/17/15 2:24		



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-39- Comp

Sampled: 11/9/2015 10:30

Sample ID: 15K0478-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/16/15	11/16/15 15:10	AG
pH @23.2°C	8.0		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 19:00	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	96.7		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-39- Comp

Sampled: 11/9/2015 10:30

Sample ID: 15K0478-08

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:34	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 11:46	SCB
Barium	0.18	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:34	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:34	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:34	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:34	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:34	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:34	AME

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-42-14.5-15.0ft

Sampled: 11/9/2015 11:00

Sample ID: 15K0478-09

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Acrylonitrile	ND	0.0060	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	R-05	SW-846 8260C	11/17/15	11/17/15 13:17	MFF
2-Butanone (MEK)	ND	0.040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
n-Butylbenzene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Carbon Disulfide	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Chloroethane	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Chloroform	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,1-Dichloroethylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Diethyl Ether	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF

HAZ - 389

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-42- 14.5-15.0ft

Sampled: 11/9/2015 11:00

Sample ID: 15K0478-09

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Methylene Chloride	0.021	0.020	mg/Kg dry	1	B-01	SW-846 8260C	11/17/15	11/17/15 13:17	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Naphthalene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Toluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
m+p Xylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:17	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	102	70-130	11/17/15 13:17
Toluene-d8	97.1	70-130	11/17/15 13:17
4-Bromofluorobenzene	91.0	70-130	11/17/15 13:17



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-42- 14.5-15.0ft

Sampled: 11/9/2015 11:00

Sample ID: 15K0478-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.4		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-42- Comp

Sampled: 11/9/2015 11:00

Sample ID: 15K0478-10

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:05	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		63.2	30-130					11/14/15 23:05	
2-Fluorobiphenyl		75.2	30-130					11/14/15 23:05	
p-Terphenyl-d14		95.4	30-130					11/14/15 23:05	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-42- Comp

Sampled: 11/9/2015 11:00

Sample ID: 15K0478-10

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:45	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:45	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:45	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:45	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:45	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:45	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:45	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:45	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:45	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	87.9	30-150	
Decachlorobiphenyl [2]	91.2	30-150	
Tetrachloro-m-xylene [1]	84.8	30-150	
Tetrachloro-m-xylene [2]	91.1	30-150	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-42- Comp

Sampled: 11/9/2015 11:00

Sample ID: 15K0478-10

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date		Analyst
							Prepared	Analyzed	
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/16/15	11/16/15 17:11	EEH
Diesel Range Organics	ND	8.7	mg/Kg dry	1		SW-846 8015C	11/12/15	11/17/15 2:41	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	90.6		70-130				11/16/15 17:11		
o-Terphenyl	70.4		40-140				11/17/15 2:41		

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-42- Comp

Sampled: 11/9/2015 11:00

Sample ID: 15K0478-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/16/15	11/16/15 15:10	AG
pH @22.9°C	8.7		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 19:00	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	95.9		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-42- Comp

Sampled: 11/9/2015 11:00

Sample ID: 15K0478-10

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:55	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 11:48	SCB
Barium	0.27	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:55	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:55	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:55	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:55	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:55	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:55	AME

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-44- 14.5-15.0ft

Sampled: 11/9/2015 12:45

Sample ID: 15K0478-11

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Acrylonitrile	ND	0.0055	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Bromomethane	ND	0.0092	mg/Kg dry	1	R-05	SW-846 8260C	11/17/15	11/17/15 13:44	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
tert-Butyl Alcohol (TBA)	ND	0.037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
n-Butylbenzene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Carbon Disulfide	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Chlorodibromomethane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Chloroethane	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Chloromethane	ND	0.0092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,2-Dibromoethane (EDB)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
trans-1,4-Dichloro-2-butene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,3-Dichloropropane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
cis-1,3-Dichloropropene	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
trans-1,3-Dichloropropene	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Diethyl Ether	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-44-14.5-15.0ft

Sampled: 11/9/2015 12:45

Sample ID: 15K0478-11

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,4-Dioxane	ND	0.092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Methylene Chloride	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,1,2,2-Tetrachloroethane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Tetrahydrofuran	ND	0.0092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,3,5-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
Vinyl Chloride	ND	0.0092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 13:44	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	105	70-130	11/17/15 13:44
Toluene-d8	96.6	70-130	11/17/15 13:44
4-Bromofluorobenzene	89.9	70-130	11/17/15 13:44



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-44- 14.5-15.0ft

Sampled: 11/9/2015 12:45

Sample ID: 15K0478-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.9		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-44- Comp

Sampled: 11/9/2015 12:45

Sample ID: 15K0478-12

Sample Matrix: Soil

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL
Acenaphthylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL
Anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL
Benzo(a)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL
Benzo(a)pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL
Benzo(b)fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL
Benzo(g,h,i)perylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL
Benzo(k)fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL
Chrysene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL
Dibenz(a,h)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL
Fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL
Indeno(1,2,3-cd)pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL
Phenanthrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL
Pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:32	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Nitrobenzene-d5	71.5	30-130	11/14/15 23:32
2-Fluorobiphenyl	83.6	30-130	11/14/15 23:32
p-Terphenyl-d14	93.1	30-130	11/14/15 23:32

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Subject Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-44- Comp

Sampled: 11/9/2015 12:45

Sample ID: 15K0478-12

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:58	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:58	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:58	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:58	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:58	JMB
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:58	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:58	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:58	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:58	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	84.4	30-150	11/13/15 20:58
Decachlorobiphenyl [2]	87.0	30-150	11/13/15 20:58
Tetrachloro-m-xylene [1]	83.3	30-150	11/13/15 20:58
Tetrachloro-m-xylene [2]	90.2	30-150	11/13/15 20:58



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-44- Comp

Sampled: 11/9/2015 12:45

Sample ID: 15K0478-12

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date		Analyst
							Prepared	Analyzed	
Gasoline Range Organics (GRO)	ND	1.2	mg/Kg dry	1		SW-846 8015C	11/16/15	11/16/15 17:47	EEH
Diesel Range Organics	ND	9.1	mg/Kg dry	1		SW-846 8015C	11/12/15	11/17/15 2:58	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	86.7		70-130				11/16/15 17:47		
o-Terphenyl	75.7		40-140				11/17/15 2:58		

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-44- Comp

Sampled: 11/9/2015 12:45

Sample ID: 15K0478-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/16/15	11/16/15 15:10	AG
pH @25.6°C	5.9		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 19:00	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	91.1		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-44- Comp

Sampled: 11/9/2015 12:45

Sample ID: 15K0478-12

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:59	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 11:49	SCB
Barium	0.27	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:59	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:59	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:59	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:59	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:59	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 13:59	AME

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-47- 14.5-15.0ft

Sampled: 11/9/2015 13:30

Sample ID: 15K0478-13

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.094	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Acrylonitrile	ND	0.0056	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Bromomethane	ND	0.0094	mg/Kg dry	1	R-05	SW-846 8260C	11/17/15	11/17/15 14:11	MFF
2-Butanone (MEK)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
tert-Butyl Alcohol (TBA)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
n-Butylbenzene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Carbon Disulfide	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Chlorodibromomethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Chloroethane	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Chloroform	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Chloromethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,2-Dibromoethane (EDB)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
trans-1,4-Dichloro-2-butene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,1-Dichloroethylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,3-Dichloropropane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
cis-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
trans-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Diethyl Ether	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-47- 14.5-15.0ft

Sampled: 11/9/2015 13:30

Sample ID: 15K0478-13

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,4-Dioxane	ND	0.094	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Methylene Chloride	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Naphthalene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,1,2,2-Tetrachloroethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Tetrahydrofuran	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,3,5-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
Vinyl Chloride	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
m+p Xylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:11	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	105	70-130	11/17/15 14:11
Toluene-d8	95.8	70-130	11/17/15 14:11
4-Bromofluorobenzene	91.2	70-130	11/17/15 14:11



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-47- 14.5-15.0ft

Sampled: 11/9/2015 13:30

Sample ID: 15K0478-13

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.6		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-47- Comp

Sampled: 11/9/2015 13:30

Sample ID: 15K0478-14

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
Acenaphthylene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
Anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
Benzo(a)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
Benzo(a)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
Benzo(b)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
Benzo(g,h,i)perylene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
Benzo(k)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
Chrysene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
Dibenz(a,h)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
Fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
Fluorene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
2-Methylnaphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
Naphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
Phenanthrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
Pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/14/15 23:58	BGL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Nitrobenzene-d5	84.1		30-130				11/14/15 23:58		
2-Fluorobiphenyl	93.7		30-130				11/14/15 23:58		
p-Terphenyl-d14	114		30-130				11/14/15 23:58		

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-47- Comp

Sampled: 11/9/2015 13:30

Sample ID: 15K0478-14

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 21:10	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 21:10	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 21:10	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 21:10	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 21:10	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 21:10	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 21:10	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 21:10	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 21:10	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	90.3	30-150	
Decachlorobiphenyl [2]	93.5	30-150	
Tetrachloro-m-xylene [1]	82.6	30-150	
Tetrachloro-m-xylene [2]	88.4	30-150	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-47- Comp

Sampled: 11/9/2015 13:30

Sample ID: 15K0478-14

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg dry	1		SW-846 8015C	11/16/15	11/16/15 18:23	EEH
Diesel Range Organics	ND	8.5	mg/Kg dry	1		SW-846 8015C	11/12/15	11/17/15 3:16	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	86.0		70-130					11/16/15 18:23	
o-Terphenyl	92.2		40-140					11/17/15 3:16	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-47- Comp

Sampled: 11/9/2015 13:30

Sample ID: 15K0478-14

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/16/15	11/16/15 15:10	AG
pH @23.2°C	7.4		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 19:00	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	98.2		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-47- Comp

Sampled: 11/9/2015 13:30

Sample ID: 15K0478-14

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:04	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 11:50	SCB
Barium	0.24	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:04	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:04	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:04	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:04	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:04	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:04	AME

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-43- 14.5-15.0ft

Sampled: 11/9/2015 14:15

Sample ID: 15K0478-15

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Acrylonitrile	ND	0.0063	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Benzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Bromobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Bromochloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Bromodichloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Bromoform	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	R-05	SW-846 8260C	11/17/15	11/17/15 14:39	MFF
2-Butanone (MEK)	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
tert-Butyl Alcohol (TBA)	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
n-Butylbenzene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
sec-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
tert-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Carbon Disulfide	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Carbon Tetrachloride	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Chlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Chloroethane	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Chloroform	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
2-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
4-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Dibromomethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,2-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,3-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,4-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
trans-1,4-Dichloro-2-butene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,1-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,2-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,1-Dichloroethylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
cis-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
trans-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
2,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,1-Dichloropropene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Diethyl Ether	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF

HAZ - 413

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-43- 14.5-15.0ft

Sampled: 11/9/2015 14:15

Sample ID: 15K0478-15

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Ethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Hexachlorobutadiene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
2-Hexanone (MBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Isopropylbenzene (Cumene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Methylene Chloride	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Naphthalene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
n-Propylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Styrene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Tetrachloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Toluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,2,3-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,2,4-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,3,5-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,1,1-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,1,2-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Trichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,2,3-Trichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,2,4-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
1,3,5-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
m+p Xylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF
o-Xylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 14:39	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	105	70-130	11/17/15 14:39
Toluene-d8	97.7	70-130	11/17/15 14:39
4-Bromofluorobenzene	90.2	70-130	11/17/15 14:39



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-43- 14.5-15.0ft

Sampled: 11/9/2015 14:15

Sample ID: 15K0478-15

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.4		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-43- Comp

Sampled: 11/9/2015 14:15

Sample ID: 15K0478-16

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Accnaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:24	BGL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Nitrobenzene-d5	76.5		30-130				11/15/15 0:24		
2-Fluorobiphenyl	89.9		30-130				11/15/15 0:24		
p-Terphenyl-d14	109		30-130				11/15/15 0:24		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-43- Comp

Sampled: 11/9/2015 14:15

Sample ID: 15K0478-16

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:00	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:00	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:00	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:00	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:00	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:00	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:00	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:00	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:00	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	85.4	30-150	
Decachlorobiphenyl [2]	88.7	30-150	
Tetrachloro-m-xylene [1]	83.8	30-150	
Tetrachloro-m-xylene [2]	89.8	30-150	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-43- Comp

Sampled: 11/9/2015 14:15

Sample ID: 15K0478-16

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/16/15	11/16/15 18:59	EEH
Diesel Range Organics	ND	8.7	mg/Kg dry	1		SW-846 8015C	11/12/15	11/17/15 3:33	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	86.6		70-130					11/16/15 18:59	
o-Terphenyl	88.1		40-140					11/17/15 3:33	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-43- Comp

Sampled: 11/9/2015 14:15

Sample ID: 15K0478-16

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/16/15	11/16/15 15:10	AG
pH @22.7°C	7.4		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 19:00	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	95.3		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-43- Comp

Sampled: 11/9/2015 14:15

Sample ID: 15K0478-16

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:09	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 11:52	SCB
Barium	0.25	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:09	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:09	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:09	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:09	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:09	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:09	AME

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-40- 14.5-15.0ft

Sampled: 11/10/2015 09:30

Sample ID: 15K0478-17

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Acrylonitrile	ND	0.0060	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	R-05	SW-846 8260C	11/17/15	11/17/15 15:06	MFF
2-Butanone (MEK)	ND	0.040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
n-Butylbenzene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Carbon Disulfide	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Chloroethane	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Chloroform	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,1-Dichloroethylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Diethyl Ether	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF

HAZ - 421

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-40-14.5-15.0ft

Sampled: 11/10/2015 09:30

Sample ID: 15K0478-17

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Methylene Chloride	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Naphthalene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Toluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
m+p Xylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:06	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	104	70-130	11/17/15 15:06
Toluene-d8	96.0	70-130	11/17/15 15:06
4-Bromofluorobenzene	90.6	70-130	11/17/15 15:06



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-40- 14.5-15.0ft

Sampled: 11/10/2015 09:30

Sample ID: 15K0478-17

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.1		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-40- Comp

Sampled: 11/10/2015 09:30

Sample ID: 15K0478-18

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 0:51	BGL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Nitrobenzene-d5	78.9	30-130						11/15/15 0:51	
2-Fluorobiphenyl	91.9	30-130						11/15/15 0:51	
p-Terphenyl-d14	114	30-130						11/15/15 0:51	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-40- Comp

Sampled: 11/10/2015 09:30

Sample ID: 15K0478-18

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:13	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:13	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:13	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:13	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:13	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:13	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:13	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:13	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:13	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	62.2	30-150	
Decachlorobiphenyl [2]	64.5	30-150	
Tetrachloro-m-xylene [1]	50.3	30-150	
Tetrachloro-m-xylene [2]	54.8	30-150	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-40- Comp

Sampled: 11/10/2015 09:30

Sample ID: 15K0478-18

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/16/15	11/16/15 19:35	EEH
Diesel Range Organics	ND	8.7	mg/Kg dry	1		SW-846 8015C	11/12/15	11/17/15 2:06	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	85.4		70-130				11/16/15 19:35		
o-Terphenyl	74.7		40-140				11/17/15 2:06		

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-40- Comp

Sampled: 11/10/2015 09:30

Sample ID: 15K0478-18

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/16/15	11/16/15 15:10	AG
pH @23.1°C	7.6		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 19:00	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	96.3		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-40- Comp

Sampled: 11/10/2015 09:30

Sample ID: 15K0478-18

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:13	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 11:53	SCB
Barium	0.42	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:13	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:13	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:13	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:13	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:13	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:13	AME

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-37- 14.5-15.0ft

Sampled: 11/10/2015 10:15

Sample ID: 15K0478-19

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Acrylonitrile	ND	0.0055	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Bromomethane	ND	0.0092	mg/Kg dry	1	R-05	SW-846 8260C	11/17/15	11/17/15 15:34	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
tert-Butyl Alcohol (TBA)	ND	0.037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
n-Butylbenzene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Carbon Disulfide	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Chlorodibromomethane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Chloroethane	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Chloromethane	ND	0.0092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,2-Dibromoethane (EDB)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
trans-1,4-Dichloro-2-butene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,3-Dichloropropane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
cis-1,3-Dichloropropene	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
trans-1,3-Dichloropropene	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Diethyl Ether	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-37- 14.5-15.0ft

Sampled: 11/10/2015 10:15

Sample ID: 15K0478-19

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,4-Dioxane	ND	0.092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Methylene Chloride	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,1,2,2-Tetrachloroethane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Tetrahydrofuran	ND	0.0092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,3,5-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
Vinyl Chloride	ND	0.0092	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 15:34	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	107	70-130	11/17/15 15:34
Toluene-d8	96.0	70-130	11/17/15 15:34
4-Bromofluorobenzene	88.8	70-130	11/17/15 15:34



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-37- 14.5-15.0ft

Sampled: 11/10/2015 10:15

Sample ID: 15K0478-19

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
% Solids	93.9		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-37- Comp

Sampled: 11/10/2015 10:15

Sample ID: 15K0478-20

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/15/15 1:18	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Nitrobenzene-d5	67.0	30-130	11/15/15 1:18
2-Fluorobiphenyl	80.2	30-130	11/15/15 1:18
p-Terphenyl-d14	104	30-130	11/15/15 1:18

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-37- Comp

Sampled: 11/10/2015 10:15

Sample ID: 15K0478-20

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:25	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:25	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:25	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:25	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:25	JMB
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:25	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:25	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:25	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 22:25	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	80.2	30-150	
Decachlorobiphenyl [2]	82.9	30-150	
Tetrachloro-m-xylene [1]	79.8	30-150	
Tetrachloro-m-xylene [2]	85.5	30-150	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-37- Comp

Sampled: 11/10/2015 10:15

Sample ID: 15K0478-20

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/16/15	11/16/15 20:11	EEH
Diesel Range Organics	ND	8.8	mg/Kg dry	1		SW-846 8015C	11/12/15	11/17/15 7:00	PJG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene		89.6	70-130					11/16/15 20:11	
o-Terphenyl		92.3	40-140					11/17/15 7:00	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-37- Comp

Sampled: 11/10/2015 10:15

Sample ID: 15K0478-20

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/16/15	11/16/15 15:10	AG
pH @22.9°C	6.7		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 19:00	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	95.1		% Wt	1		SM 2540G	11/11/15	11/12/15 8:47	MRL



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0478

Date Received: 11/11/2015

Field Sample #: SB-37- Comp

Sampled: 11/10/2015 10:15

Sample ID: 15K0478-20

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:18	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 11:55	SCB
Barium	0.37	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:18	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:18	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:18	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:18	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:18	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:18	AME

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
15K0478-01 [SB-32- 8.5-9.0ft]	B135188	11/11/15
15K0478-02 [SB-32- Comp]	B135188	11/11/15
15K0478-03 [SB-34- 14.5-15.0ft]	B135188	11/11/15
15K0478-04 [SB-34- Comp]	B135188	11/11/15
15K0478-05 [SB-36- 14.5-15.0ft]	B135188	11/11/15
15K0478-06 [SB-36- Comp]	B135188	11/11/15
15K0478-07 [SB-39- 14.5-15.0ft]	B135188	11/11/15
15K0478-08 [SB-39- Comp]	B135188	11/11/15
15K0478-09 [SB-42- 14.5-15.0ft]	B135188	11/11/15
15K0478-10 [SB-42- Comp]	B135188	11/11/15
15K0478-11 [SB-44- 14.5-15.0ft]	B135188	11/11/15
15K0478-12 [SB-44- Comp]	B135188	11/11/15
15K0478-13 [SB-47- 14.5-15.0ft]	B135188	11/11/15
15K0478-14 [SB-47- Comp]	B135188	11/11/15
15K0478-15 [SB-43- 14.5-15.0ft]	B135188	11/11/15
15K0478-16 [SB-43- Comp]	B135188	11/11/15
15K0478-17 [SB-40- 14.5-15.0ft]	B135188	11/11/15
15K0478-18 [SB-40- Comp]	B135188	11/11/15
15K0478-19 [SB-37- 14.5-15.0ft]	B135188	11/11/15
15K0478-20 [SB-37- Comp]	B135188	11/11/15

846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
15K0478-02 [SB-32- Comp]	B135526	50.0	11/16/15
15K0478-04 [SB-34- Comp]	B135526	50.0	11/16/15
15K0478-06 [SB-36- Comp]	B135526	50.0	11/16/15
15K0478-08 [SB-39- Comp]	B135526	50.0	11/16/15
15K0478-10 [SB-42- Comp]	B135526	50.0	11/16/15
15K0478-12 [SB-44- Comp]	B135526	50.0	11/16/15
15K0478-14 [SB-47- Comp]	B135526	50.0	11/16/15
15K0478-16 [SB-43- Comp]	B135526	50.0	11/16/15
15K0478-18 [SB-40- Comp]	B135526	50.0	11/16/15
15K0478-20 [SB-37- Comp]	B135526	50.0	11/16/15

Prep Method: SW-846 3010A-SW-846 6010C

Leachates were extracted on 11/12/2015 per SW-846 1311 in Batch B135243

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15K0478-02 [SB-32- Comp]	B135395	50.0	50.0	11/13/15
15K0478-04 [SB-34- Comp]	B135395	50.0	50.0	11/13/15
15K0478-06 [SB-36- Comp]	B135395	50.0	50.0	11/13/15
15K0478-08 [SB-39- Comp]	B135395	50.0	50.0	11/13/15
15K0478-10 [SB-42- Comp]	B135395	50.0	50.0	11/13/15
15K0478-12 [SB-44- Comp]	B135395	50.0	50.0	11/13/15
15K0478-14 [SB-47- Comp]	B135395	50.0	50.0	11/13/15
15K0478-16 [SB-43- Comp]	B135395	50.0	50.0	11/13/15
15K0478-18 [SB-40- Comp]	B135395	50.0	50.0	11/13/15
15K0478-20 [SB-37- Comp]	B135395	50.0	50.0	11/13/15

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 7470A Prep-SW-846 7470A

Leachates were extracted on 11/12/2015 per SW-846 1311 in Batch B135243

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15K0478-02 [SB-32- Comp]	B135389	6.00	6.00	11/13/15
15K0478-04 [SB-34- Comp]	B135389	6.00	6.00	11/13/15
15K0478-06 [SB-36- Comp]	B135389	6.00	6.00	11/13/15
15K0478-08 [SB-39- Comp]	B135389	6.00	6.00	11/13/15
15K0478-10 [SB-42- Comp]	B135389	6.00	6.00	11/13/15
15K0478-12 [SB-44- Comp]	B135389	6.00	6.00	11/13/15
15K0478-14 [SB-47- Comp]	B135389	6.00	6.00	11/13/15
15K0478-16 [SB-43- Comp]	B135389	6.00	6.00	11/13/15
15K0478-18 [SB-40- Comp]	B135389	6.00	6.00	11/13/15
15K0478-20 [SB-37- Comp]	B135389	6.00	6.00	11/13/15

Prep Method: SW-846 3546-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0478-02 [SB-32- Comp]	B135223	30.0	1.00	11/12/15
15K0478-04 [SB-34- Comp]	B135223	30.0	1.00	11/12/15
15K0478-06 [SB-36- Comp]	B135223	30.0	1.00	11/12/15
15K0478-08 [SB-39- Comp]	B135223	30.0	1.00	11/12/15
15K0478-10 [SB-42- Comp]	B135223	30.0	1.00	11/12/15
15K0478-12 [SB-44- Comp]	B135223	30.0	1.00	11/12/15
15K0478-14 [SB-47- Comp]	B135223	30.0	1.00	11/12/15
15K0478-16 [SB-43- Comp]	B135223	30.0	1.00	11/12/15
15K0478-18 [SB-40- Comp]	B135223	30.0	1.00	11/12/15
15K0478-20 [SB-37- Comp]	B135223	30.0	1.00	11/12/15

Prep Method: SW-846 5035/5030B-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0478-02 [SB-32- Comp]	B135551	15.4	16.0	11/16/15
15K0478-04 [SB-34- Comp]	B135551	15.0	16.7	11/16/15
15K0478-06 [SB-36- Comp]	B135551	15.6	15.7	11/16/15
15K0478-08 [SB-39- Comp]	B135551	15.4	15.6	11/16/15
15K0478-10 [SB-42- Comp]	B135551	15.1	15.7	11/16/15
15K0478-12 [SB-44- Comp]	B135551	15.3	16.5	11/16/15
15K0478-14 [SB-47- Comp]	B135551	15.0	15.4	11/16/15
15K0478-16 [SB-43- Comp]	B135551	15.2	15.8	11/16/15
15K0478-18 [SB-40- Comp]	B135551	15.4	15.7	11/16/15
15K0478-20 [SB-37- Comp]	B135551	15.7	15.9	11/16/15

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0478-02 [SB-32- Comp]	B135270	10.0	10.0	11/12/15
15K0478-04 [SB-34- Comp]	B135270	10.0	10.0	11/12/15
15K0478-06 [SB-36- Comp]	B135270	10.0	10.0	11/12/15
15K0478-08 [SB-39- Comp]	B135270	10.0	10.0	11/12/15
15K0478-10 [SB-42- Comp]	B135270	10.0	10.0	11/12/15
15K0478-12 [SB-44- Comp]	B135270	10.0	10.0	11/12/15
15K0478-14 [SB-47- Comp]	B135270	10.0	10.0	11/12/15
15K0478-16 [SB-43- Comp]	B135270	10.0	10.0	11/12/15
15K0478-18 [SB-40- Comp]	B135270	10.0	10.0	11/12/15

Sample Extraction Data

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0478-20 [SB-37- Comp]	B135270	10.0	10.0	11/12/15

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0478-01 [SB-32- 8.5-9.0ft]	B135570	5.80	10.0	11/16/15
15K0478-03 [SB-34- 14.5-15.0ft]	B135570	5.70	10.0	11/16/15
15K0478-05 [SB-36- 14.5-15.0ft]	B135570	5.30	10.0	11/16/15

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0478-07 [SB-39- 14.5-15.0ft]	B135664	5.40	10.0	11/17/15
15K0478-09 [SB-42- 14.5-15.0ft]	B135664	5.20	10.0	11/17/15
15K0478-11 [SB-44- 14.5-15.0ft]	B135664	5.80	10.0	11/17/15
15K0478-13 [SB-47- 14.5-15.0ft]	B135664	5.50	10.0	11/17/15
15K0478-15 [SB-43- 14.5-15.0ft]	B135664	5.00	10.0	11/17/15
15K0478-17 [SB-40- 14.5-15.0ft]	B135664	5.30	10.0	11/17/15
15K0478-19 [SB-37- 14.5-15.0ft]	B135664	5.80	10.0	11/17/15

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0478-02 [SB-32- Comp]	B135190	30.0	1.00	11/11/15
15K0478-04 [SB-34- Comp]	B135190	30.2	1.00	11/11/15
15K0478-06 [SB-36- Comp]	B135190	30.5	1.00	11/11/15
15K0478-08 [SB-39- Comp]	B135190	30.2	1.00	11/11/15
15K0478-10 [SB-42- Comp]	B135190	30.0	1.00	11/11/15
15K0478-12 [SB-44- Comp]	B135190	30.2	1.00	11/11/15
15K0478-14 [SB-47- Comp]	B135190	30.2	1.00	11/11/15
15K0478-16 [SB-43- Comp]	B135190	30.3	1.00	11/11/15
15K0478-18 [SB-40- Comp]	B135190	30.0	1.00	11/11/15
15K0478-20 [SB-37- Comp]	B135190	30.0	1.00	11/11/15

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0478-02 [SB-32- Comp]	B135520	25.2	250	11/16/15
15K0478-04 [SB-34- Comp]	B135520	25.3	250	11/16/15
15K0478-06 [SB-36- Comp]	B135520	25.4	250	11/16/15
15K0478-08 [SB-39- Comp]	B135520	25.1	250	11/16/15
15K0478-10 [SB-42- Comp]	B135520	25.8	250	11/16/15
15K0478-12 [SB-44- Comp]	B135520	25.4	250	11/16/15
15K0478-14 [SB-47- Comp]	B135520	25.0	250	11/16/15
15K0478-16 [SB-43- Comp]	B135520	25.4	250	11/16/15
15K0478-18 [SB-40- Comp]	B135520	25.8	250	11/16/15
15K0478-20 [SB-37- Comp]	B135520	25.1	250	11/16/15

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Sample Extraction Data

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0478-02 [SB-32- Comp]	B135523	25.2	250	11/16/15
15K0478-04 [SB-34- Comp]	B135523	25.3	250	11/16/15
15K0478-06 [SB-36- Comp]	B135523	25.4	250	11/16/15
15K0478-08 [SB-39- Comp]	B135523	25.1	250	11/16/15
15K0478-10 [SB-42- Comp]	B135523	25.8	250	11/16/15
15K0478-12 [SB-44- Comp]	B135523	25.4	250	11/16/15
15K0478-14 [SB-47- Comp]	B135523	25.0	250	11/16/15
15K0478-16 [SB-43- Comp]	B135523	25.4	250	11/16/15
15K0478-18 [SB-40- Comp]	B135523	25.8	250	11/16/15
15K0478-20 [SB-37- Comp]	B135523	25.1	250	11/16/15

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
15K0478-02 [SB-32- Comp]	B135426	20.0	11/16/15
15K0478-04 [SB-34- Comp]	B135426	20.0	11/16/15
15K0478-06 [SB-36- Comp]	B135426	20.0	11/16/15
15K0478-08 [SB-39- Comp]	B135426	20.0	11/16/15
15K0478-10 [SB-42- Comp]	B135426	20.0	11/16/15
15K0478-12 [SB-44- Comp]	B135426	20.0	11/16/15
15K0478-14 [SB-47- Comp]	B135426	20.0	11/16/15
15K0478-16 [SB-43- Comp]	B135426	20.0	11/16/15
15K0478-18 [SB-40- Comp]	B135426	20.0	11/16/15
15K0478-20 [SB-37- Comp]	B135426	20.0	11/16/15

SW-846 9095B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0478-02 [SB-32- Comp]	B135224	100	100	11/12/15
15K0478-04 [SB-34- Comp]	B135224	100	100	11/12/15
15K0478-06 [SB-36- Comp]	B135224	100	100	11/12/15
15K0478-08 [SB-39- Comp]	B135224	100	100	11/12/15
15K0478-10 [SB-42- Comp]	B135224	100	100	11/12/15
15K0478-12 [SB-44- Comp]	B135224	100	100	11/12/15
15K0478-14 [SB-47- Comp]	B135224	100	100	11/12/15
15K0478-16 [SB-43- Comp]	B135224	100	100	11/12/15
15K0478-18 [SB-40- Comp]	B135224	100	100	11/12/15
15K0478-20 [SB-37- Comp]	B135224	100	100	11/12/15

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135570 - SW-846 5035										
Blank (B135570-BLK1)										
Prepared & Analyzed: 11/16/15										
Acetone	ND	0.10	mg/Kg wet							V-05
Acrylonitrile	ND	0.0060	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
1,2-Dichlorobutadiene	ND	0.0020	mg/Kg wet							
Methyl Ethyl Ketone (MEK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135570 - SW-846 5035										
Blank (B135570-BLK1)										
Prepared & Analyzed: 11/16/15										
Methylene Chloride	ND	0.020	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							V-05
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							V-05
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0494		mg/Kg wet	0.0500		98.7	70-130			
Surrogate: Toluene-d8	0.0529		mg/Kg wet	0.0500		106	70-130			
Surrogate: 4-Bromofluorobenzene	0.0496		mg/Kg wet	0.0500		99.2	70-130			
LCS (B135570-BS1)										
Prepared & Analyzed: 11/16/15										
Acetone	0.149	0.10	mg/Kg wet	0.200		74.6	70-160			V-05 †
Acrylonitrile	0.0207	0.0060	mg/Kg wet	0.0200		104	70-130			
tert-Amyl Methyl Ether (TAME)	0.0218	0.0010	mg/Kg wet	0.0200		109	70-130			
Benzene	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130			
Bromobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
Bromochloromethane	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130			
Bromodichloromethane	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
Bromoform	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
Bromomethane	0.0103	0.010	mg/Kg wet	0.0200		51.5	40-130			V-20 †
2-Butanone (MEK)	0.208	0.040	mg/Kg wet	0.200		104	70-160			†
tert-Butyl Alcohol (TBA)	0.176	0.040	mg/Kg wet	0.200		87.9	40-130			†
n-Butylbenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
sec-Butylbenzene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130			
tert-Butylbenzene	0.0211	0.0020	mg/Kg wet	0.0200		106	70-160			†
tert-Butyl Ethyl Ether (TBEE)	0.0221	0.0010	mg/Kg wet	0.0200		110	70-130			
Carbon Disulfide	0.0182	0.0060	mg/Kg wet	0.0200		91.2	70-130			
Carbon Tetrachloride	0.0200	0.0020	mg/Kg wet	0.0200		99.9	70-130			
Chlorobenzene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130			
Chlorodibromomethane	0.0222	0.0010	mg/Kg wet	0.0200		111	70-130			
Chloroethane	0.0220	0.020	mg/Kg wet	0.0200		110	70-130			
Chloroform	0.0228	0.0040	mg/Kg wet	0.0200		114	70-130			
Chloromethane	0.0183	0.010	mg/Kg wet	0.0200		91.6	70-130			
2-Chlorotoluene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			

HAZ-442

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135570 - SW-846 5035										
LCS (B135570-BS1)										
Prepared & Analyzed: 11/16/15										
4-Chlorotoluene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130			
1,2-Dibromoethane (EDB)	0.0221	0.0010	mg/Kg wet	0.0200		110	70-130			
Dibromomethane	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130			
1,2-Dichlorobenzene	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			
1,3-Dichlorobenzene	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			
1,4-Dichlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
trans-1,4-Dichloro-2-butene	0.0198	0.0040	mg/Kg wet	0.0200		99.2	70-130			
Dichlorodifluoromethane (Freon 12)	0.0256	0.020	mg/Kg wet	0.0200		128	40-160			V-20 †
1,1-Dichloroethane	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130			
1,2-Dichloroethane	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130			
1,1-Dichloroethylene	0.0194	0.0040	mg/Kg wet	0.0200		97.2	70-130			
cis-1,2-Dichloroethylene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130			
trans-1,2-Dichloroethylene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
1,2-Dichloropropane	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130			
1,3-Dichloropropane	0.0227	0.0010	mg/Kg wet	0.0200		113	70-130			
2,2-Dichloropropane	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130			
1,1-Dichloropropene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,3-Dichloropropene	0.0211	0.0010	mg/Kg wet	0.0200		106	70-130			
1,1,3-Dichloropropene	0.0250	0.0010	mg/Kg wet	0.0200		125	70-130			
Diethyl Ether	0.0184	0.020	mg/Kg wet	0.0200		92.0	70-130			
Diisopropyl Ether (DIPE)	0.0233	0.0010	mg/Kg wet	0.0200		116	70-130			
1,4-Dioxane	0.180	0.10	mg/Kg wet	0.200		89.9	40-160			†
Ethylbenzene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130			
Hexachlorobutadiene	0.0219	0.0020	mg/Kg wet	0.0200		110	70-160			
2-Hexanone (MBK)	0.218	0.020	mg/Kg wet	0.200		109	70-160			†
Isopropylbenzene (Cumene)	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
p-Isopropyltoluene (p-Cymene)	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0195	0.0040	mg/Kg wet	0.0200		97.6	70-130			
Methylene Chloride	0.0183	0.020	mg/Kg wet	0.0200		91.6	40-160			V-20 †
4-Methyl-2-pentanone (MIBK)	0.209	0.020	mg/Kg wet	0.200		105	70-160			†
Naphthalene	0.0204	0.0040	mg/Kg wet	0.0200		102	40-130			†
n-Propylbenzene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130			
Styrene	0.0227	0.0020	mg/Kg wet	0.0200		113	70-130			
1,1,1,2-Tetrachloroethane	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
1,1,1,2,2-Tetrachloroethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
Tetrachloroethylene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130			
Tetrahydrofuran	0.0208	0.010	mg/Kg wet	0.0200		104	70-130			
Toluene	0.0246	0.0020	mg/Kg wet	0.0200		123	70-130			
1,2,3-Trichlorobenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.5	70-130			V-05
1,2,4-Trichlorobenzene	0.0173	0.0020	mg/Kg wet	0.0200		86.7	70-130			V-05
1,3,5-Trichlorobenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,1,1-Trichloroethane	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
1,1,2-Trichloroethane	0.0250	0.0020	mg/Kg wet	0.0200		125	70-130			
Trichloroethylene	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130			
Trichlorofluoromethane (Freon 11)	0.0201	0.010	mg/Kg wet	0.0200		101	70-130			
1,2,3-Trichloropropane	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
1,1,1-Trichloro-1,2,2-trifluoroethane (Freon)	0.0201	0.010	mg/Kg wet	0.0200		100	70-130			
1,2,4-Trimethylbenzene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
1,3,5-Trimethylbenzene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130			
Vinyl Chloride	0.0191	0.010	mg/Kg wet	0.0200		95.5	40-130			†

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135570 - SW-846 5035										
LCS (B135570-BS1)										
Prepared & Analyzed: 11/16/15										
m+p Xylene	0.0460	0.0040	mg/Kg wet	0.0400		115	70-130			
o-Xylene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0502		mg/Kg wet	0.0500		100	70-130			
Surrogate: Toluene-d8	0.0553		mg/Kg wet	0.0500		111	70-130			
Surrogate: 4-Bromofluorobenzene	0.0500		mg/Kg wet	0.0500		99.9	70-130			
LCS Dup (B135570-BSD1)										
Prepared & Analyzed: 11/16/15										
Acetone	0.157	0.10	mg/Kg wet	0.200		78.6	70-160	5.13	25	V-05 †
Acrylonitrile	0.0221	0.0060	mg/Kg wet	0.0200		111	70-130	6.72	25	
tert-Amyl Methyl Ether (TAME)	0.0236	0.0010	mg/Kg wet	0.0200		118	70-130	8.03	25	
Benzene	0.0246	0.0020	mg/Kg wet	0.0200		123	70-130	3.99	25	
Bromobenzene	0.0235	0.0020	mg/Kg wet	0.0200		117	70-130	8.43	25	
Bromochloromethane	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130	6.97	25	
Bromodichloromethane	0.0235	0.0020	mg/Kg wet	0.0200		117	70-130	6.60	25	
Bromoform	0.0233	0.0020	mg/Kg wet	0.0200		117	70-130	11.7	25	
Bromomethane	0.0107	0.010	mg/Kg wet	0.0200		53.4	40-130	3.62	25	V-20 †
2-Butanone (MEK)	0.225	0.040	mg/Kg wet	0.200		113	70-160	7.89	25	†
tert-Butyl Alcohol (TBA)	0.205	0.040	mg/Kg wet	0.200		103	40-130	15.5	25	†
n-Butylbenzene	0.0235	0.0020	mg/Kg wet	0.0200		118	70-130	9.34	25	
sec-Butylbenzene	0.0235	0.0020	mg/Kg wet	0.0200		117	70-130	5.87	25	
tert-Butylbenzene	0.0227	0.0020	mg/Kg wet	0.0200		113	70-160	6.94	25	†
tert-Butyl Ethyl Ether (TBEE)	0.0240	0.0010	mg/Kg wet	0.0200		120	70-130	8.59	25	
Carbon Disulfide	0.0188	0.0060	mg/Kg wet	0.0200		94.2	70-130	3.24	25	
Carbon Tetrachloride	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	5.17	25	
Chlorobenzene	0.0235	0.0020	mg/Kg wet	0.0200		118	70-130	9.24	25	
Chlorodibromomethane	0.0245	0.0010	mg/Kg wet	0.0200		123	70-130	9.83	25	
Chloroethane	0.0248	0.020	mg/Kg wet	0.0200		124	70-130	11.8	25	
Chloroform	0.0238	0.0040	mg/Kg wet	0.0200		119	70-130	4.46	25	
Chloromethane	0.0190	0.010	mg/Kg wet	0.0200		94.9	70-130	3.54	25	
2-Chlorotoluene	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130	7.24	25	
4-Chlorotoluene	0.0235	0.0020	mg/Kg wet	0.0200		117	70-130	7.15	25	
1,2-Dibromo-3-chloropropane (DBCP)	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	13.3	25	
1,2-Dibromoethane (EDB)	0.0242	0.0010	mg/Kg wet	0.0200		121	70-130	9.16	25	
Dibromomethane	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130	6.68	25	
1,2-Dichlorobenzene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130	6.86	25	
1,3-Dichlorobenzene	0.0229	0.0020	mg/Kg wet	0.0200		115	70-130	8.08	25	
1,4-Dichlorobenzene	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130	10.9	25	
trans-1,4-Dichloro-2-butene	0.0225	0.0040	mg/Kg wet	0.0200		112	70-130	12.5	25	
Dichlorodifluoromethane (Freon 12)	0.0211	0.020	mg/Kg wet	0.0200		106	40-160	19.3	25	V-20 †
1,1-Dichloroethane	0.0237	0.0020	mg/Kg wet	0.0200		119	70-130	2.91	25	
1,2-Dichloroethane	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130	7.50	25	
1,1-Dichloroethylene	0.0200	0.0040	mg/Kg wet	0.0200		100	70-130	3.04	25	
cis-1,2-Dichloroethylene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130	4.17	25	
trans-1,2-Dichloroethylene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	3.89	25	
1,2-Dichloropropane	0.0243	0.0020	mg/Kg wet	0.0200		122	70-130	6.27	25	
1,3-Dichloropropane	0.0247	0.0010	mg/Kg wet	0.0200		124	70-130	8.61	25	
2,2-Dichloropropane	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	3.32	25	
1,1-Dichloropropene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	2.00	25	
cis-1,3-Dichloropropene	0.0230	0.0010	mg/Kg wet	0.0200		115	70-130	8.79	25	
trans-1,3-Dichloropropene	0.0274	0.0010	mg/Kg wet	0.0200		137 *	70-130	9.01	25	L-07
Diethyl Ether	0.0191	0.020	mg/Kg wet	0.0200		95.6	70-130	3.84	25	
Diisopropyl Ether (DIPE)	0.0243	0.0010	mg/Kg wet	0.0200		122	70-130	4.29	25	

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135570 - SW-846 5035										
LCS Dup (B135570-BSD1)										
Prepared & Analyzed: 11/16/15										
1,4-Dioxane	0.211	0.10	mg/Kg wet	0.200		105	40-160	15.9	50	† ‡
Ethylbenzene	0.0251	0.0020	mg/Kg wet	0.0200		125	70-130	8.13	25	
Hexachlorobutadiene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-160	6.61	25	
2-Hexanone (MBK)	0.243	0.020	mg/Kg wet	0.200		121	70-160	10.7	25	†
Isopropylbenzene (Cumene)	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130	6.96	25	
p-Isopropyltoluene (p-Cymene)	0.0256	0.0020	mg/Kg wet	0.0200		128	70-130	7.88	25	
Methyl tert-Butyl Ether (MTBE)	0.0214	0.0040	mg/Kg wet	0.0200		107	70-130	9.37	25	
Methylene Chloride	0.0194	0.020	mg/Kg wet	0.0200		97.1	40-160	5.83	25	V-20 †
4-Methyl-2-pentanone (MIBK)	0.234	0.020	mg/Kg wet	0.200		117	70-160	11.0	25	†
Naphthalene	0.0232	0.0040	mg/Kg wet	0.0200		116	40-130	13.0	25	†
n-Propylbenzene	0.0250	0.0020	mg/Kg wet	0.0200		125	70-130	8.33	25	
Styrene	0.0245	0.0020	mg/Kg wet	0.0200		123	70-130	7.88	25	
1,1,1,2-Tetrachloroethane	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130	8.43	25	
1,1,2,2-Tetrachloroethane	0.0245	0.0020	mg/Kg wet	0.0200		123	70-130	9.30	25	
Tetrachloroethylene	0.0244	0.0020	mg/Kg wet	0.0200		122	70-130	5.38	25	
Tetrahydrofuran	0.0235	0.010	mg/Kg wet	0.0200		117	70-130	12.0	25	
Toluene	0.0271	0.0020	mg/Kg wet	0.0200		135	* 70-130	9.36	25	L-07
1,2,3-Trichlorobenzene	0.0198	0.0020	mg/Kg wet	0.0200		99.0	70-130	10.1	25	V-05
1,2,4-Trichlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	9.76	25	V-05
1,3,5-Trichlorobenzene	0.0237	0.0020	mg/Kg wet	0.0200		118	70-130	8.09	25	
1,1,1-Trichloroethane	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	2.89	25	
1,1,2-Trichloroethane	0.0282	0.0020	mg/Kg wet	0.0200		141	* 70-130	11.9	25	L-07
Trichloroethylene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	5.68	25	
Trichlorofluoromethane (Freon 11)	0.0203	0.010	mg/Kg wet	0.0200		102	70-130	0.891	25	
1,2,3-Trichloropropane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	8.95	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0209	0.010	mg/Kg wet	0.0200		104	70-130	4.00	25	
1,2,4-Trimethylbenzene	0.0242	0.0020	mg/Kg wet	0.0200		121	70-130	6.76	25	
1,3,5-Trimethylbenzene	0.0246	0.0020	mg/Kg wet	0.0200		123	70-130	6.97	25	
Vinyl Chloride	0.0186	0.010	mg/Kg wet	0.0200		92.8	40-130	2.87	25	†
m+p Xylene	0.0497	0.0040	mg/Kg wet	0.0400		124	70-130	7.69	25	
o-Xylene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130	7.83	25	
Surrogate: 1,2-Dichloroethane-d4	0.0498		mg/Kg wet	0.0500		99.6	70-130			
Surrogate: Toluene-d8	0.0559		mg/Kg wet	0.0500		112	70-130			
Surrogate: 4-Bromofluorobenzene	0.0496		mg/Kg wet	0.0500		99.2	70-130			

Batch B135664 - SW-846 5035

Blank (B135664-BLK1)

Prepared & Analyzed: 11/17/15

Acetone	ND	0.10	mg/Kg wet							
Acrylonitrile	ND	0.0060	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							R-05
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0040	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							

HAZ - 445

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135664 - SW-846 5035										
Blank (B135664-BLK1)										
Prepared & Analyzed: 11/17/15										
tert-Butyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.020	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methylene Chloride	ND	0.020	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135664 - SW-846 5035										
Blank (B135664-BLK1)										
Prepared & Analyzed: 11/17/15										
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0485		mg/Kg wet	0.0500		97.0	70-130			
Surrogate: Toluene-d8	0.0485		mg/Kg wet	0.0500		97.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.0474		mg/Kg wet	0.0500		94.8	70-130			
LCS (B135664-BS1)										
Prepared & Analyzed: 11/17/15										
Acetone	0.174	0.10	mg/Kg wet	0.200		87.2	70-160			V-20 †
Acrylonitrile	0.0177	0.0060	mg/Kg wet	0.0200		88.5	70-130			
tert-Amyl Methyl Ether (TAME)	0.0202	0.0010	mg/Kg wet	0.0200		101	70-130			
Benzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
Toluene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130			
Bromochloromethane	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
Bromodichloromethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
Bromoform	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
Bromomethane	0.0101	0.010	mg/Kg wet	0.0200		50.5	40-130			R-05 †
2-Butanone (MEK)	0.175	0.040	mg/Kg wet	0.200		87.7	70-160			†
tert-Butyl Alcohol (TBA)	0.234	0.040	mg/Kg wet	0.200		117	40-130			V-20 †
n-Butylbenzene	0.0209	0.0040	mg/Kg wet	0.0200		104	70-130			
sec-Butylbenzene	0.0237	0.0020	mg/Kg wet	0.0200		119	70-130			
tert-Butylbenzene	0.0237	0.0020	mg/Kg wet	0.0200		118	70-160			†
tert-Butyl Ethyl Ether (TBEE)	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130			
Carbon Disulfide	0.0221	0.020	mg/Kg wet	0.0200		111	70-130			V-20
Carbon Tetrachloride	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
Chlorobenzene	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130			
Chlorodibromomethane	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130			
Chloroethane	0.0199	0.020	mg/Kg wet	0.0200		99.3	70-130			
Chloroform	0.0205	0.0040	mg/Kg wet	0.0200		102	70-130			
Chloromethane	0.0176	0.010	mg/Kg wet	0.0200		87.9	70-130			
2-Chlorotoluene	0.0235	0.0020	mg/Kg wet	0.0200		118	70-130			
4-Chlorotoluene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130			
1,2-Dibromoethane (EDB)	0.0225	0.0010	mg/Kg wet	0.0200		113	70-130			
Dibromomethane	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
1,2-Dichlorobenzene	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
1,3-Dichlorobenzene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130			
1,4-Dichlorobenzene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
trans-1,4-Dichloro-2-butene	0.0172	0.0040	mg/Kg wet	0.0200		85.9	70-130			
1,1,1-Trichlorodifluoromethane (Freon 12)	0.0167	0.020	mg/Kg wet	0.0200		83.5	40-160			†
1,1-Dichloroethane	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
1,2-Dichloroethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
1,1-Dichloroethylene	0.0187	0.0040	mg/Kg wet	0.0200		93.3	70-130			
cis-1,2-Dichloroethylene	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130			
trans-1,2-Dichloroethylene	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135664 - SW-846 5035										
LCS (B135664-BS1)										
				Prepared & Analyzed: 11/17/15						
1,2-Dichloropropane	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
1,3-Dichloropropane	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130			
2,2-Dichloropropane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,1-Dichloropropene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130			
cis-1,3-Dichloropropene	0.0197	0.0010	mg/Kg wet	0.0200		98.7	70-130			
trans-1,3-Dichloropropene	0.0214	0.0010	mg/Kg wet	0.0200		107	70-130			
Diethyl Ether	0.0181	0.020	mg/Kg wet	0.0200		90.4	70-130			
Diisopropyl Ether (DIPE)	0.0183	0.0010	mg/Kg wet	0.0200		91.6	70-130			
1,4-Dioxane	0.176	0.10	mg/Kg wet	0.200		88.2	40-160			†
Ethylbenzene	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130			
Hexachlorobutadiene	0.0236	0.0020	mg/Kg wet	0.0200		118	70-160			
2-Hexanone (MBK)	0.194	0.020	mg/Kg wet	0.200		97.0	70-160			†
Isopropylbenzene (Cumene)	0.0241	0.0020	mg/Kg wet	0.0200		121	70-130			
p-Isopropyltoluene (p-Cymene)	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0205	0.0040	mg/Kg wet	0.0200		102	70-130			
Methylene Chloride	0.0180	0.020	mg/Kg wet	0.0200		89.8	40-160			†
4-Methyl-2-pentanone (MIBK)	0.198	0.020	mg/Kg wet	0.200		99.2	70-160			†
Naphthalene	0.0168	0.0040	mg/Kg wet	0.0200		83.9	40-130			†
n-Propylbenzene	0.0240	0.0020	mg/Kg wet	0.0200		120 *	70-130			
Styrene	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130			
1,1,1,2-Tetrachloroethane	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130			
1,1,1,2,2-Tetrachloroethane	0.0217	0.0010	mg/Kg wet	0.0200		108	70-130			
Tetrachloroethylene	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130			
Tetrahydrofuran	0.0183	0.010	mg/Kg wet	0.0200		91.3	70-130			
Toluene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
1,2,3-Trichlorobenzene	0.0177	0.0020	mg/Kg wet	0.0200		88.7	70-130			
1,2,4-Trichlorobenzene	0.0173	0.0020	mg/Kg wet	0.0200		86.5	70-130			
1,3,5-Trichlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130			
1,1,1-Trichloroethane	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
1,1,2-Trichloroethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
Trichloroethylene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
Trichlorofluoromethane (Freon 11)	0.0179	0.010	mg/Kg wet	0.0200		89.6	70-130			
1,2,3-Trichloropropane	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0181	0.010	mg/Kg wet	0.0200		90.7	70-130			
1,2,4-Trimethylbenzene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
1,3,5-Trimethylbenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
Vinyl Chloride	0.0172	0.010	mg/Kg wet	0.0200		86.2	40-130			†
m+p Xylene	0.0470	0.0040	mg/Kg wet	0.0400		117	70-130			
o-Xylene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0464		mg/Kg wet	0.0500		92.8	70-130			
Surrogate: Toluene-d8	0.0496		mg/Kg wet	0.0500		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.0492		mg/Kg wet	0.0500		98.3	70-130			

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135664 - SW-846 5035										
LCS Dup (B135664-BSD1)										
Prepared & Analyzed: 11/17/15										
Acetone	0.178	0.10	mg/Kg wet	0.200		88.9	70-160	1.87	25	V-20 †
Acrylonitrile	0.0186	0.0060	mg/Kg wet	0.0200		93.2	70-130	5.17	25	
tert-Amyl Methyl Ether (TAME)	0.0207	0.0010	mg/Kg wet	0.0200		104	70-130	2.34	25	
Benzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	0.290	25	
Bromobenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	0.633	25	
Bromochloromethane	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130	2.20	25	
Bromodichloromethane	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130	1.73	25	
Bromoform	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	0.483	25	
Bromomethane	0.0133	0.010	mg/Kg wet	0.0200		66.3	40-130	27.1 *	25	R-05 †
2-Butanone (MEK)	0.176	0.040	mg/Kg wet	0.200		87.8	70-160	0.148	25	†
tert-Butyl Alcohol (TBA)	0.238	0.040	mg/Kg wet	0.200		119	40-130	1.53	25	V-20 †
n-Butylbenzene	0.0214	0.0040	mg/Kg wet	0.0200		107	70-130	2.65	25	
sec-Butylbenzene	0.0244	0.0020	mg/Kg wet	0.0200		122	70-130	2.58	25	
tert-Butylbenzene	0.0243	0.0020	mg/Kg wet	0.0200		121	70-160	2.42	25	†
tert-Butyl Ethyl Ether (TBEE)	0.0207	0.0010	mg/Kg wet	0.0200		104	70-130	0.775	25	
Carbon Disulfide	0.0224	0.020	mg/Kg wet	0.0200		112	70-130	1.17	25	V-20
Carbon Tetrachloride	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	0.577	25	
Chlorobenzene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130	3.21	25	
Chlorodibromomethane	0.0209	0.0010	mg/Kg wet	0.0200		104	70-130	2.82	25	
Chloroethane	0.0198	0.020	mg/Kg wet	0.0200		99.2	70-130	0.101	25	
Chloroform	0.0209	0.0040	mg/Kg wet	0.0200		104	70-130	1.84	25	
Chloromethane	0.0179	0.010	mg/Kg wet	0.0200		89.4	70-130	1.69	25	
2-Chlorotoluene	0.0246	0.0020	mg/Kg wet	0.0200		123	70-130	4.65	25	
4-Chlorotoluene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130	4.55	25	
1,2-Dibromo-3-chloropropane (DBCP)	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130	6.55	25	
1,2-Dibromoethane (EDB)	0.0229	0.0010	mg/Kg wet	0.0200		115	70-130	1.67	25	
Dibromomethane	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	3.31	25	
1,2-Dichlorobenzene	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130	3.67	25	
1,3-Dichlorobenzene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	3.38	25	
1,4-Dichlorobenzene	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130	0.265	25	
trans-1,4-Dichloro-2-butene	0.0194	0.0040	mg/Kg wet	0.0200		97.1	70-130	12.2	25	
Dichlorodifluoromethane (Freon 12)	0.0171	0.020	mg/Kg wet	0.0200		85.5	40-160	2.37	25	†
1,1-Dichloroethane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	1.47	25	
1,2-Dichloroethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	0.268	25	
1,1-Dichloroethylene	0.0195	0.0040	mg/Kg wet	0.0200		97.3	70-130	4.20	25	
cis-1,2-Dichloroethylene	0.0194	0.0020	mg/Kg wet	0.0200		97.2	70-130	1.13	25	
trans-1,2-Dichloroethylene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	1.50	25	
1,2-Dichloropropane	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	0.917	25	
1,3-Dichloropropane	0.0213	0.0010	mg/Kg wet	0.0200		107	70-130	3.72	25	
2,2-Dichloropropane	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	1.10	25	
1,1-Dichloropropene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	0.380	25	
cis-1,3-Dichloropropene	0.0198	0.0010	mg/Kg wet	0.0200		99.0	70-130	0.303	25	
trans-1,3-Dichloropropene	0.0221	0.0010	mg/Kg wet	0.0200		111	70-130	3.40	25	
Diethyl Ether	0.0180	0.020	mg/Kg wet	0.0200		89.8	70-130	0.666	25	
Diisopropyl Ether (DIPE)	0.0184	0.0010	mg/Kg wet	0.0200		92.2	70-130	0.653	25	
1,4-Dioxane	0.180	0.10	mg/Kg wet	0.200		89.8	40-160	1.81	50	† ‡
Ethylbenzene	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130	1.68	25	
1,2-Dichlorobutadiene	0.0249	0.0020	mg/Kg wet	0.0200		125	70-160	5.35	25	
Acetone (MBK)	0.199	0.020	mg/Kg wet	0.200		99.5	70-160	2.61	25	†
Isopropylbenzene (Cumene)	0.0246	0.0020	mg/Kg wet	0.0200		123	70-130	1.97	25	
p-Isopropyltoluene (p-Cymene)	0.0247	0.0020	mg/Kg wet	0.0200		123	70-130	2.88	25	
Methyl tert-Butyl Ether (MTBE)	0.0205	0.0040	mg/Kg wet	0.0200		102	70-130	0.00	25	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135664 - SW-846 5035										
LCS Dup (B135664-BSD1)										
Prepared & Analyzed: 11/17/15										
Methylene Chloride	0.0184	0.020	mg/Kg wet	0.0200		92.2	40-160	2.64	25	†
4-Methyl-2-pentanone (MIBK)	0.206	0.020	mg/Kg wet	0.200		103	70-160	3.68	25	†
Naphthalene	0.0178	0.0040	mg/Kg wet	0.0200		88.8	40-130	5.67	25	†
n-Propylbenzene	0.0248	0.0020	mg/Kg wet	0.0200		124	70-130	3.45	25	
Styrene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	3.15	25	
1,1,1,2-Tetrachloroethane	0.0237	0.0020	mg/Kg wet	0.0200		119	70-130	5.19	25	
1,1,2,2-Tetrachloroethane	0.0227	0.0010	mg/Kg wet	0.0200		113	70-130	4.60	25	
Tetrachloroethylene	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130	2.66	25	
Tetrahydrofuran	0.0195	0.010	mg/Kg wet	0.0200		97.5	70-130	6.57	25	
Toluene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130	0.623	25	
1,2,3-Trichlorobenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.7	70-130	2.23	25	
1,2,4-Trichlorobenzene	0.0178	0.0020	mg/Kg wet	0.0200		89.1	70-130	2.96	25	
1,3,5-Trichlorobenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	2.31	25	
1,1,1-Trichloroethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	1.77	25	
1,1,2-Trichloroethane	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	2.12	25	
Trichloroethylene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130	1.17	25	
Trichlorofluoromethane (Freon 11)	0.0184	0.010	mg/Kg wet	0.0200		92.2	70-130	2.86	25	
1,2,3-Trichloropropane	0.0252	0.0020	mg/Kg wet	0.0200		126	70-130	13.9	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0189	0.010	mg/Kg wet	0.0200		94.4	70-130	4.00	25	
1,2,4-Trimethylbenzene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	2.88	25	
1,3,5-Trimethylbenzene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130	3.03	25	
Vinyl Chloride	0.0178	0.010	mg/Kg wet	0.0200		88.9	40-130	3.08	25	†
m+p Xylene	0.0480	0.0040	mg/Kg wet	0.0400		120	70-130	2.23	25	
o-Xylene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	2.62	25	
Surrogate: 1,2-Dichloroethane-d4	0.0471		mg/Kg wet	0.0500		94.2	70-130			
Surrogate: Toluene-d8	0.0498		mg/Kg wet	0.0500		99.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.0500		mg/Kg wet	0.0500		100	70-130			

QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135190 - SW-846 3546										
Blank (B135190-BLK1)										
Prepared: 11/11/15 Analyzed: 11/12/15										
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Surrogate: Nitrobenzene-d5	2.63		mg/Kg wet	3.33		79.0	30-130			
Surrogate: 2-Fluorobiphenyl	3.00		mg/Kg wet	3.33		90.2	30-130			
Surrogate: p-Terphenyl-d14	3.80		mg/Kg wet	3.33		114	30-130			
LCS (B135190-BS1)										
Prepared: 11/11/15 Analyzed: 11/12/15										
Acenaphthene	0.761	0.17	mg/Kg wet	0.833		91.4	40-140			
Acenaphthylene	0.766	0.17	mg/Kg wet	0.833		91.9	40-140			
Anthracene	0.797	0.17	mg/Kg wet	0.833		95.7	40-140			
Benzo(a)anthracene	0.825	0.17	mg/Kg wet	0.833		99.0	40-140			
Benzo(a)pyrene	0.823	0.17	mg/Kg wet	0.833		98.7	40-140			
Benzo(b)fluoranthene	0.792	0.17	mg/Kg wet	0.833		95.1	40-140			
Benzo(g,h,i)perylene	0.898	0.17	mg/Kg wet	0.833		108	40-140			
Benzo(k)fluoranthene	0.804	0.17	mg/Kg wet	0.833		96.4	40-140			
Chrysene	0.803	0.17	mg/Kg wet	0.833		96.4	40-140			
Dibenz(a,h)anthracene	0.879	0.17	mg/Kg wet	0.833		106	40-140			
Fluoranthene	0.734	0.17	mg/Kg wet	0.833		88.1	40-140			
Fluorene	0.795	0.17	mg/Kg wet	0.833		95.4	40-140			
Indeno(1,2,3-cd)pyrene	0.928	0.17	mg/Kg wet	0.833		111	40-140			
2-Methylnaphthalene	0.715	0.17	mg/Kg wet	0.833		85.8	40-140			
Naphthalene	0.657	0.17	mg/Kg wet	0.833		78.9	40-140			
Phenanthrene	0.805	0.17	mg/Kg wet	0.833		96.6	40-140			
Pyrene	0.957	0.17	mg/Kg wet	0.833		115	40-140			
Surrogate: Nitrobenzene-d5	2.75		mg/Kg wet	3.33		82.4	30-130			
Surrogate: 2-Fluorobiphenyl	3.27		mg/Kg wet	3.33		98.0	30-130			
Surrogate: p-Terphenyl-d14	3.96		mg/Kg wet	3.33		119	30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135190 - SW-846 3546										
LCS Dup (B135190-BSD1)										
Prepared: 11/11/15 Analyzed: 11/12/15										
Acenaphthene	0.814	0.17	mg/Kg wet	0.833		97.7	40-140	6.69	30	
Acenaphthylene	0.814	0.17	mg/Kg wet	0.833		97.7	40-140	6.12	30	
Anthracene	0.932	0.17	mg/Kg wet	0.833		112	40-140	15.6	30	
Benzo(a)anthracene	0.972	0.17	mg/Kg wet	0.833		117	40-140	16.4	30	
Benzo(a)pyrene	0.986	0.17	mg/Kg wet	0.833		118	40-140	18.0	30	
Benzo(b)fluoranthene	0.908	0.17	mg/Kg wet	0.833		109	40-140	13.6	30	
Benzo(g,h,i)perylene	1.07	0.17	mg/Kg wet	0.833		129	40-140	17.7	30	
Benzo(k)fluoranthene	0.957	0.17	mg/Kg wet	0.833		115	40-140	17.5	30	
Chrysene	0.927	0.17	mg/Kg wet	0.833		111	40-140	14.3	30	
Dibenz(a,h)anthracene	1.05	0.17	mg/Kg wet	0.833		127	40-140	18.1	30	
Fluoranthene	0.899	0.17	mg/Kg wet	0.833		108	40-140	20.2	30	
Fluorene	0.875	0.17	mg/Kg wet	0.833		105	40-140	9.66	30	
Indeno(1,2,3-cd)pyrene	1.06	0.17	mg/Kg wet	0.833		128	40-140	13.7	30	
2-Methylnaphthalene	0.775	0.17	mg/Kg wet	0.833		93.0	40-140	7.96	30	
Naphthalene	0.675	0.17	mg/Kg wet	0.833		81.0	40-140	2.65	30	
Phenanthrene	0.953	0.17	mg/Kg wet	0.833		114	40-140	16.8	30	
Pyrene	1.12	0.17	mg/Kg wet	0.833		135	40-140	16.0	30	
Surrogate: Nitrobenzene-d5	2.79		mg/Kg wet	3.33		83.7	30-130			
Surrogate: 2-Fluorobiphenyl	3.36		mg/Kg wet	3.33		101	30-130			
Surrogate: p-Terphenyl-d14	4.62		mg/Kg wet	3.33		139 *	30-130			S-07

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B135270 - SW-846 3546

Blank (B135270-BLK1)

Prepared: 11/12/15 Analyzed: 11/13/15

Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.173		mg/Kg wet	0.200		86.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.184		mg/Kg wet	0.200		92.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.179		mg/Kg wet	0.200		89.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.189		mg/Kg wet	0.200		94.6	30-150			

LCS (B135270-BS1)

Prepared: 11/12/15 Analyzed: 11/13/15

Aroclor-1016	0.19	0.020	mg/Kg wet	0.200		93.6	40-140			
Aroclor-1016 [2C]	0.20	0.020	mg/Kg wet	0.200		101	40-140			
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		90.0	40-140			
Aroclor-1260 [2C]	0.20	0.020	mg/Kg wet	0.200		98.4	40-140			
Surrogate: Decachlorobiphenyl	0.180		mg/Kg wet	0.200		90.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.191		mg/Kg wet	0.200		95.4	30-150			
Surrogate: Tetrachloro-m-xylene	0.178		mg/Kg wet	0.200		88.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.188		mg/Kg wet	0.200		93.8	30-150			

LCS Dup (B135270-BSD1)

Prepared: 11/12/15 Analyzed: 11/13/15

Aroclor-1016	0.19	0.020	mg/Kg wet	0.200		93.0	40-140	0.606	30	
Aroclor-1016 [2C]	0.20	0.020	mg/Kg wet	0.200		101	40-140	0.543	30	
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		90.9	40-140	1.07	30	
Aroclor-1260 [2C]	0.20	0.020	mg/Kg wet	0.200		100	40-140	1.63	30	
Surrogate: Decachlorobiphenyl	0.182		mg/Kg wet	0.200		91.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.192		mg/Kg wet	0.200		95.9	30-150			
Surrogate: Tetrachloro-m-xylene	0.177		mg/Kg wet	0.200		88.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.187		mg/Kg wet	0.200		93.6	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135270 - SW-846 3546										
Matrix Spike (B135270-MS1)										
			Source: 15K0478-04		Prepared: 11/12/15		Analyzed: 11/13/15			
Aroclor-1016	0.15	0.11	mg/Kg dry	0.224	ND	66.6	40-140			R-06
Aroclor-1016 [2C]	0.17	0.11	mg/Kg dry	0.224	ND	76.3	40-140			R-06
Aroclor-1260	0.15	0.11	mg/Kg dry	0.224	ND	67.4	40-140			
Aroclor-1260 [2C]	0.17	0.11	mg/Kg dry	0.224	ND	76.8	40-140			
Surrogate: Decachlorobiphenyl	0.140		mg/Kg dry	0.224		62.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.146		mg/Kg dry	0.224		65.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.122		mg/Kg dry	0.224		54.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.133		mg/Kg dry	0.224		59.2	30-150			
Matrix Spike Dup (B135270-MSD1)										
			Source: 15K0478-04		Prepared: 11/12/15		Analyzed: 11/14/15			
Aroclor-1016	0.21	0.11	mg/Kg dry	0.224	ND	95.9	40-140	36.1 *	30	R-06
Aroclor-1016 [2C]	0.24	0.11	mg/Kg dry	0.224	ND	109	40-140	35.0 *	30	R-06
Aroclor-1260	0.20	0.11	mg/Kg dry	0.224	ND	88.6	40-140	27.3	30	
Aroclor-1260 [2C]	0.22	0.11	mg/Kg dry	0.224	ND	100	40-140	26.6	30	
Surrogate: Decachlorobiphenyl	0.184		mg/Kg dry	0.224		82.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.191		mg/Kg dry	0.224		85.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.177		mg/Kg dry	0.224		79.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.190		mg/Kg dry	0.224		84.9	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135223 - SW-846 3546										
Blank (B135223-BLK1) Prepared: 11/12/15 Analyzed: 11/14/15										
Diesel Range Organics	ND	8.3	mg/Kg wet							
Surrogate: o-Terphenyl	2.87		mg/Kg wet	3.33		86.1	40-140			
LCS (B135223-BS1) Prepared: 11/12/15 Analyzed: 11/14/15										
Diesel Range Organics	21.9	8.3	mg/Kg wet	33.3		65.6	40-140			
Surrogate: o-Terphenyl	2.93		mg/Kg wet	3.33		87.8	40-140			
LCS Dup (B135223-BSD1) Prepared: 11/12/15 Analyzed: 11/14/15										
Diesel Range Organics	23.6	8.3	mg/Kg wet	33.3		70.8	40-140	7.64		
Surrogate: o-Terphenyl	3.15		mg/Kg wet	3.33		94.6	40-140			
Matrix Spike (B135223-MS1) Source: 15K0478-02 Prepared: 11/12/15 Analyzed: 11/17/15										
Diesel Range Organics	26.7	8.8	mg/Kg dry	35.4	3.65	65.1	40-140			
Surrogate: o-Terphenyl	2.80		mg/Kg dry	3.54		79.1	40-140			
Matrix Spike Dup (B135223-MSD1) Source: 15K0478-02 Prepared: 11/12/15 Analyzed: 11/17/15										
Diesel Range Organics	25.9	8.8	mg/Kg dry	35.4	3.65	62.9	40-140	3.05	30	
Surrogate: o-Terphenyl	3.04		mg/Kg dry	3.54		86.0	40-140			
Batch B135551 - SW-846 5035/5030B										
Blank (B135551-BLK1) Prepared & Analyzed: 11/16/15										
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg wet							
Surrogate: 1-Chloro-3-fluorobenzene	0.0138		mg/Kg wet	0.0150		92.3	70-130			
LCS (B135551-BS1) Prepared & Analyzed: 11/16/15										
Gasoline Range Organics (GRO)	0.245	0.010	mg/Kg wet	0.250		98.1	80-120			
Surrogate: 1-Chloro-3-fluorobenzene	0.0137		mg/Kg wet	0.0150		91.4	70-130			
LCS Dup (B135551-BSD1) Prepared & Analyzed: 11/16/15										
Gasoline Range Organics (GRO)	0.244	0.010	mg/Kg wet	0.250		97.5	80-120	0.661	30	
Surrogate: 1-Chloro-3-fluorobenzene	0.0140		mg/Kg wet	0.0150		93.6	70-130			



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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135426 - SW-846 9045C										
LCS (B135426-BS1)				Prepared & Analyzed: 11/16/15						
pH	6.04		pH Units	6.00		101	98.6-102			
LCS (B135426-BS2)				Prepared & Analyzed: 11/16/15						
pH	6.03		pH Units	6.00		100	98.6-102			
Duplicate (B135426-DUP1)				Source: 15K0478-04			Prepared & Analyzed: 11/16/15			
pH	7.1		pH Units		7.1			0.141	5	
Duplicate (B135426-DUP2)				Source: 15K0478-16			Prepared & Analyzed: 11/16/15			
pH	7.4		pH Units		7.4			0.135	5	
Batch B135520 - SW-846 9014										
Blank (B135520-BLK1)				Prepared: 11/16/15 Analyzed: 11/17/15						
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B135520-BS1)				Prepared: 11/16/15 Analyzed: 11/17/15						
Reactive Cyanide	9.6	0.40	mg/Kg	10.0		95.9	86.4-107			
Batch B135523 - SW-846 9030A										
Blank (B135523-BLK1)				Prepared: 11/16/15 Analyzed: 11/17/15						
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B135523-BS1)				Prepared: 11/16/15 Analyzed: 11/17/15						
Reactive Sulfide	18	2.0	mg/Kg	14.8		122	42.9-132			

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QUALITY CONTROL

TCLP - Metals Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135389 - SW-846 7470A Prep										
Blank (B135389-BLK1)				Prepared: 11/13/15 Analyzed: 11/16/15						
Mercury	ND	0.00010	mg/L							
LCS (B135389-BS1)				Prepared: 11/13/15 Analyzed: 11/16/15						
Mercury	0.00199	0.00010	mg/L	0.00200		99.6	80-120			
LCS Dup (B135389-BSD1)				Prepared: 11/13/15 Analyzed: 11/16/15						
Mercury	0.00213	0.00010	mg/L	0.00200		107	80-120	6.67	20	
Matrix Spike (B135389-MS1)		Source: 15K0478-02		Prepared: 11/13/15 Analyzed: 11/16/15						
Mercury	0.00189	0.00010	mg/L	0.00200	0.0000473	92.1	75-125			
Batch B135395 - SW-846 3010A										
Blank (B135395-BLK1)				Prepared: 11/13/15 Analyzed: 11/18/15						
Arsenic	ND	0.010	mg/L							
Barium	ND	0.050	mg/L							
Cadmium	ND	0.0040	mg/L							
Chromium	ND	0.010	mg/L							
Lead	ND	0.010	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.0050	mg/L							
LCS (B135395-BS1)				Prepared: 11/13/15 Analyzed: 11/18/15						
Arsenic	0.543	0.010	mg/L	0.500		109	80-120			
Barium	0.501	0.050	mg/L	0.500		100	80-120			
Cadmium	0.510	0.0040	mg/L	0.500		102	80-120			
Chromium	0.488	0.010	mg/L	0.500		97.6	80-120			
Lead	0.466	0.010	mg/L	0.500		93.1	80-120			
Selenium	0.554	0.050	mg/L	0.500		111	80-120			
Silver	0.500	0.0050	mg/L	0.500		99.9	80-120			
LCS Dup (B135395-BSD1)				Prepared: 11/13/15 Analyzed: 11/18/15						
Arsenic	0.545	0.010	mg/L	0.500		109	80-120	0.358	20	
Barium	0.502	0.050	mg/L	0.500		100	80-120	0.245	20	
Cadmium	0.511	0.0040	mg/L	0.500		102	80-120	0.296	20	
Chromium	0.488	0.010	mg/L	0.500		97.5	80-120	0.0829	20	
Lead	0.468	0.010	mg/L	0.500		93.7	80-120	0.578	20	
Selenium	0.563	0.050	mg/L	0.500		113	80-120	1.64	20	
Silver	0.500	0.0050	mg/L	0.500		100	80-120	0.151	20	
Matrix Spike (B135395-MS1)		Source: 15K0478-02		Prepared: 11/13/15 Analyzed: 11/18/15						
Arsenic	0.535	0.010	mg/L	0.500	ND	107	75-125			
Barium	0.802	0.050	mg/L	0.500	0.309	98.6	75-125			
Cadmium	0.512	0.0040	mg/L	0.500	ND	102	75-125			
Chromium	0.483	0.010	mg/L	0.500	ND	96.6	75-125			
Lead	0.477	0.010	mg/L	0.500	0.0126	92.9	75-125			
Selenium	0.573	0.050	mg/L	0.500	0.0139	112	75-125			
Silver	0.484	0.0050	mg/L	0.500	ND	96.7	75-125			

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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS

Lab Sample ID: B135270-BS1 Date(s) Analyzed: 11/13/2015 11/13/2015
 Instrument ID (1): _____ Instrument ID (2): _____
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.19	
	2	0.00	0.00	0.00	0.20	7
Aroclor-1260	1	0.00	0.00	0.00	0.18	
	2	0.00	0.00	0.00	0.20	11

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS Dup

Lab Sample ID: B135270-BSD1 Date(s) Analyzed: 11/13/2015 11/13/2015
 Instrument ID (1): _____ Instrument ID (2): _____
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.19	
	2	0.00	0.00	0.00	0.20	7
Aroclor-1260	1	0.00	0.00	0.00	0.18	
	2	0.00	0.00	0.00	0.20	9

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

Matrix Spike

Lab Sample ID: B135270-MS1 Date(s) Analyzed: 11/13/2015 11/13/2015

Instrument ID (1): _____ Instrument ID (2): _____

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.15	
	2	0.00	0.00	0.00	0.17	13
Aroclor-1260	1	0.00	0.00	0.00	0.15	
	2	0.00	0.00	0.00	0.17	12

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B135270-MSD1 Date(s) Analyzed: 11/14/2015 11/14/2015

Instrument ID (1): _____ Instrument ID (2): _____

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.21	
	2	0.00	0.00	0.00	0.24	11
Aroclor-1260	1	0.00	0.00	0.00	0.20	
	2	0.00	0.00	0.00	0.22	10

FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
 - † Wide recovery limits established for difficult compound.
 - ‡ Wide RPD limits established for difficult compound.
 - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
No results have been blank subtracted unless specified in the case narrative section.
- B-01 Methylene chloride is a common laboratory contaminant.
 - H-03 Sample received after recommended holding time was exceeded.
 - L-07 Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
 - PR-03 Sample preserved in the laboratory, not in the field as required by the method.
 - PR-15 According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846 5035-L/5035A-L.
 - R-05 Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
 - R-06 Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.
 - S-07 One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.
 - V-05 Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
 - V-20 Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 1030 in Soil	
Ignitability	NY,NH,CT,NC,ME,VA
SW-846 6010C in Water	
Arsenic	NY,CT,NC,ME,NH,VA
Barium	NY,CT,ME,NC,NH,VA
Cadmium	NY,CT,ME,NC,NH,VA
Chromium	NY,CT,ME,NC,NH,VA
Lead	NY,CT,ME,NC,NH,VA
Selenium	CT,ME,NC,NH,NY,VA
Silver	CT,ME,NC,NH,NY,VA
SW-846 7470A in Water	
Mercury	CT,ME,NC,NH,NY,VA
SW-846 8015C in Soil	
Gasoline Range Organics (GRO)	NY,VA,NH
Diesel Range Organics	NY,VA,NH
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NY,NC
Aroclor-1262 [2C]	NY,NC
Aroclor-1268	NY,NC
Aroclor-1268 [2C]	NY,NC
SW-846 8260C in Soil	
Acetone	CT,NH,NY,ME,VA
Acrylonitrile	CT,NH,NY,ME,VA
Benzene	CT,NH,NY,ME,VA
Bromobenzene	NH,NY,ME,VA
Bromochloromethane	NH,NY,ME,VA
Bromodichloromethane	CT,NH,NY,ME,VA
Bromoform	CT,NH,NY,ME,VA
Dimethylmethane	CT,NH,NY,ME,VA
2-Butanone (MEK)	CT,NH,NY,ME,VA
n-Butylbenzene	CT,NH,NY,ME,VA
sec-Butylbenzene	CT,NH,NY,ME,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
tert-Butylbenzene	CT,NH,NY,ME,VA
Carbon Disulfide	CT,NH,NY,ME,VA
Carbon Tetrachloride	CT,NH,NY,ME,VA
Chlorobenzene	CT,NH,NY,ME,VA
Chlorodibromomethane	CT,NH,NY,ME,VA
Chloroethane	CT,NH,NY,ME,VA
Chloroform	CT,NH,NY,ME,VA
Chloromethane	CT,NH,NY,ME,VA
2-Chlorotoluene	CT,NH,NY,ME,VA
4-Chlorotoluene	CT,NH,NY,ME,VA
Dibromomethane	NH,NY,ME,VA
1,2-Dichlorobenzene	CT,NH,NY,ME,VA
1,3-Dichlorobenzene	CT,NH,NY,ME,VA
1,4-Dichlorobenzene	CT,NH,NY,ME,VA
Dichlorodifluoromethane (Freon 12)	NH,NY,ME,VA
1,1-Dichloroethane	CT,NH,NY,ME,VA
1,2-Dichloroethane	CT,NH,NY,ME,VA
1,1-Dichloroethylene	CT,NH,NY,ME,VA
cis-1,2-Dichloroethylene	CT,NH,NY,ME,VA
trans-1,2-Dichloroethylene	CT,NH,NY,ME,VA
1,2-Dichloropropane	CT,NH,NY,ME,VA
1,3-Dichloropropane	NH,NY,ME,VA
2,2-Dichloropropane	NH,NY,ME,VA
1,1-Dichloropropene	NH,NY,ME,VA
cis-1,3-Dichloropropene	CT,NH,NY,ME,VA
trans-1,3-Dichloropropene	CT,NH,NY,ME,VA
Ethylbenzene	CT,NH,NY,ME,VA
Hexachlorobutadiene	NH,NY,ME,VA
2-Hexanone (MBK)	CT,NH,NY,ME,VA
Isopropylbenzene (Cumene)	CT,NH,NY,ME,VA
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl tert-Butyl Ether (MTBE)	NY,VA
Methylene Chloride	CT,NH,NY,ME,VA
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,VA
Naphthalene	NH,NY,ME,VA
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME,VA
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME,VA
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME,VA
Tetrachloroethylene	CT,NH,NY,ME,VA
Toluene	CT,NH,NY,ME,VA
1,2,3-Trichlorobenzene	ME
1,2,4-Trichlorobenzene	NH,NY,ME,VA
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NH,NY,ME,VA
1,1,2-Trichloroethane	CT,NH,NY,ME,VA
Trichloroethylene	CT,NH,NY,ME,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Soil	
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME,VA
1,2,3-Trichloropropane	NH,NY,ME,VA
1,2,4-Trimethylbenzene	CT,NH,NY,ME,VA
1,3,5-Trimethylbenzene	CT,NH,NY,ME,VA
Vinyl Chloride	CT,NH,NY,ME,VA
m+p Xylene	CT,NH,NY,ME,VA
o-Xylene	CT,NH,NY,ME,VA
SW-846 8270D in Soil	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2016
MA	Massachusetts DEP	M-MA100	06/30/2016
CT	Connecticut Department of Public Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2016
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2016
RI	Rhode Island Department of Health	LAO00112	12/30/2015
NC	North Carolina Div. of Water Quality	652	12/31/2015
NJ	New Jersey DEP	MA007 NELAP	06/30/2016
FL	Florida Department of Health	E871027 NELAP	06/30/2016
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2016
WA	State of Washington Department of Ecology	C2065	02/23/2016
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2015
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2016

39 Spruce St.
 East Longmeadow, MA. 01028
 P: 413-525-2332
 F: 413-525-6405
 www.contestlabs.com



Sample Receipt Checklist

CLIENT NAME: LCO RECEIVED BY: RFJ DATE: 11/11/15

- 1) Was the chain(s) of custody relinquished and signed? **Yes** No No CoC Included
 2) Does the chain agree with the samples? **Yes** No
 If not, explain:
 3) Are all the samples in good condition? **Yes** No
 If not, explain:

4) How were the samples received:
 On Ice Direct from Sampling Ambient In Cooler(s)
 Were the samples received in Temperature Compliance of (2-6°C)? **Yes** No N/A
 Temperature °C by Temp blank _____ Temperature °C by Temp gun 4.1 C

- 5) Are there Dissolved samples for the lab to filter? Yes **No**
 Who was notified _____ Date _____ Time _____
 6) Are there any RUSH or SHORT HOLDING TIME samples? Yes **No**
 Who was notified _____ Date _____ Time _____

7) Location where samples are stored: [Signature]
 Permission to subcontract samples? Yes No
 (Walk-in clients only) if not already approved
 Client Signature: _____

- 8) Do all samples have the proper Acid pH: Yes No **N/A**
 9) Do all samples have the proper Base pH: Yes No **N/A**
 10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No **N/A**

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber /clear jar	<u>17</u>
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	<u>17</u>
1 Liter Plastic		Plastic Bag / Ziploc	
500 mL Plastic		SOC Kit	
250 mL plastic		Non-ConTest Container	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other <u>1106Z</u>	<u>17</u>

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol _____
 # Bisulfate _____ # DI Water _____
 # Thiosulfate _____ Unpreserved _____
 Time and Date Frozen: _____

Login Sample Receipt Checklist
 (Rejection Criteria Listing - Using Sample Acceptance Policy)
 Any False statement will be brought to the attention of Client

Question	Answer (True/False)	Comment
	T/F/NA	
1) The cooler's custody seal, if present, is intact.	T	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.	T	

Doc #277 Rev. 4 August 2013

Who notified of False statements?
 Log-In Technician Initials:

Date/Time:
 Date/Time:

RLT

11/11/15 1345

November 18, 2015

Amy Hewson
LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202

Project Location: Atlantic Ave., Brooklyn, NY
Client Job Number:
Project Number: 15-008-0265
Laboratory Work Order Number: 15K0480

Enclosed are results of analyses for samples received by the laboratory on November 11, 2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Aaron L. Benoit
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Amy Hewson

REPORT DATE: 11/18/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 15-008-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15K0480

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave., Brooklyn, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-38- 14.5-15.0ft	15K0480-01	Soil		SM 2540G	
				SW-846 8260C	
SB-38- Comp	15K0480-02	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-35- 14.5-15.0ft	15K0480-03
SW-846 8260C					
SB-35- Comp	15K0480-04	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-33- 14.5-15.0ft	15K0480-05
SW-846 8260C					



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LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Amy Hewson

REPORT DATE: 11/18/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 15-008-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15K0480

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave., Brooklyn, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB				
SB-33- Comp	15K0480-06	Soil		SM 2540G					
				SW-846 1030					
				SW-846 1311					
				SW-846 6010C					
				SW-846 7470A					
				SW-846 8015C					
				SW-846 8082A					
				SW-846 8270D					
				SW-846 9014					
				SW-846 9030A					
SB-29- 14.5-15.0ft	15K0480-07	Soil		SW-846 9045C					
				SW-846 9095B					
				SM 2540G					
				SW-846 8260C					
				SB-29- Comp	15K0480-08	Soil		SM 2540G	
								SW-846 1030	
								SW-846 1311	
								SW-846 6010C	
								SW-846 7470A	
								SW-846 8015C	
SW-846 8082A									
SW-846 8270D									
SW-846 9014									
SW-846 9030A									
SB-23- 14.5-15.0ft	15K0480-09	Soil		SW-846 9045C					
				SW-846 9095B					
				SM 2540G					
				SW-846 8260C					
				SB-23- Comp	15K0480-10	Soil		SM 2540G	
								SW-846 1030	
								SW-846 1311	
								SW-846 6010C	
								SW-846 7470A	
								SW-846 8015C	
SW-846 8082A									
SW-846 8270D									
SW-846 9014									
SW-846 9030A									
				SW-846 9045C					
				SW-846 9095B					



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LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Amy Hewson

REPORT DATE: 11/18/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 15-008-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15K0480

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave., Brooklyn, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-22- 14.5-15.0ft	15K0480-11	Soil		SM 2540G	
				SW-846 8260C	
SB-22- Comp	15K0480-12	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-20- 14.5-15.0ft	15K0480-13
SW-846 8260C					
SB-20- Comp	15K0480-14	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

Qualifications:

B-01

Methylene chloride is a common laboratory contaminant.

Analyte & Samples(s) Qualified:

Methylene Chloride

15K0480-05[SB-33- 14.5-15.0ft]

PR-03

Sample preserved in the laboratory, not in the field as required by the method.

Analyte & Samples(s) Qualified:

15K0480-01[SB-38- 14.5-15.0ft], 15K0480-03[SB-35- 14.5-15.0ft], 15K0480-05[SB-33- 14.5-15.0ft], 15K0480-07[SB-29- 14.5-15.0ft], 15K0480-09[SB-23- 14.5-15.0ft],
15K0480-11[SB-22- 14.5-15.0ft], 15K0480-13[SB-20- 14.5-15.0ft]

PR-15

According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846 5035-L/5035A-L.

Analyte & Samples(s) Qualified:

15K0480-01[SB-38- 14.5-15.0ft], 15K0480-03[SB-35- 14.5-15.0ft], 15K0480-05[SB-33- 14.5-15.0ft], 15K0480-07[SB-29- 14.5-15.0ft], 15K0480-09[SB-23- 14.5-15.0ft],
15K0480-11[SB-22- 14.5-15.0ft], 15K0480-13[SB-20- 14.5-15.0ft]

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:

Bromomethane

15K0480-01[SB-38- 14.5-15.0ft], 15K0480-03[SB-35- 14.5-15.0ft], 15K0480-05[SB-33- 14.5-15.0ft], 15K0480-07[SB-29- 14.5-15.0ft], 15K0480-09[SB-23- 14.5-15.0ft],
15K0480-11[SB-22- 14.5-15.0ft], B135676-BLK1, B135676-BS1, B135676-BSD1

Chlorodifluoromethane (Freon 12)

15K0480-11[SB-22- 14.5-15.0ft], 15K0480-13[SB-20- 14.5-15.0ft], B135701-BLK1, B135701-BS1, B135701-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Carbon Disulfide

B135676-BS1, B135676-BSD1, B135701-BS1, B135701-BSD1

tert-Butyl Alcohol (TBA)

B135676-BS1, B135676-BSD1, B135701-BS1, B135701-BSD1

SW-846 8270D

Qualifications:

S-07

One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.

Analyte & Samples(s) Qualified:

p-Terphenyl-d14

B135190-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Benzo(g,h,i)perylene

15K0480-02[SB-38- Comp], 15K0480-04[SB-35- Comp], 15K0480-06[SB-33- Comp], 15K0480-08[SB-29- Comp], 15K0480-10[SB-23- Comp], 15K0480-14[SB-20- Comp]

SW-846 9045C

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:**pH**

15K0480-02[SB-38- Comp], 15K0480-04[SB-35- Comp], 15K0480-06[SB-33- Comp], 15K0480-08[SB-29- Comp]

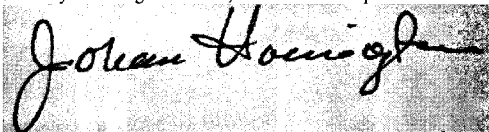
SW-846 8015C

Gasoline Range Organics (2-Methylpentane through 1,2,4-Trimethylbenzene) is quantitated against a calibration made with an unleaded gasoline composite standard.

Diesel Range Organics (C10-C28) is quantitated against a calibration made with a #2 fuel oil standard.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Johanna K. Harrington

Manager, Laboratory Reporting

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-38-14.5-15.0ft

Sampled: 11/10/2015 11:00

Sample ID: 15K0480-01

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Acrylonitrile	ND	0.0062	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Benzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Bromobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Bromochloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Bromodichloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Bromoform	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	R-05	SW-846 8260C	11/17/15	11/17/15 20:07	MFF
2-Butanone (MEK)	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
tert-Butyl Alcohol (TBA)	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
n-Butylbenzene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
sec-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
tert-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Carbon Disulfide	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Carbon Tetrachloride	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Chlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Chloroethane	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Chloroform	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
2-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
4-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Dibromomethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,2-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,3-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,4-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
trans-1,4-Dichloro-2-butene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,1-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,2-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,1-Dichloroethylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
cis-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
trans-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,1-Dichloropropene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Diethyl Ether	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF

HAZ - 479

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-38-14.5-15.0ft

Sampled: 11/10/2015 11:00

Sample ID: 15K0480-01

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Ethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Hexachlorobutadiene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
2-Hexanone (MBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Isopropylbenzene (Cumene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Methylene Chloride	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Naphthalene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
n-Propylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Styrene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Tetrachloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Toluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,2,3-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,2,4-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,3,5-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,1,1-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,1,2-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Trichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,2,3-Trichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,2,4-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
1,3,5-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
m+p Xylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF
o-Xylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:07	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	11/17/15 20:07
Toluene-d8	96.4	70-130	11/17/15 20:07
4-Bromofluorobenzene	90.4	70-130	11/17/15 20:07



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-38- 14.5-15.0ft

Sampled: 11/10/2015 11:00

Sample ID: 15K0480-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.3		% Wt	1		SM 2540G	11/11/15	11/12/15 8:42	MRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-38- Comp

Sampled: 11/10/2015 11:00

Sample ID: 15K0480-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 15:59	BGL
Acenaphthylene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 15:59	BGL
Anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 15:59	BGL
Benzo(a)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 15:59	BGL
Benzo(a)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 15:59	BGL
Benzo(b)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 15:59	BGL
Benzo(g,h,i)perylene	ND	0.17	mg/Kg dry	1	V-05	SW-846 8270D	11/11/15	11/16/15 15:59	BGL
Benzo(k)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 15:59	BGL
Chrysene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 15:59	BGL
Dibenz(a,h)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 15:59	BGL
Fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 15:59	BGL
Fluorene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 15:59	BGL
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 15:59	BGL
2-Methylnaphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 15:59	BGL
Naphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 15:59	BGL
Phenanthrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 15:59	BGL
Pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 15:59	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Nitrobenzene-d5	74.9	30-130	11/16/15 15:59
2-Fluorobiphenyl	92.4	30-130	11/16/15 15:59
p-Terphenyl-d14	93.8	30-130	11/16/15 15:59

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-38- Comp

Sampled: 11/10/2015 11:00

Sample ID: 15K0480-02

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:15	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:15	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:15	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:15	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:15	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:15	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:15	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:15	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:15	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	90.3	30-150	
Decachlorobiphenyl [2]	86.6	30-150	
Tetrachloro-m-xylene [1]	86.4	30-150	
Tetrachloro-m-xylene [2]	89.3	30-150	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-38- Comp

Sampled: 11/10/2015 11:00

Sample ID: 15K0480-02

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg dry	1		SW-846 8015C	11/16/15	11/16/15 20:47	EEH
Diesel Range Organics	ND	8.6	mg/Kg dry	1		SW-846 8015C	11/12/15	11/17/15 1:49	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	85.0		70-130					11/16/15 20:47	
o-Terphenyl	67.1		40-140					11/17/15 1:49	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-38- Comp

Sampled: 11/10/2015 11:00

Sample ID: 15K0480-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/12/15	11/12/15 14:15	AG
pH @24.6°C	6.4		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 19:00	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	96.5		% Wt	1		SM 2540G	11/11/15	11/12/15 8:42	MRL



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-38- Comp

Sampled: 11/10/2015 11:00

Sample ID: 15K0480-02

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:23	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 12:00	SCB
Barium	0.21	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:23	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:23	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:23	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:23	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:23	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:23	AME

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-35- 14.5-15.0ft

Sampled: 11/10/2015 12:30

Sample ID: 15K0480-03

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Acrylonitrile	ND	0.0061	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	R-05	SW-846 8260C	11/17/15	11/17/15 20:35	MFF
2-Butanone (MEK)	ND	0.041	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
tert-Butyl Alcohol (TBA)	ND	0.041	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
n-Butylbenzene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Carbon Disulfide	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Chloroethane	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Chloroform	ND	0.0041	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
trans-1,4-Dichloro-2-butene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,1-Dichloroethylene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Diethyl Ether	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-35- 14.5-15.0ft

Sampled: 11/10/2015 12:30

Sample ID: 15K0480-03

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0041	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Methylene Chloride	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Naphthalene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Toluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
m+p Xylene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 20:35	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	103	70-130	11/17/15 20:35
Toluene-d8	94.1	70-130	11/17/15 20:35
4-Bromofluorobenzene	89.4	70-130	11/17/15 20:35

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-35- 14.5-15.0ft

Sampled: 11/10/2015 12:30

Sample ID: 15K0480-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.2		% Wt	1		SM 2540G	11/11/15	11/12/15 8:42	MRL



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-35- Comp

Sampled: 11/10/2015 12:30

Sample ID: 15K0480-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:24	BGL
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:24	BGL
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:24	BGL
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:24	BGL
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:24	BGL
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:24	BGL
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1	V-05	SW-846 8270D	11/11/15	11/16/15 16:24	BGL
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:24	BGL
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:24	BGL
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:24	BGL
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:24	BGL
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:24	BGL
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:24	BGL
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:24	BGL
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:24	BGL
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:24	BGL
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:24	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Nitrobenzene-d5	74.3	30-130	
2-Fluorobiphenyl	81.5	30-130	
p-Terphenyl-d14	78.3	30-130	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-35- Comp

Sampled: 11/10/2015 12:30

Sample ID: 15K0480-04

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:28	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:28	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:28	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:28	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:28	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:28	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:28	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:28	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:28	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		93.2	30-150					11/13/15 19:28	
Decachlorobiphenyl [2]		89.3	30-150					11/13/15 19:28	
Tetrachloro-m-xylene [1]		83.2	30-150					11/13/15 19:28	
Tetrachloro-m-xylene [2]		86.0	30-150					11/13/15 19:28	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-35- Comp

Sampled: 11/10/2015 12:30

Sample ID: 15K0480-04

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/16/15	11/16/15 21:23	EEH
Diesel Range Organics	ND	8.7	mg/Kg dry	1		SW-846 8015C	11/12/15	11/17/15 7:18	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	87.9		70-130				11/16/15 21:23		
o-Terphenyl	83.0		40-140				11/17/15 7:18		

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-35- Comp

Sampled: 11/10/2015 12:30

Sample ID: 15K0480-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/12/15	11/12/15 14:15	AG
pH @25.2°C	7.7		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 19:00	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	96.2		% Wt	1		SM 2540G	11/11/15	11/12/15 8:42	MRL



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-35- Comp

Sampled: 11/10/2015 12:30

Sample ID: 15K0480-04

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:27	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 12:01	SCB
Barium	0.13	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:27	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:27	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:27	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:27	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:27	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:27	AME

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-33- 14.5-15.0ft

Sampled: 11/10/2015 13:15

Sample ID: 15K0480-05

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Acrylonitrile	ND	0.0065	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Benzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Bromobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Bromochloromethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Bromodichloromethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Bromoform	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Bromomethane	ND	0.011	mg/Kg dry	1	R-05	SW-846 8260C	11/17/15	11/17/15 21:02	MFF
2-Butanone (MEK)	ND	0.043	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
tert-Butyl Alcohol (TBA)	ND	0.043	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
n-Butylbenzene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
sec-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
tert-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Carbon Disulfide	ND	0.022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Carbon Tetrachloride	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Chlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Chlorodibromomethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Chloroethane	ND	0.022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Chloroform	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Chloromethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
2-Chlorotoluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
4-Chlorotoluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Dibromomethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,2-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,3-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,4-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
trans-1,4-Dichloro-2-butene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,1-Dichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,2-Dichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,1-Dichloroethylene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
cis-1,2-Dichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
trans-1,2-Dichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,2-Dichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,3-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
2,2-Dichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,1-Dichloropropene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
cis-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
trans-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Diethyl Ether	ND	0.022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF

HAZ - 495

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-33-14.5-15.0ft

Sampled: 11/10/2015 13:15

Sample ID: 15K0480-05

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,4-Dioxane	ND	0.11	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Ethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Hexachlorobutadiene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
2-Hexanone (MBK)	ND	0.022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Isopropylbenzene (Cumene)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Methylene Chloride	0.029	0.022	mg/Kg dry	1	B-01	SW-846 8260C	11/17/15	11/17/15 21:02	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Naphthalene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
n-Propylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Styrene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,1,1,2-Tetrachloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Tetrachloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Tetrahydrofuran	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Toluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,2,3-Trichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,2,4-Trichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,3,5-Trichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,1,1-Trichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,1,2-Trichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Trichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,2,3-Trichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,2,4-Trimethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
1,3,5-Trimethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
Vinyl Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
m+p Xylene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF
o-Xylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:02	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	11/17/15 21:02
Toluene-d8	96.4	70-130	11/17/15 21:02
4-Bromofluorobenzene	88.6	70-130	11/17/15 21:02

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-33- 14.5-15.0ft

Sampled: 11/10/2015 13:15

Sample ID: 15K0480-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.1		% Wt	1		SM 2540G	11/11/15	11/12/15 8:42	MRL

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-33- Comp

Sampled: 11/10/2015 13:15

Sample ID: 15K0480-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Acenaphthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:49	BGL
Acenaphthylene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:49	BGL
Anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:49	BGL
Benzo(a)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:49	BGL
Benzo(a)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:49	BGL
Benzo(b)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:49	BGL
Benzo(g,h,i)perylene	ND	0.17	mg/Kg dry	1	V-05	SW-846 8270D	11/11/15	11/16/15 16:49	BGL
Benzo(k)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:49	BGL
Chrysene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:49	BGL
Dibenz(a,h)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:49	BGL
Fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:49	BGL
Fluorene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:49	BGL
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:49	BGL
2-Methylnaphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:49	BGL
Naphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:49	BGL
Phenanthrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:49	BGL
Pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 16:49	BGL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Nitrobenzene-d5	82.9		30-130						11/16/15 16:49
2-Fluorobiphenyl	97.2		30-130						11/16/15 16:49
p-Terphenyl-d14	96.0		30-130						11/16/15 16:49

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-33- Comp

Sampled: 11/10/2015 13:15

Sample ID: 15K0480-06

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:41	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:41	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:41	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:41	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:41	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:41	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:41	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:41	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:41	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		86.3	30-150					11/13/15 19:41	
Decachlorobiphenyl [2]		81.8	30-150					11/13/15 19:41	
Tetrachloro-m-xylene [1]		80.5	30-150					11/13/15 19:41	
Tetrachloro-m-xylene [2]		81.6	30-150					11/13/15 19:41	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-33- Comp

Sampled: 11/10/2015 13:15

Sample ID: 15K0480-06

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg dry	1		SW-846 8015C	11/16/15	11/16/15 21:58	EEH
Diesel Range Organics	ND	8.6	mg/Kg dry	1		SW-846 8015C	11/12/15	11/17/15 7:35	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	92.8		70-130				11/16/15 21:58		
o-Terphenyl	78.5		40-140				11/17/15 7:35		



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-33- Comp

Sampled: 11/10/2015 13:15

Sample ID: 15K0480-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/12/15	11/12/15 14:15	AG
pH @23.3°C	5.8		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 19:00	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	97.2		% Wt	1		SM 2540G	11/11/15	11/12/15 8:42	MRL

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-33- Comp

Sampled: 11/10/2015 13:15

Sample ID: 15K0480-06

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:32	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 12:03	SCB
Barium	0.12	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:32	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:32	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:32	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:32	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:32	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:32	AME

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-29- 14.5-15.0ft

Sampled: 11/10/2015 14:15

Sample ID: 15K0480-07

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Acrylonitrile	ND	0.0063	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Benzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Bromobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Bromochloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Bromodichloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Bromoform	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	R-05	SW-846 8260C	11/17/15	11/17/15 21:30	MFF
2-Butanone (MEK)	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
tert-Butyl Alcohol (TBA)	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
n-Butylbenzene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
sec-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
tert-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Carbon Disulfide	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Carbon Tetrachloride	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Chlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Chloroethane	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Chloroform	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
2-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
4-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Dibromomethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,2-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,3-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,4-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
trans-1,4-Dichloro-2-butene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,1-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,2-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,1-Dichloroethylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
cis-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
trans-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
2,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,1-Dichloropropene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Diethyl Ether	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF

HAZ - 503

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-29- 14.5-15.0ft

Sampled: 11/10/2015 14:15

Sample ID: 15K0480-07

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Ethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Hexachlorobutadiene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
2-Hexanone (MBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Isopropylbenzene (Cumene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Methylene Chloride	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Naphthalene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
n-Propylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Styrene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Tetrachloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Toluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,2,3-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,2,4-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,3,5-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,1,1-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,1,2-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Trichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,2,3-Trichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,2,4-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
1,3,5-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
m+p Xylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF
o-Xylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:30	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	103	70-130	11/17/15 21:30
Toluene-d8	95.0	70-130	11/17/15 21:30
4-Bromofluorobenzene	89.2	70-130	11/17/15 21:30



PROJECT ID.: HWD10105

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-29- 14.5-15.0ft

Sampled: 11/10/2015 14:15

Sample ID: 15K0480-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.9		% Wt	1		SM 2540G	11/11/15	11/12/15 8:42	MRL



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-29- Comp

Sampled: 11/10/2015 14:15

Sample ID: 15K0480-08

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:14	BGL
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:14	BGL
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:14	BGL
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:14	BGL
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:14	BGL
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:14	BGL
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1	V-05	SW-846 8270D	11/11/15	11/16/15 17:14	BGL
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:14	BGL
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:14	BGL
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:14	BGL
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:14	BGL
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:14	BGL
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:14	BGL
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:14	BGL
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:14	BGL
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:14	BGL
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:14	BGL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Nitrobenzene-d5	78.3	30-130						11/16/15 17:14	
2-Fluorobiphenyl	88.1	30-130						11/16/15 17:14	
p-Terphenyl-d14	87.3	30-130						11/16/15 17:14	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-29- Comp

Sampled: 11/10/2015 14:15

Sample ID: 15K0480-08

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:54	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:54	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:54	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:54	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:54	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:54	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:54	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:54	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 19:54	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		90.6	30-150					11/13/15 19:54	
Decachlorobiphenyl [2]		86.5	30-150					11/13/15 19:54	
Tetrachloro-m-xylene [1]		72.6	30-150					11/13/15 19:54	
Tetrachloro-m-xylene [2]		74.2	30-150					11/13/15 19:54	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-29- Comp

Sampled: 11/10/2015 14:15

Sample ID: 15K0480-08

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/16/15	11/16/15 22:34	EEH
Diesel Range Organics	ND	8.7	mg/Kg dry	1		SW-846 8015C	11/12/15	11/17/15 7:52	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	87.4		70-130				11/16/15 22:34		
o-Terphenyl	77.6		40-140				11/17/15 7:52		

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-29- Comp

Sampled: 11/10/2015 14:15

Sample ID: 15K0480-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/12/15	11/12/15 14:15	AG
pH @23.8°C	6.8		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 19:00	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	96.0		% Wt	1		SM 2540G	11/11/15	11/12/15 8:42	MRL



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-29- Comp

Sampled: 11/10/2015 14:15

Sample ID: 15K0480-08

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:37	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 12:10	SCB
Barium	0.43	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:37	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:37	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:37	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:37	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:37	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:37	AME

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Subject Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-23- 14.5-15.0ft

Sampled: 11/11/2015 09:30

Sample ID: 15K0480-09

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.089	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Acrylonitrile	ND	0.0053	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Bromomethane	ND	0.0089	mg/Kg dry	1	R-05	SW-846 8260C	11/17/15	11/17/15 21:57	MFF
2-Butanone (MEK)	ND	0.035	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
tert-Butyl Alcohol (TBA)	ND	0.035	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
n-Butylbenzene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Carbon Disulfide	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Chlorodibromomethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Chloroethane	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Chloroform	ND	0.0035	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Chloromethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,2-Dibromoethane (EDB)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
trans-1,4-Dichloro-2-butene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,1-Dichloroethylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,3-Dichloropropane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,2-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
cis-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
trans-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Diethyl Ether	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-23- 14.5-15.0ft

Sampled: 11/11/2015 09:30

Sample ID: 15K0480-09

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,4-Dioxane	ND	0.089	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0035	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Methylene Chloride	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Naphthalene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,1,2,2-Tetrachloroethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Tetrahydrofuran	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,3,5-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
Vinyl Chloride	ND	0.0089	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
m+p Xylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/17/15	11/17/15 21:57	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	104	70-130	11/17/15 21:57
Toluene-d8	95.4	70-130	11/17/15 21:57
4-Bromofluorobenzene	89.1	70-130	11/17/15 21:57



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-23- 14.5-15.0ft

Sampled: 11/11/2015 09:30

Sample ID: 15K0480-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.4		% Wt	1		SM 2540G	11/11/15	11/12/15 8:42	MRL

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-23- Comp

Sampled: 11/11/2015 09:30

Sample ID: 15K0480-10

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:39	BGL
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:39	BGL
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:39	BGL
Benzo(a)anthracene	0.35	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:39	BGL
Benzo(a)pyrene	0.34	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:39	BGL
Benzo(b)fluoranthene	0.44	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:39	BGL
Benzo(g,h,i)perylene	0.19	0.18	mg/Kg dry	1	V-05	SW-846 8270D	11/11/15	11/16/15 17:39	BGL
Benzo(k)fluoranthene	0.20	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:39	BGL
Chrysene	0.36	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:39	BGL
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:39	BGL
Fluoranthene	0.74	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:39	BGL
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:39	BGL
Indeno(1,2,3-cd)pyrene	0.21	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:39	BGL
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:39	BGL
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:39	BGL
Phenanthrene	0.44	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:39	BGL
Pyrene	0.73	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 17:39	BGL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Nitrobenzene-d5	87.0		30-130			11/16/15 17:39			
2-Fluorobiphenyl	98.5		30-130			11/16/15 17:39			
p-Terphenyl-d14	102		30-130			11/16/15 17:39			

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-23- Comp

Sampled: 11/11/2015 09:30

Sample ID: 15K0480-10

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:07	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	88.0	30-150	
Decachlorobiphenyl [2]	83.1	30-150	
Tetrachloro-m-xylene [1]	81.9	30-150	
Tetrachloro-m-xylene [2]	84.3	30-150	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-23- Comp

Sampled: 11/11/2015 09:30

Sample ID: 15K0480-10

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.2	mg/Kg dry	1		SW-846 8015C	11/16/15	11/16/15 23:10	EEH
Diesel Range Organics	67	9.0	mg/Kg dry	1		SW-846 8015C	11/12/15	11/18/15 2:29	CJM
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	87.8		70-130				11/16/15 23:10		
o-Terphenyl	69.4		40-140				11/18/15 2:29		



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-23- Comp

Sampled: 11/11/2015 09:30

Sample ID: 15K0480-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/12/15	11/12/15 14:15	AG
pH @22.8°C	8.7		pH Units	1		SW-846 9045C	11/12/15	11/12/15 8:30	LL
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	92.5		% Wt	1		SM 2540G	11/11/15	11/12/15 8:42	MRL



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-23- Comp

Sampled: 11/11/2015 09:30

Sample ID: 15K0480-10

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	0.030	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:57	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 12:11	SCB
Barium	0.36	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:57	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:57	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:57	AME
Lead	0.12	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:57	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:57	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 14:57	AME



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-22-14.5-15.0ft

Sampled: 11/11/2015 10:15

Sample ID: 15K0480-11

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Acrylonitrile	ND	0.0057	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Bromomethane	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
2-Butanone (MEK)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
tert-Butyl Alcohol (TBA)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
n-Butylbenzene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Carbon Disulfide	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Chlorodibromomethane	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Chloroethane	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Chloroform	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Chloromethane	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,2-Dibromoethane (EDB)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
trans-1,4-Dichloro-2-butene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.019	mg/Kg dry	1	R-05	SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,1-Dichloroethylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,3-Dichloropropane	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
cis-1,3-Dichloropropene	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
trans-1,3-Dichloropropene	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Diethyl Ether	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-22- 14.5-15.0ft

Sampled: 11/11/2015 10:15

Sample ID: 15K0480-11

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,4-Dioxane	ND	0.095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Methylene Chloride	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Naphthalene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,1,2,2-Tetrachloroethane	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Tetrahydrofuran	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,3,5-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
Vinyl Chloride	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
m+p Xylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 7:41	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	103	70-130	11/18/15 7:41
Toluene-d8	96.7	70-130	11/18/15 7:41
4-Bromofluorobenzene	90.2	70-130	11/18/15 7:41



PROJECT ID.: HWD10105

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-22- 14.5-15.0ft

Sampled: 11/11/2015 10:15

Sample ID: 15K0480-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.1		% Wt	1		SM 2540G	11/11/15	11/12/15 8:42	MRL



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-22- Comp

Sampled: 11/11/2015 10:15

Sample ID: 15K0480-12

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
Acenaphthylene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
Anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
Benzo(a)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
Benzo(a)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
Benzo(b)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
Benzo(g,h,i)perylene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
Benzo(k)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
Chrysene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
Dibenz(a,h)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
Fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
Fluorene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
2-Methylnaphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
Naphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
Phenanthrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
Pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	11/11/15	11/17/15 10:24	BGL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Nitrobenzene-d5	80.8	30-130						11/17/15 10:24	
2-Fluorobiphenyl	87.4	30-130						11/17/15 10:24	
p-Terphenyl-d14	96.7	30-130						11/17/15 10:24	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-22- Comp

Sampled: 11/11/2015 10:15

Sample ID: 15K0480-12

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:20	JMB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	68.9		30-150					11/13/15 20:20	
Decachlorobiphenyl [2]	64.8		30-150					11/13/15 20:20	
Tetrachloro-m-xylene [1]	63.5		30-150					11/13/15 20:20	
Tetrachloro-m-xylene [2]	64.1		30-150					11/13/15 20:20	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-22- Comp

Sampled: 11/11/2015 10:15

Sample ID: 15K0480-12

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg dry	1		SW-846 8015C	11/16/15	11/16/15 23:46	EEH
Diesel Range Organics	ND	8.7	mg/Kg dry	1		SW-846 8015C	11/12/15	11/17/15 8:27	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1-Chloro-3-fluorobenzene	91.2	70-130	
o-Terphenyl	74.2	40-140	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-22- Comp

Sampled: 11/11/2015 10:15

Sample ID: 15K0480-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/12/15	11/12/15 14:15	AG
pH @23.7°C	6.3		pH Units	1		SW-846 9045C	11/12/15	11/12/15 8:30	LL
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	96.0		% Wt	1		SM 2540G	11/11/15	11/12/15 8:42	MRL



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-22- Comp

Sampled: 11/11/2015 10:15

Sample ID: 15K0480-12

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 15:02	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 12:13	SCB
Barium	0.33	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 15:02	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 15:02	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 15:02	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 15:02	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 15:02	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 15:02	AME

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-20-14.5-15.0ft

Sampled: 11/11/2015 11:00

Sample ID: 15K0480-13

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Acrylonitrile	ND	0.0060	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Bromomethane	ND	0.0099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
2-Butanone (MEK)	ND	0.040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
n-Butylbenzene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Carbon Disulfide	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Chlorodibromomethane	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Chloroethane	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Chloroform	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Chloromethane	ND	0.0099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,2-Dibromoethane (EDB)	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg dry	1	R-05	SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,1-Dichloroethylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,3-Dichloropropane	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
cis-1,3-Dichloropropene	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
trans-1,3-Dichloropropene	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Diethyl Ether	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF

HAZ - 527

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-20- 14.5-15.0ft

Sampled: 11/11/2015 11:00

Sample ID: 15K0480-13

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,4-Dioxane	ND	0.099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Methylene Chloride	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Naphthalene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,1,2,2-Tetrachloroethane	ND	0.00099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Tetrahydrofuran	ND	0.0099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Toluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
Vinyl Chloride	ND	0.0099	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
m+p Xylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/17/15	11/18/15 8:09	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	103	70-130	11/18/15 8:09
Toluene-d8	95.4	70-130	11/18/15 8:09
4-Bromofluorobenzene	90.8	70-130	11/18/15 8:09



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-20- 14.5-15.0ft

Sampled: 11/11/2015 11:00

Sample ID: 15K0480-13

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.7		% Wt	1		SM 2540G	11/11/15	11/12/15 8:42	MRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-20- Comp

Sampled: 11/11/2015 11:00

Sample ID: 15K0480-14

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 18:29	BGL
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 18:29	BGL
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 18:29	BGL
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 18:29	BGL
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 18:29	BGL
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 18:29	BGL
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1	V-05	SW-846 8270D	11/11/15	11/16/15 18:29	BGL
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 18:29	BGL
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 18:29	BGL
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 18:29	BGL
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 18:29	BGL
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 18:29	BGL
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 18:29	BGL
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 18:29	BGL
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 18:29	BGL
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 18:29	BGL
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/11/15	11/16/15 18:29	BGL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Nitrobenzene-d5	96.2		30-130					11/16/15 18:29	
2-Fluorobiphenyl	105		30-130					11/16/15 18:29	
p-Terphenyl-d14	108		30-130					11/16/15 18:29	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-20- Comp

Sampled: 11/11/2015 11:00

Sample ID: 15K0480-14

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:33	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:33	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:33	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:33	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:33	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:33	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:33	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:33	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/12/15	11/13/15 20:33	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	96.2	30-150	
Decachlorobiphenyl [2]	92.4	30-150	
Tetrachloro-m-xylene [1]	81.9	30-150	
Tetrachloro-m-xylene [2]	84.9	30-150	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-20- Comp

Sampled: 11/11/2015 11:00

Sample ID: 15K0480-14

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg dry	1		SW-846 8015C	11/16/15	11/17/15 0:22	EEH
Diesel Range Organics	ND	8.7	mg/Kg dry	1		SW-846 8015C	11/12/15	11/17/15 6:43	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	86.3		70-130				11/17/15 0:22		
o-Terphenyl	75.5		40-140				11/17/15 6:43		

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-20- Comp

Sampled: 11/11/2015 11:00

Sample ID: 15K0480-14

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/12/15	11/12/15 11:00	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/12/15	11/12/15 14:15	AG
pH @25.7°C	6.9		pH Units	1		SW-846 9045C	11/12/15	11/12/15 8:30	LL
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/16/15	11/17/15 17:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/16/15	11/17/15 17:05	AG
% Solids	96.1		% Wt	1		SM 2540G	11/11/15	11/12/15 8:42	MRL



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0480

Date Received: 11/11/2015

Field Sample #: SB-20- Comp

Sampled: 11/11/2015 11:00

Sample ID: 15K0480-14

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 15:06	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/13/15	11/16/15 12:14	SCB
Barium	0.44	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 15:06	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/13/15	11/18/15 15:06	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 15:06	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/13/15	11/18/15 15:06	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 15:06	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/13/15	11/18/15 15:06	AME

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
15K0480-01 [SB-38- 14.5-15.0ft]	B135194	11/11/15
15K0480-02 [SB-38- Comp]	B135194	11/11/15
15K0480-03 [SB-35- 14.5-15.0ft]	B135194	11/11/15
15K0480-04 [SB-35- Comp]	B135194	11/11/15
15K0480-05 [SB-33- 14.5-15.0ft]	B135194	11/11/15
15K0480-06 [SB-33- Comp]	B135194	11/11/15
15K0480-07 [SB-29- 14.5-15.0ft]	B135194	11/11/15
15K0480-08 [SB-29- Comp]	B135194	11/11/15
15K0480-09 [SB-23- 14.5-15.0ft]	B135194	11/11/15
15K0480-10 [SB-23- Comp]	B135194	11/11/15
15K0480-11 [SB-22- 14.5-15.0ft]	B135194	11/11/15
15K0480-12 [SB-22- Comp]	B135194	11/11/15
15K0480-13 [SB-20- 14.5-15.0ft]	B135194	11/11/15
15K0480-14 [SB-20- Comp]	B135194	11/11/15

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
15K0480-02 [SB-38- Comp]	B135271	50.0	11/12/15
15K0480-04 [SB-35- Comp]	B135271	50.0	11/12/15
15K0480-06 [SB-33- Comp]	B135271	50.0	11/12/15
15K0480-08 [SB-29- Comp]	B135271	50.0	11/12/15
15K0480-10 [SB-23- Comp]	B135271	50.0	11/12/15
15K0480-12 [SB-22- Comp]	B135271	50.0	11/12/15
15K0480-14 [SB-20- Comp]	B135271	50.0	11/12/15

Prep Method: SW-846 3010A-SW-846 6010C

Leachates were extracted on 11/12/2015 per SW-846 1311 in Batch B135243

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15K0480-02 [SB-38- Comp]	B135395	50.0	50.0	11/13/15
15K0480-04 [SB-35- Comp]	B135395	50.0	50.0	11/13/15
15K0480-06 [SB-33- Comp]	B135395	50.0	50.0	11/13/15
15K0480-08 [SB-29- Comp]	B135395	50.0	50.0	11/13/15
15K0480-10 [SB-23- Comp]	B135395	50.0	50.0	11/13/15
15K0480-12 [SB-22- Comp]	B135395	50.0	50.0	11/13/15
15K0480-14 [SB-20- Comp]	B135395	50.0	50.0	11/13/15

Prep Method: SW-846 7470A Prep-SW-846 7470A

Leachates were extracted on 11/12/2015 per SW-846 1311 in Batch B135243

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15K0480-02 [SB-38- Comp]	B135389	6.00	6.00	11/13/15
15K0480-04 [SB-35- Comp]	B135389	6.00	6.00	11/13/15
15K0480-06 [SB-33- Comp]	B135389	6.00	6.00	11/13/15
15K0480-08 [SB-29- Comp]	B135389	6.00	6.00	11/13/15
15K0480-10 [SB-23- Comp]	B135389	6.00	6.00	11/13/15
15K0480-12 [SB-22- Comp]	B135389	6.00	6.00	11/13/15
15K0480-14 [SB-20- Comp]	B135389	6.00	6.00	11/13/15

Sample Extraction Data

Prep Method: SW-846 3546-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0480-02 [SB-38- Comp]	B135223	30.1	1.00	11/12/15
15K0480-04 [SB-35- Comp]	B135223	30.0	1.00	11/12/15
15K0480-06 [SB-33- Comp]	B135223	30.0	1.00	11/12/15
15K0480-08 [SB-29- Comp]	B135223	30.0	1.00	11/12/15
15K0480-10 [SB-23- Comp]	B135223	30.0	1.00	11/12/15
15K0480-12 [SB-22- Comp]	B135223	30.0	1.00	11/12/15
15K0480-14 [SB-20- Comp]	B135223	30.0	1.00	11/12/15

Prep Method: SW-846 5035/5030B-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0480-02 [SB-38- Comp]	B135551	15.4	15.6	11/16/15
15K0480-04 [SB-35- Comp]	B135551	15.4	15.7	11/16/15
15K0480-06 [SB-33- Comp]	B135551	15.4	15.5	11/16/15
15K0480-08 [SB-29- Comp]	B135551	15.5	15.7	11/16/15
15K0480-10 [SB-23- Comp]	B135551	15.1	16.2	11/16/15
15K0480-12 [SB-22- Comp]	B135551	15.8	15.7	11/16/15
15K0480-14 [SB-20- Comp]	B135551	15.9	15.7	11/16/15

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0480-02 [SB-38- Comp]	B135292	10.4	10.0	11/12/15
15K0480-04 [SB-35- Comp]	B135292	10.0	10.0	11/12/15
15K0480-06 [SB-33- Comp]	B135292	10.0	10.0	11/12/15
15K0480-08 [SB-29- Comp]	B135292	10.0	10.0	11/12/15
15K0480-10 [SB-23- Comp]	B135292	10.2	10.0	11/12/15
15K0480-12 [SB-22- Comp]	B135292	10.0	10.0	11/12/15
15K0480-14 [SB-20- Comp]	B135292	10.1	10.0	11/12/15

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0480-01 [SB-38- 14.5-15.0ft]	B135676	5.00	10.0	11/17/15
15K0480-03 [SB-35- 14.5-15.0ft]	B135676	5.20	10.0	11/17/15
15K0480-05 [SB-33- 14.5-15.0ft]	B135676	5.40	10.0	11/17/15
15K0480-07 [SB-29- 14.5-15.0ft]	B135676	5.00	10.0	11/17/15
15K0480-09 [SB-23- 14.5-15.0ft]	B135676	5.80	10.0	11/17/15

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0480-11 [SB-22- 14.5-15.0ft]	B135701	5.50	10.0	11/17/15
15K0480-13 [SB-20- 14.5-15.0ft]	B135701	5.20	10.0	11/17/15

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0480-02 [SB-38- Comp]	B135190	30.3 HAZ - 536	1.00	11/11/15

Sample Extraction Data

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0480-04 [SB-35- Comp]	B135190	30.1	1.00	11/11/15
15K0480-06 [SB-33- Comp]	B135190	30.1	1.00	11/11/15
15K0480-08 [SB-29- Comp]	B135190	30.3	1.00	11/11/15
15K0480-10 [SB-23- Comp]	B135190	30.3	1.00	11/11/15
15K0480-12 [SB-22- Comp]	B135190	30.4	1.00	11/11/15
15K0480-14 [SB-20- Comp]	B135190	30.1	1.00	11/11/15

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0480-02 [SB-38- Comp]	B135520	25.3	250	11/16/15
15K0480-04 [SB-35- Comp]	B135520	25.3	250	11/16/15
15K0480-06 [SB-33- Comp]	B135520	26.0	250	11/16/15
15K0480-08 [SB-29- Comp]	B135520	25.5	250	11/16/15
15K0480-10 [SB-23- Comp]	B135520	25.3	250	11/16/15
15K0480-12 [SB-22- Comp]	B135520	25.6	250	11/16/15
15K0480-14 [SB-20- Comp]	B135520	25.2	250	11/16/15

SW-846 9030A

Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0480-02 [SB-38- Comp]	B135523	25.3	250	11/16/15
15K0480-04 [SB-35- Comp]	B135523	25.3	250	11/16/15
15K0480-06 [SB-33- Comp]	B135523	26.0	250	11/16/15
15K0480-08 [SB-29- Comp]	B135523	25.5	250	11/16/15
15K0480-10 [SB-23- Comp]	B135523	25.3	250	11/16/15
15K0480-12 [SB-22- Comp]	B135523	25.6	250	11/16/15
15K0480-14 [SB-20- Comp]	B135523	25.2	250	11/16/15

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
15K0480-10 [SB-23- Comp]	B135218	20.0	11/12/15
15K0480-12 [SB-22- Comp]	B135218	20.0	11/12/15
15K0480-14 [SB-20- Comp]	B135218	20.0	11/12/15

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
15K0480-02 [SB-38- Comp]	B135426	20.0	11/16/15
15K0480-04 [SB-35- Comp]	B135426	20.0	11/16/15
15K0480-06 [SB-33- Comp]	B135426	20.0	11/16/15
15K0480-08 [SB-29- Comp]	B135426	20.0	11/16/15

SW-846 9095B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0480-02 [SB-38- Comp]	B135224	100	100	11/12/15
15K0480-04 [SB-35- Comp]	B135224	100	100	11/12/15

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

SW-846 9095B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0480-06 [SB-33- Comp]	B135224	100	100	11/12/15
15K0480-08 [SB-29- Comp]	B135224	100	100	11/12/15
15K0480-10 [SB-23- Comp]	B135224	100	100	11/12/15
15K0480-12 [SB-22- Comp]	B135224	100	100	11/12/15
15K0480-14 [SB-20- Comp]	B135224	100	100	11/12/15

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135676 - SW-846 5035										
Blank (B135676-BLK1)										
Prepared & Analyzed: 11/17/15										
Acetone	ND	0.10	mg/Kg wet							
Acrylonitrile	ND	0.0060	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							R-05
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0040	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.020	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
1,2-Dichlorobutadiene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobutadiene (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135676 - SW-846 5035										
Blank (B135676-BLK1)										
Prepared & Analyzed: 11/17/15										
Methylene Chloride	ND	0.020	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0487		mg/Kg wet	0.0500		97.4	70-130			
Surrogate: Toluene-d8	0.0482		mg/Kg wet	0.0500		96.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.0462		mg/Kg wet	0.0500		92.5	70-130			
LCS (B135676-BS1)										
Prepared & Analyzed: 11/17/15										
Acetone	0.174	0.10	mg/Kg wet	0.200		86.8	70-160			†
Acrylonitrile	0.0189	0.0060	mg/Kg wet	0.0200		94.4	70-130			
tert-Amyl Methyl Ether (TAME)	0.0203	0.0010	mg/Kg wet	0.0200		101	70-130			
Benzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
Bromobenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
Bromochloromethane	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
Bromodichloromethane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
Bromoform	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130			
Bromomethane	0.00960	0.010	mg/Kg wet	0.0200		48.0	40-130			R-05 †
2-Butanone (MEK)	0.171	0.040	mg/Kg wet	0.200		85.5	70-160			†
tert-Butyl Alcohol (TBA)	0.230	0.040	mg/Kg wet	0.200		115	40-130			V-20 †
n-Butylbenzene	0.0211	0.0040	mg/Kg wet	0.0200		106	70-130			
sec-Butylbenzene	0.0242	0.0020	mg/Kg wet	0.0200		121	70-130			
tert-Butylbenzene	0.0241	0.0020	mg/Kg wet	0.0200		120	70-160			†
tert-Butyl Ethyl Ether (TBEE)	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130			
Carbon Disulfide	0.0229	0.020	mg/Kg wet	0.0200		115	70-130			V-20
Carbon Tetrachloride	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Chlorobenzene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130			
Chlorodibromomethane	0.0200	0.0010	mg/Kg wet	0.0200		100	70-130			
Chloroethane	0.0194	0.020	mg/Kg wet	0.0200		97.1	70-130			
Chloroform	0.0211	0.0040	mg/Kg wet	0.0200		106	70-130			
Chloromethane	0.0171	0.010	mg/Kg wet	0.0200		85.5	70-130			
2-Chlorotoluene	0.0242	0.0020	mg/Kg wet	0.0200		121	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135676 - SW-846 5035										
LCS (B135676-BS1)										
Prepared & Analyzed: 11/17/15										
4-Chlorotoluene	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0175	0.0020	mg/Kg wet	0.0200		87.5	70-130			
1,2-Dibromoethane (EDB)	0.0227	0.0010	mg/Kg wet	0.0200		113	70-130			
Dibromomethane	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
1,2-Dichlorobenzene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130			
1,3-Dichlorobenzene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
1,4-Dichlorobenzene	0.0227	0.0020	mg/Kg wet	0.0200		113	70-130			
trans-1,4-Dichloro-2-butene	0.0177	0.0040	mg/Kg wet	0.0200		88.4	70-130			
Dichlorodifluoromethane (Freon 12)	0.0157	0.020	mg/Kg wet	0.0200		78.3	40-160			†
1,1-Dichloroethane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
1,2-Dichloroethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
1,1-Dichloroethylene	0.0199	0.0040	mg/Kg wet	0.0200		99.7	70-130			
cis-1,2-Dichloroethylene	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130			
trans-1,2-Dichloroethylene	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130			
1,2-Dichloropropane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,3-Dichloropropane	0.0208	0.0010	mg/Kg wet	0.0200		104	70-130			
2,2-Dichloropropane	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130			
1,1-Dichloropropene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,3-Dichloropropene	0.0190	0.0010	mg/Kg wet	0.0200		95.1	70-130			
1,3-Dichloropropene	0.0205	0.0010	mg/Kg wet	0.0200		102	70-130			
Diethyl Ether	0.0188	0.020	mg/Kg wet	0.0200		94.2	70-130			
Diisopropyl Ether (DIPE)	0.0190	0.0010	mg/Kg wet	0.0200		94.8	70-130			
1,4-Dioxane	0.172	0.10	mg/Kg wet	0.200		85.9	40-160			†
Ethylbenzene	0.0237	0.0020	mg/Kg wet	0.0200		118	70-130			
Hexachlorobutadiene	0.0240	0.0020	mg/Kg wet	0.0200		120	70-160			
2-Hexanone (MBK)	0.190	0.020	mg/Kg wet	0.200		95.1	70-160			†
Isopropylbenzene (Cumene)	0.0237	0.0020	mg/Kg wet	0.0200		119	70-130			
p-Isopropyltoluene (p-Cymene)	0.0245	0.0020	mg/Kg wet	0.0200		122	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0206	0.0040	mg/Kg wet	0.0200		103	70-130			
Methylene Chloride	0.0202	0.020	mg/Kg wet	0.0200		101	40-160			†
4-Methyl-2-pentanone (MIBK)	0.197	0.020	mg/Kg wet	0.200		98.4	70-160			†
Naphthalene	0.0159	0.0040	mg/Kg wet	0.0200		79.7	40-130			†
n-Propylbenzene	0.0243	0.0020	mg/Kg wet	0.0200		122	70-130			
Styrene	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130			
1,1,1,2-Tetrachloroethane	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130			
1,1,2,2-Tetrachloroethane	0.0215	0.0010	mg/Kg wet	0.0200		108	70-130			
Tetrachloroethylene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
Tetrahydrofuran	0.0182	0.010	mg/Kg wet	0.0200		90.9	70-130			
Toluene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
1,2,3-Trichlorobenzene	0.0165	0.0020	mg/Kg wet	0.0200		82.6	70-130			
1,2,4-Trichlorobenzene	0.0160	0.0020	mg/Kg wet	0.0200		80.2	70-130			
1,3,5-Trichlorobenzene	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130			
1,1,1-Trichloroethane	0.0229	0.0020	mg/Kg wet	0.0200		115	70-130			
1,1,2-Trichloroethane	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130			
Trichloroethylene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
Trichlorofluoromethane (Freon 11)	0.0190	0.010	mg/Kg wet	0.0200		95.2	70-130			
1,2,3-Trichloropropane	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
1,1,1-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0193	0.010	mg/Kg wet	0.0200		96.6	70-130			
1,2,4-Trimethylbenzene	0.0229	0.0020	mg/Kg wet	0.0200		115	70-130			
1,3,5-Trimethylbenzene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130			
Vinyl Chloride	0.0172	0.010	mg/Kg wet	0.0200		86.0	40-130			†

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135676 - SW-846 5035										
LCS (B135676-BS1)										
Prepared & Analyzed: 11/17/15										
m+p Xylene	0.0472	0.0040	mg/Kg wet	0.0400		118	70-130			
o-Xylene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0475		mg/Kg wet	0.0500		95.0	70-130			
Surrogate: Toluene-d8	0.0498		mg/Kg wet	0.0500		99.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.0491		mg/Kg wet	0.0500		98.1	70-130			
LCS Dup (B135676-BSD1)										
Prepared & Analyzed: 11/17/15										
Acetone	0.192	0.10	mg/Kg wet	0.200		95.8	70-160	9.82	25	†
Acrylonitrile	0.0196	0.0060	mg/Kg wet	0.0200		98.1	70-130	3.84	25	
tert-Amyl Methyl Ether (TAME)	0.0214	0.0010	mg/Kg wet	0.0200		107	70-130	5.47	25	
Benzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	6.17	25	
Bromobenzene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130	3.71	25	
Bromochloromethane	0.0247	0.0020	mg/Kg wet	0.0200		124	70-130	11.6	25	
Bromodichloromethane	0.0229	0.0020	mg/Kg wet	0.0200		115	70-130	7.89	25	
Bromoform	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	3.95	25	
Bromomethane	0.0149	0.010	mg/Kg wet	0.0200		74.4	40-130	43.1 *	25	R-05 †
2-Butanone (MEK)	0.185	0.040	mg/Kg wet	0.200		92.5	70-160	7.87	25	†
tert-Butyl Alcohol (TBA)	0.238	0.040	mg/Kg wet	0.200		119	40-130	3.10	25	V-20 †
n-Butylbenzene	0.0222	0.0040	mg/Kg wet	0.0200		111	70-130	5.08	25	
sec-Butylbenzene	0.0251	0.0020	mg/Kg wet	0.0200		125	70-130	3.57	25	
tert-Butylbenzene	0.0249	0.0020	mg/Kg wet	0.0200		125	70-160	3.59	25	†
tert-Butyl Ethyl Ether (TBEE)	0.0216	0.0010	mg/Kg wet	0.0200		108	70-130	4.64	25	
Carbon Disulfide	0.0244	0.020	mg/Kg wet	0.0200		122	70-130	6.09	25	V-20
Carbon Tetrachloride	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	8.17	25	
Chlorobenzene	0.0244	0.0020	mg/Kg wet	0.0200		122	70-130	4.79	25	
Chlorodibromomethane	0.0213	0.0010	mg/Kg wet	0.0200		106	70-130	6.20	25	
Chloroethane	0.0219	0.020	mg/Kg wet	0.0200		109	70-130	11.9	25	
Chloroform	0.0224	0.0040	mg/Kg wet	0.0200		112	70-130	5.80	25	
Chloromethane	0.0190	0.010	mg/Kg wet	0.0200		95.1	70-130	10.6	25	
2-Chlorotoluene	0.0256	0.0020	mg/Kg wet	0.0200		128	70-130	5.38	25	
4-Chlorotoluene	0.0242	0.0020	mg/Kg wet	0.0200		121	70-130	6.47	25	
1,2-Dibromo-3-chloropropane (DBCP)	0.0187	0.0020	mg/Kg wet	0.0200		93.3	70-130	6.42	25	
1,2-Dibromoethane (EDB)	0.0239	0.0010	mg/Kg wet	0.0200		120	70-130	5.41	25	
Dibromomethane	0.0247	0.0020	mg/Kg wet	0.0200		124	70-130	10.3	25	
1,2-Dichlorobenzene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	5.12	25	
1,3-Dichlorobenzene	0.0233	0.0020	mg/Kg wet	0.0200		116	70-130	2.79	25	
1,4-Dichlorobenzene	0.0239	0.0020	mg/Kg wet	0.0200		120	70-130	5.41	25	
trans-1,4-Dichloro-2-butene	0.0189	0.0040	mg/Kg wet	0.0200		94.5	70-130	6.67	25	
Dichlorodifluoromethane (Freon 12)	0.0161	0.020	mg/Kg wet	0.0200		80.5	40-160	2.77	25	†
1,1-Dichloroethane	0.0229	0.0020	mg/Kg wet	0.0200		115	70-130	7.88	25	
1,2-Dichloroethane	0.0243	0.0020	mg/Kg wet	0.0200		122	70-130	8.13	25	
1,1-Dichloroethylene	0.0220	0.0040	mg/Kg wet	0.0200		110	70-130	10.0	25	
cis-1,2-Dichloroethylene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	5.04	25	
trans-1,2-Dichloroethylene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	10.7	25	
1,2-Dichloropropane	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	5.87	25	
1,3-Dichloropropane	0.0223	0.0010	mg/Kg wet	0.0200		112	70-130	7.06	25	
2,2-Dichloropropane	0.0233	0.0020	mg/Kg wet	0.0200		117	70-130	3.66	25	
1,1-Dichloropropene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130	5.44	25	
cis-1,3-Dichloropropene	0.0201	0.0010	mg/Kg wet	0.0200		100	70-130	5.52	25	
trans-1,3-Dichloropropene	0.0219	0.0010	mg/Kg wet	0.0200		109	70-130	6.42	25	
Diethyl Ether	0.0204	0.020	mg/Kg wet	0.0200		102	70-130	7.85	25	
Diisopropyl Ether (DIPE)	0.0202	0.0010	mg/Kg wet	0.0200		101	70-130	6.43	25	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135676 - SW-846 5035										
LCS Dup (B135676-BSD1)				Prepared & Analyzed: 11/17/15						
1,4-Dioxane	0.172	0.10	mg/Kg wet	0.200		86.2	40-160	0.337	50	† ‡
Ethylbenzene	0.0246	0.0020	mg/Kg wet	0.0200		123	70-130	3.73	25	
Hexachlorobutadiene	0.0244	0.0020	mg/Kg wet	0.0200		122	70-160	1.66	25	
2-Hexanone (MBK)	0.210	0.020	mg/Kg wet	0.200		105	70-160	10.1	25	†
Isopropylbenzene (Cumene)	0.0250	0.0020	mg/Kg wet	0.0200		125	70-130	5.41	25	
p-Isopropyltoluene (p-Cymene)	0.0255	0.0020	mg/Kg wet	0.0200		127	70-130	3.92	25	
Methyl tert-Butyl Ether (MTBE)	0.0219	0.0040	mg/Kg wet	0.0200		110	70-130	6.02	25	
Methylene Chloride	0.0219	0.020	mg/Kg wet	0.0200		110	40-160	8.36	25	†
4-Methyl-2-pentanone (MIBK)	0.214	0.020	mg/Kg wet	0.200		107	70-160	8.19	25	†
Naphthalene	0.0167	0.0040	mg/Kg wet	0.0200		83.6	40-130	4.78	25	†
n-Propylbenzene	0.0260	0.0020	mg/Kg wet	0.0200		130	70-130	6.68	25	
Styrene	0.0237	0.0020	mg/Kg wet	0.0200		118	70-130	3.35	25	
1,1,1,2-Tetrachloroethane	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130	6.28	25	
1,1,2,2-Tetrachloroethane	0.0232	0.0010	mg/Kg wet	0.0200		116	70-130	7.60	25	
Tetrachloroethylene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130	4.37	25	
Tetrahydrofuran	0.0193	0.010	mg/Kg wet	0.0200		96.6	70-130	6.08	25	
Toluene	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130	7.43	25	
1,2,3-Trichlorobenzene	0.0174	0.0020	mg/Kg wet	0.0200		86.9	70-130	5.07	25	
1,2,4-Trichlorobenzene	0.0165	0.0020	mg/Kg wet	0.0200		82.7	70-130	3.07	25	
1,3,5-Trichlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130	3.52	25	
1,1,1-Trichloroethane	0.0243	0.0020	mg/Kg wet	0.0200		122	70-130	5.76	25	
1,1,2-Trichloroethane	0.0237	0.0020	mg/Kg wet	0.0200		118	70-130	5.20	25	
Trichloroethylene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130	4.72	25	
Trichlorofluoromethane (Freon 11)	0.0205	0.010	mg/Kg wet	0.0200		102	70-130	7.19	25	
1,2,3-Trichloropropane	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130	4.89	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0213	0.010	mg/Kg wet	0.0200		106	70-130	9.56	25	
1,2,4-Trimethylbenzene	0.0243	0.0020	mg/Kg wet	0.0200		121	70-130	5.68	25	
1,3,5-Trimethylbenzene	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130	5.42	25	
Vinyl Chloride	0.0192	0.010	mg/Kg wet	0.0200		96.2	40-130	11.2	25	†
m+p Xylene	0.0500	0.0040	mg/Kg wet	0.0400		125	70-130	5.88	25	
o-Xylene	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130	5.75	25	
Surrogate: 1,2-Dichloroethane-d4	0.0481		mg/Kg wet	0.0500		96.2	70-130			
Surrogate: Toluene-d8	0.0501		mg/Kg wet	0.0500		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.0492		mg/Kg wet	0.0500		98.3	70-130			

Batch B135701 - SW-846 5035

Blank (B135701-BLK1)				Prepared & Analyzed: 11/18/15						
Acetone	ND	0.10	mg/Kg wet							
Acrylonitrile	ND	0.0060	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0040	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135701 - SW-846 5035										
Blank (B135701-BLK1)										
Prepared & Analyzed: 11/18/15										
tert-Butyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.020	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							R-05
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methylene Chloride	ND	0.020	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135701 - SW-846 5035										
Blank (B135701-BLK1)										
Prepared & Analyzed: 11/18/15										
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0492		mg/Kg wet	0.0500		98.3	70-130			
Surrogate: Toluene-d8	0.0488		mg/Kg wet	0.0500		97.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.0454		mg/Kg wet	0.0500		90.7	70-130			
LCS (B135701-BS1)										
Prepared & Analyzed: 11/18/15										
Acetone	0.174	0.10	mg/Kg wet	0.200		87.2	70-160			†
Acrylonitrile	0.0181	0.0060	mg/Kg wet	0.0200		90.7	70-130			
tert-Amyl Methyl Ether (TAME)	0.0195	0.0010	mg/Kg wet	0.0200		97.3	70-130			
Benzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
Toluene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130			
Bromochloromethane	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
Bromodichloromethane	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
Bromoform	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130			
Bromomethane	0.0111	0.010	mg/Kg wet	0.0200		55.7	40-130			†
2-Butanone (MEK)	0.168	0.040	mg/Kg wet	0.200		83.9	70-160			†
tert-Butyl Alcohol (TBA)	0.222	0.040	mg/Kg wet	0.200		111	40-130			†
n-Butylbenzene	0.0202	0.0040	mg/Kg wet	0.0200		101	70-130			V-20
sec-Butylbenzene	0.0227	0.0020	mg/Kg wet	0.0200		113	70-130			
tert-Butylbenzene	0.0225	0.0020	mg/Kg wet	0.0200		112	70-160			†
tert-Butyl Ethyl Ether (TBEE)	0.0201	0.0010	mg/Kg wet	0.0200		100	70-130			
Carbon Disulfide	0.0236	0.020	mg/Kg wet	0.0200		118	70-130			V-20
Carbon Tetrachloride	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
Chlorobenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
Chlorodibromomethane	0.0196	0.0010	mg/Kg wet	0.0200		98.2	70-130			
Chloroethane	0.0215	0.020	mg/Kg wet	0.0200		108	70-130			
Chloroform	0.0202	0.0040	mg/Kg wet	0.0200		101	70-130			
Chloromethane	0.0177	0.010	mg/Kg wet	0.0200		88.6	70-130			
2-Chlorotoluene	0.0233	0.0020	mg/Kg wet	0.0200		116	70-130			
4-Chlorotoluene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0175	0.0020	mg/Kg wet	0.0200		87.6	70-130			
1,2-Dibromoethane (EDB)	0.0219	0.0010	mg/Kg wet	0.0200		110	70-130			
Dibromomethane	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
1,2-Dichlorobenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
1,3-Dichlorobenzene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130			
1,4-Dichlorobenzene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130			
trans-1,4-Dichloro-2-butene	0.0184	0.0040	mg/Kg wet	0.0200		91.9	70-130			
Dichlorodifluoromethane (Freon 12)	0.00962	0.020	mg/Kg wet	0.0200		48.1	40-160			R-05 †
1,1-Dichloroethane	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130			
1,2-Dichloroethane	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
1,1-Dichloroethylene	0.0207	0.0040	mg/Kg wet	0.0200		104	70-130			
cis-1,2-Dichloroethylene	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130			
trans-1,2-Dichloroethylene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135701 - SW-846 5035										
LCS (B135701-BS1)										
Prepared & Analyzed: 11/18/15										
1,2-Dichloropropane	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130			
1,3-Dichloropropane	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130			
2,2-Dichloropropane	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130			
1,1-Dichloropropene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130			
cis-1,3-Dichloropropene	0.0190	0.0010	mg/Kg wet	0.0200		95.2	70-130			
trans-1,3-Dichloropropene	0.0204	0.0010	mg/Kg wet	0.0200		102	70-130			
Diethyl Ether	0.0195	0.020	mg/Kg wet	0.0200		97.6	70-130			
Diisopropyl Ether (DIPE)	0.0186	0.0010	mg/Kg wet	0.0200		93.2	70-130			
1,4-Dioxane	0.177	0.10	mg/Kg wet	0.200		88.4	40-160			†
Ethylbenzene	0.0227	0.0020	mg/Kg wet	0.0200		113	70-130			
Hexachlorobutadiene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-160			
2-Hexanone (MBK)	0.186	0.020	mg/Kg wet	0.200		93.2	70-160			†
Isopropylbenzene (Cumene)	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130			
p-Isopropyltoluene (p-Cymene)	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0205	0.0040	mg/Kg wet	0.0200		102	70-130			
Methylene Chloride	0.0186	0.020	mg/Kg wet	0.0200		93.0	40-160			†
4-Methyl-2-pentanone (MIBK)	0.195	0.020	mg/Kg wet	0.200		97.4	70-160			†
Naphthalene	0.0156	0.0040	mg/Kg wet	0.0200		77.8	40-130			†
n-Propylbenzene	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130			
Styrene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
1,1,1,2-Tetrachloroethane	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
1,1,2,2-Tetrachloroethane	0.0213	0.0010	mg/Kg wet	0.0200		107	70-130			
Tetrachloroethylene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130			
Tetrahydrofuran	0.0172	0.010	mg/Kg wet	0.0200		86.2	70-130			
Toluene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
1,2,3-Trichlorobenzene	0.0163	0.0020	mg/Kg wet	0.0200		81.3	70-130			
1,2,4-Trichlorobenzene	0.0158	0.0020	mg/Kg wet	0.0200		78.9	70-130			
1,3,5-Trichlorobenzene	0.0182	0.0020	mg/Kg wet	0.0200		91.0	70-130			
1,1,1-Trichloroethane	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
1,1,2-Trichloroethane	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
Trichloroethylene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
Trichlorofluoromethane (Freon 11)	0.0199	0.010	mg/Kg wet	0.0200		99.7	70-130			
1,2,3-Trichloropropane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0199	0.010	mg/Kg wet	0.0200		99.4	70-130			
1,2,4-Trimethylbenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
1,3,5-Trimethylbenzene	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			
Vinyl Chloride	0.0184	0.010	mg/Kg wet	0.0200		91.9	40-130			†
m+p Xylene	0.0461	0.0040	mg/Kg wet	0.0400		115	70-130			
o-Xylene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0476		mg/Kg wet	0.0500		95.2	70-130			
Surrogate: Toluene-d8	0.0504		mg/Kg wet	0.0500		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.0502		mg/Kg wet	0.0500		100	70-130			

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135701 - SW-846 5035										
LCS Dup (B135701-BSD1)										
Prepared & Analyzed: 11/18/15										
Acetone	0.180	0.10	mg/Kg wet	0.200		89.9	70-160	3.00	25	†
Acrylonitrile	0.0188	0.0060	mg/Kg wet	0.0200		94.1	70-130	3.68	25	
tert-Amyl Methyl Ether (TAME)	0.0211	0.0010	mg/Kg wet	0.0200		105	70-130	7.90	25	
Benzene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130	3.47	25	
Bromobenzene	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130	7.25	25	
Bromochloromethane	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130	7.86	25	
Bromodichloromethane	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130	9.39	25	
Bromoform	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	5.05	25	
Bromomethane	0.0141	0.010	mg/Kg wet	0.0200		70.3	40-130	23.2	25	†
2-Butanone (MEK)	0.180	0.040	mg/Kg wet	0.200		90.2	70-160	7.16	25	†
tert-Butyl Alcohol (TBA)	0.238	0.040	mg/Kg wet	0.200		119	40-130	6.70	25	V-20 †
n-Butylbenzene	0.0222	0.0040	mg/Kg wet	0.0200		111	70-130	9.52	25	
sec-Butylbenzene	0.0250	0.0020	mg/Kg wet	0.0200		125	70-130	9.66	25	
tert-Butylbenzene	0.0248	0.0020	mg/Kg wet	0.0200		124	70-160	9.89	25	†
tert-Butyl Ethyl Ether (TBEE)	0.0209	0.0010	mg/Kg wet	0.0200		105	70-130	4.29	25	
Carbon Disulfide	0.0237	0.020	mg/Kg wet	0.0200		118	70-130	0.0846	25	V-20
Carbon Tetrachloride	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	5.97	25	
Chlorobenzene	0.0237	0.0020	mg/Kg wet	0.0200		119	70-130	6.70	25	
Chlorodibromomethane	0.0213	0.0010	mg/Kg wet	0.0200		106	70-130	8.11	25	
Chloroethane	0.0205	0.020	mg/Kg wet	0.0200		103	70-130	4.66	25	
Chloroform	0.0216	0.0040	mg/Kg wet	0.0200		108	70-130	6.88	25	
Chloromethane	0.0182	0.010	mg/Kg wet	0.0200		91.2	70-130	2.89	25	
2-Chlorotoluene	0.0247	0.0020	mg/Kg wet	0.0200		124	70-130	6.09	25	
4-Chlorotoluene	0.0235	0.0020	mg/Kg wet	0.0200		117	70-130	7.42	25	
1,2-Dibromo-3-chloropropane (DBCP)	0.0194	0.0020	mg/Kg wet	0.0200		97.1	70-130	10.3	25	
1,2-Dibromoethane (EDB)	0.0239	0.0010	mg/Kg wet	0.0200		119	70-130	8.56	25	
Dibromomethane	0.0245	0.0020	mg/Kg wet	0.0200		122	70-130	9.59	25	
1,2-Dichlorobenzene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	11.9	25	
1,3-Dichlorobenzene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	9.76	25	
1,4-Dichlorobenzene	0.0239	0.0020	mg/Kg wet	0.0200		120	70-130	10.7	25	
trans-1,4-Dichloro-2-butene	0.0198	0.0040	mg/Kg wet	0.0200		98.9	70-130	7.34	25	
Dichlorodifluoromethane (Freon 12)	0.0154	0.020	mg/Kg wet	0.0200		77.0	40-160	46.2 *	25	R-05 †
1,1-Dichloroethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	2.23	25	
1,2-Dichloroethane	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	5.04	25	
1,1-Dichloroethylene	0.0214	0.0040	mg/Kg wet	0.0200		107	70-130	3.42	25	
cis-1,2-Dichloroethylene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	4.07	25	
trans-1,2-Dichloroethylene	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130	3.05	25	
1,2-Dichloropropane	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130	6.49	25	
1,3-Dichloropropane	0.0218	0.0010	mg/Kg wet	0.0200		109	70-130	7.11	25	
2,2-Dichloropropane	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130	2.25	25	
1,1-Dichloropropene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	3.09	25	
cis-1,3-Dichloropropene	0.0203	0.0010	mg/Kg wet	0.0200		101	70-130	6.21	25	
trans-1,3-Dichloropropene	0.0219	0.0010	mg/Kg wet	0.0200		110	70-130	7.09	25	
Diethyl Ether	0.0196	0.020	mg/Kg wet	0.0200		98.0	70-130	0.409	25	
Diisopropyl Ether (DIPE)	0.0196	0.0010	mg/Kg wet	0.0200		98.1	70-130	5.12	25	
1,4-Dioxane	0.185	0.10	mg/Kg wet	0.200		92.3	40-160	4.33	50	† ‡
Ethylbenzene	0.0243	0.0020	mg/Kg wet	0.0200		121	70-130	6.73	25	
1,2-Dichlorobutadiene	0.0253	0.0020	mg/Kg wet	0.0200		126	70-160	8.49	25	
Acetone (MBK)	0.206	0.020	mg/Kg wet	0.200		103	70-160	9.81	25	†
Isopropylbenzene (Cumene)	0.0246	0.0020	mg/Kg wet	0.0200		123	70-130	7.41	25	
p-Isopropyltoluene (p-Cymene)	0.0254	0.0020	mg/Kg wet	0.0200		127	70-130	10.0	25	
Methyl tert-Butyl Ether (MTBE)	0.0210	0.0040	mg/Kg wet	0.0200		105	70-130	2.50	25	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135701 - SW-846 5035										
LCS Dup (B135701-BSD1)										
Prepared & Analyzed: 11/18/15										
Methylene Chloride	0.0195	0.020	mg/Kg wet	0.0200		97.6	40-160	4.83	25	†
4-Methyl-2-pentanone (MIBK)	0.210	0.020	mg/Kg wet	0.200		105	70-160	7.49	25	†
Naphthalene	0.0171	0.0040	mg/Kg wet	0.0200		85.4	40-130	9.31	25	†
n-Propylbenzene	0.0254	0.0020	mg/Kg wet	0.0200		127	70-130	7.18	25	
Styrene	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130	7.19	25	
1,1,1,2-Tetrachloroethane	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	5.66	25	
1,1,2,2-Tetrachloroethane	0.0226	0.0010	mg/Kg wet	0.0200		113	70-130	5.82	25	
Tetrachloroethylene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130	7.45	25	
Tetrahydrofuran	0.0192	0.010	mg/Kg wet	0.0200		95.8	70-130	10.5	25	
Toluene	0.0233	0.0020	mg/Kg wet	0.0200		117	70-130	6.01	25	
1,2,3-Trichlorobenzene	0.0182	0.0020	mg/Kg wet	0.0200		90.9	70-130	11.1	25	
1,2,4-Trichlorobenzene	0.0176	0.0020	mg/Kg wet	0.0200		88.1	70-130	11.0	25	
1,3,5-Trichlorobenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	10.9	25	
1,1,1-Trichloroethane	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130	3.62	25	
1,1,2-Trichloroethane	0.0235	0.0020	mg/Kg wet	0.0200		118	70-130	8.41	25	
Trichloroethylene	0.0237	0.0020	mg/Kg wet	0.0200		118	70-130	5.73	25	
Trichlorofluoromethane (Freon 11)	0.0203	0.010	mg/Kg wet	0.0200		101	70-130	1.59	25	
1,2,3-Trichloropropane	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130	3.31	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0206	0.010	mg/Kg wet	0.0200		103	70-130	3.75	25	
1,2,4-Trimethylbenzene	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130	10.6	25	
1,3,5-Trimethylbenzene	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130	5.35	25	
Vinyl Chloride	0.0186	0.010	mg/Kg wet	0.0200		92.8	40-130	0.975	25	†
m+p Xylene	0.0491	0.0040	mg/Kg wet	0.0400		123	70-130	6.35	25	
o-Xylene	0.0235	0.0020	mg/Kg wet	0.0200		118	70-130	5.60	25	
Surrogate: 1,2-Dichloroethane-d4	0.0471		mg/Kg wet	0.0500		94.3	70-130			
Surrogate: Toluene-d8	0.0503		mg/Kg wet	0.0500		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.0488		mg/Kg wet	0.0500		97.6	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135190 - SW-846 3546										
Blank (B135190-BLK1)										
Prepared: 11/11/15 Analyzed: 11/12/15										
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Surrogate: Nitrobenzene-d5	2.63		mg/Kg wet	3.33		79.0	30-130			
Surrogate: 2-Fluorobiphenyl	3.00		mg/Kg wet	3.33		90.2	30-130			
Surrogate: p-Terphenyl-d14	3.80		mg/Kg wet	3.33		114	30-130			
LCS (B135190-BS1)										
Prepared: 11/11/15 Analyzed: 11/12/15										
Acenaphthene	0.761	0.17	mg/Kg wet	0.833		91.4	40-140			
Acenaphthylene	0.766	0.17	mg/Kg wet	0.833		91.9	40-140			
Anthracene	0.797	0.17	mg/Kg wet	0.833		95.7	40-140			
Benzo(a)anthracene	0.825	0.17	mg/Kg wet	0.833		99.0	40-140			
Benzo(a)pyrene	0.823	0.17	mg/Kg wet	0.833		98.7	40-140			
Benzo(b)fluoranthene	0.792	0.17	mg/Kg wet	0.833		95.1	40-140			
Benzo(g,h,i)perylene	0.898	0.17	mg/Kg wet	0.833		108	40-140			
Benzo(k)fluoranthene	0.804	0.17	mg/Kg wet	0.833		96.4	40-140			
Chrysene	0.803	0.17	mg/Kg wet	0.833		96.4	40-140			
Dibenz(a,h)anthracene	0.879	0.17	mg/Kg wet	0.833		106	40-140			
Fluoranthene	0.734	0.17	mg/Kg wet	0.833		88.1	40-140			
Fluorene	0.795	0.17	mg/Kg wet	0.833		95.4	40-140			
Indeno(1,2,3-cd)pyrene	0.928	0.17	mg/Kg wet	0.833		111	40-140			
2-Methylnaphthalene	0.715	0.17	mg/Kg wet	0.833		85.8	40-140			
Naphthalene	0.657	0.17	mg/Kg wet	0.833		78.9	40-140			
Phenanthrene	0.805	0.17	mg/Kg wet	0.833		96.6	40-140			
Pyrene	0.957	0.17	mg/Kg wet	0.833		115	40-140			
Surrogate: Nitrobenzene-d5	2.75		mg/Kg wet	3.33		82.4	30-130			
Surrogate: 2-Fluorobiphenyl	3.27		mg/Kg wet	3.33		98.0	30-130			
Surrogate: p-Terphenyl-d14	3.96		mg/Kg wet	3.33		119	30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135190 - SW-846 3546										
LCS Dup (B135190-BSD1)										
Prepared: 11/11/15 Analyzed: 11/12/15										
Acenaphthene	0.814	0.17	mg/Kg wet	0.833		97.7	40-140	6.69	30	
Acenaphthylene	0.814	0.17	mg/Kg wet	0.833		97.7	40-140	6.12	30	
Anthracene	0.932	0.17	mg/Kg wet	0.833		112	40-140	15.6	30	
Benzo(a)anthracene	0.972	0.17	mg/Kg wet	0.833		117	40-140	16.4	30	
Benzo(a)pyrene	0.986	0.17	mg/Kg wet	0.833		118	40-140	18.0	30	
Benzo(b)fluoranthene	0.908	0.17	mg/Kg wet	0.833		109	40-140	13.6	30	
Benzo(g,h,i)perylene	1.07	0.17	mg/Kg wet	0.833		129	40-140	17.7	30	
Benzo(k)fluoranthene	0.957	0.17	mg/Kg wet	0.833		115	40-140	17.5	30	
Chrysene	0.927	0.17	mg/Kg wet	0.833		111	40-140	14.3	30	
Dibenz(a,h)anthracene	1.05	0.17	mg/Kg wet	0.833		127	40-140	18.1	30	
Fluoranthene	0.899	0.17	mg/Kg wet	0.833		108	40-140	20.2	30	
Fluorene	0.875	0.17	mg/Kg wet	0.833		105	40-140	9.66	30	
Indeno(1,2,3-cd)pyrene	1.06	0.17	mg/Kg wet	0.833		128	40-140	13.7	30	
2-Methylnaphthalene	0.775	0.17	mg/Kg wet	0.833		93.0	40-140	7.96	30	
Naphthalene	0.675	0.17	mg/Kg wet	0.833		81.0	40-140	2.65	30	
Phenanthrene	0.953	0.17	mg/Kg wet	0.833		114	40-140	16.8	30	
Pyrene	1.12	0.17	mg/Kg wet	0.833		135	40-140	16.0	30	
Surrogate: Nitrobenzene-d5	2.79		mg/Kg wet	3.33		83.7	30-130			
Surrogate: 2-Fluorobiphenyl	3.36		mg/Kg wet	3.33		101	30-130			
Surrogate: p-Terphenyl-d14	4.62		mg/Kg wet	3.33		139 *	30-130			S-07

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135292 - SW-846 3546										
Blank (B135292-BLK1) Prepared: 11/12/15 Analyzed: 11/13/15										
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.154		mg/Kg wet	0.200		76.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.171		mg/Kg wet	0.200		85.3	30-150			
Surrogate: Tetrachloro-m-xylene	0.155		mg/Kg wet	0.200		77.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.185		mg/Kg wet	0.200		92.3	30-150			
LCS (B135292-BS1) Prepared: 11/12/15 Analyzed: 11/13/15										
Aroclor-1016	0.16	0.020	mg/Kg wet	0.200		81.8	40-140			
Aroclor-1016 [2C]	0.18	0.020	mg/Kg wet	0.200		87.6	40-140			
Aroclor-1260	0.17	0.020	mg/Kg wet	0.200		84.9	40-140			
Aroclor-1260 [2C]	0.18	0.020	mg/Kg wet	0.200		89.7	40-140			
Surrogate: Decachlorobiphenyl	0.147		mg/Kg wet	0.200		73.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.162		mg/Kg wet	0.200		81.2	30-150			
Surrogate: Tetrachloro-m-xylene	0.129		mg/Kg wet	0.200		64.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.151		mg/Kg wet	0.200		75.5	30-150			
LCS Dup (B135292-BSD1) Prepared: 11/12/15 Analyzed: 11/13/15										
Aroclor-1016	0.19	0.020	mg/Kg wet	0.200		92.7	40-140	12.5	30	
Aroclor-1016 [2C]	0.20	0.020	mg/Kg wet	0.200		100	40-140	13.5	30	
Aroclor-1260	0.19	0.020	mg/Kg wet	0.200		95.5	40-140	11.7	30	
Aroclor-1260 [2C]	0.21	0.020	mg/Kg wet	0.200		103	40-140	13.5	30	
Surrogate: Decachlorobiphenyl	0.164		mg/Kg wet	0.200		82.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.184		mg/Kg wet	0.200		91.8	30-150			
Surrogate: Tetrachloro-m-xylene	0.144		mg/Kg wet	0.200		72.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.171		mg/Kg wet	0.200		85.4	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B135292 - SW-846 3546

Matrix Spike (B135292-MS1)

Source: 15K0480-02

Prepared: 11/12/15 Analyzed: 11/13/15

Aroclor-1016	0.21	0.099	mg/Kg dry	0.197	ND	106	40-140			
Aroclor-1016 [2C]	0.21	0.099	mg/Kg dry	0.197	ND	106	40-140			
Aroclor-1260	0.20	0.099	mg/Kg dry	0.197	ND	100	40-140			
Aroclor-1260 [2C]	0.20	0.099	mg/Kg dry	0.197	ND	99.5	40-140			
Surrogate: Decachlorobiphenyl	0.158		mg/Kg dry	0.197		80.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.154		mg/Kg dry	0.197		78.3	30-150			
Surrogate: Tetrachloro-m-xylene	0.145		mg/Kg dry	0.197		73.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.148		mg/Kg dry	0.197		74.9	30-150			

Matrix Spike Dup (B135292-MSD1)

Source: 15K0480-02

Prepared: 11/12/15 Analyzed: 11/13/15

Aroclor-1016	0.22	0.099	mg/Kg dry	0.197	ND	113	40-140	6.34	30	
Aroclor-1016 [2C]	0.22	0.099	mg/Kg dry	0.197	ND	112	40-140	5.16	30	
Aroclor-1260	0.22	0.099	mg/Kg dry	0.197	ND	110	40-140	8.72	30	
Aroclor-1260 [2C]	0.21	0.099	mg/Kg dry	0.197	ND	106	40-140	6.32	30	
Surrogate: Decachlorobiphenyl	0.171		mg/Kg dry	0.197		86.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.170		mg/Kg dry	0.197		86.2	30-150			
Surrogate: Tetrachloro-m-xylene	0.165		mg/Kg dry	0.197		83.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.169		mg/Kg dry	0.197		85.8	30-150			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135223 - SW-846 3546										
Blank (B135223-BLK1)										
Prepared: 11/12/15 Analyzed: 11/14/15										
Diesel Range Organics	ND	8.3	mg/Kg wet							
Surrogate: o-Terphenyl	2.87		mg/Kg wet	3.33		86.1	40-140			
LCS (B135223-BS1)										
Prepared: 11/12/15 Analyzed: 11/14/15										
Diesel Range Organics	21.9	8.3	mg/Kg wet	33.3		65.6	40-140			
Surrogate: o-Terphenyl	2.93		mg/Kg wet	3.33		87.8	40-140			
LCS Dup (B135223-BSD1)										
Prepared: 11/12/15 Analyzed: 11/14/15										
Diesel Range Organics	23.6	8.3	mg/Kg wet	33.3		70.8	40-140	7.64		
Surrogate: o-Terphenyl	3.15		mg/Kg wet	3.33		94.6	40-140			
Batch B135551 - SW-846 5035/5030B										
Blank (B135551-BLK1)										
Prepared & Analyzed: 11/16/15										
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg wet							
Surrogate: 1-Chloro-3-fluorobenzene	0.0138		mg/Kg wet	0.0150		92.3	70-130			
LCS (B135551-BS1)										
Prepared & Analyzed: 11/16/15										
Gasoline Range Organics (GRO)	0.245	0.010	mg/Kg wet	0.250		98.1	80-120			
Surrogate: 1-Chloro-3-fluorobenzene	0.0137		mg/Kg wet	0.0150		91.4	70-130			
LCS Dup (B135551-BSD1)										
Prepared & Analyzed: 11/16/15										
Gasoline Range Organics (GRO)	0.244	0.010	mg/Kg wet	0.250		97.5	80-120	0.661	30	
Surrogate: 1-Chloro-3-fluorobenzene	0.0140		mg/Kg wet	0.0150		93.6	70-130			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135194 - % Solids										
Duplicate (B135194-DUP1)		Source: 15K0480-01			Prepared: 11/11/15 Analyzed: 11/12/15					
% Solids	96.3		% Wt		96.3			0.00	20	
Batch B135218 - SW-846 9045C										
LCS (B135218-BS1)		Prepared & Analyzed: 11/12/15								
pH	6.01		pH Units	6.00	100		98.6-102			
Duplicate (B135218-DUP1)		Source: 15K0480-14			Prepared & Analyzed: 11/12/15					
pH	6.8		pH Units		6.9			1.60	5	
Batch B135426 - SW-846 9045C										
LCS (B135426-BS1)		Prepared & Analyzed: 11/16/15								
pH	6.04		pH Units	6.00	101		98.6-102			
LCS (B135426-BS2)		Prepared & Analyzed: 11/16/15								
pH	6.03		pH Units	6.00	100		98.6-102			
Batch B135520 - SW-846 9014										
Blank (B135520-BLK1)		Prepared: 11/16/15 Analyzed: 11/17/15								
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B135520-BS1)		Prepared: 11/16/15 Analyzed: 11/17/15								
Reactive Cyanide	9.6	0.40	mg/Kg	10.0	95.9		86.4-107			
Batch B135523 - SW-846 9030A										
Blank (B135523-BLK1)		Prepared: 11/16/15 Analyzed: 11/17/15								
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B135523-BS1)		Prepared: 11/16/15 Analyzed: 11/17/15								
Reactive Sulfide	18	2.0	mg/Kg	14.8	122		42.9-132			

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QUALITY CONTROL

TCLP - Metals Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135389 - SW-846 7470A Prep										
Blank (B135389-BLK1) Prepared: 11/13/15 Analyzed: 11/16/15										
Mercury	ND	0.00010	mg/L							
LCS (B135389-BS1) Prepared: 11/13/15 Analyzed: 11/16/15										
Mercury	0.00199	0.00010	mg/L	0.00200		99.6	80-120			
LCS Dup (B135389-BSD1) Prepared: 11/13/15 Analyzed: 11/16/15										
Mercury	0.00213	0.00010	mg/L	0.00200		107	80-120	6.67	20	
Batch B135395 - SW-846 3010A										
Blank (B135395-BLK1) Prepared: 11/13/15 Analyzed: 11/18/15										
Arsenic	ND	0.010	mg/L							
Barium	ND	0.050	mg/L							
Cadmium	ND	0.0040	mg/L							
Chromium	ND	0.010	mg/L							
Lead	ND	0.010	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.0050	mg/L							
LCS (B135395-BS1) Prepared: 11/13/15 Analyzed: 11/18/15										
Arsenic	0.543	0.010	mg/L	0.500		109	80-120			
Barium	0.501	0.050	mg/L	0.500		100	80-120			
Cadmium	0.510	0.0040	mg/L	0.500		102	80-120			
Chromium	0.488	0.010	mg/L	0.500		97.6	80-120			
Lead	0.466	0.010	mg/L	0.500		93.1	80-120			
Selenium	0.554	0.050	mg/L	0.500		111	80-120			
Silver	0.500	0.0050	mg/L	0.500		99.9	80-120			
LCS Dup (B135395-BSD1) Prepared: 11/13/15 Analyzed: 11/18/15										
Arsenic	0.545	0.010	mg/L	0.500		109	80-120	0.358	20	
Barium	0.502	0.050	mg/L	0.500		100	80-120	0.245	20	
Cadmium	0.511	0.0040	mg/L	0.500		102	80-120	0.296	20	
Chromium	0.488	0.010	mg/L	0.500		97.5	80-120	0.0829	20	
Lead	0.468	0.010	mg/L	0.500		93.7	80-120	0.578	20	
Selenium	0.563	0.050	mg/L	0.500		113	80-120	1.64	20	
Silver	0.500	0.0050	mg/L	0.500		100	80-120	0.151	20	

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS

Lab Sample ID: B135292-BS1 Date(s) Analyzed: 11/13/2015 11/13/2015

Instrument ID (1): _____ Instrument ID (2): _____

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.16	
	2	0.00	0.00	0.00	0.18	9
Aroclor-1260	1	0.00	0.00	0.00	0.17	
	2	0.00	0.00	0.00	0.18	6

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS Dup

Lab Sample ID: B135292-BSD1 Date(s) Analyzed: 11/13/2015 11/13/2015
 Instrument ID (1): _____ Instrument ID (2): _____
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.19	
	2	0.00	0.00	0.00	0.20	8
Aroclor-1260	1	0.00	0.00	0.00	0.19	
	2	0.00	0.00	0.00	0.21	9

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

Matrix Spike

Lab Sample ID: B135292-MS1 Date(s) Analyzed: 11/13/2015 11/13/2015
 Instrument ID (1): _____ Instrument ID (2): _____
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.21	
	2	0.00	0.00	0.00	0.21	0
Aroclor-1260	1	0.00	0.00	0.00	0.20	
	2	0.00	0.00	0.00	0.20	1

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

Matrix Spike Dup

SW-846 8082A

Lab Sample ID: B135292-MSD1 Date(s) Analyzed: 11/13/2015 11/13/2015

Instrument ID (1): _____ Instrument ID (2): _____

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.22	
	2	0.00	0.00	0.00	0.22	1
Aroclor-1260	1	0.00	0.00	0.00	0.22	
	2	0.00	0.00	0.00	0.21	3

FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
 - † Wide recovery limits established for difficult compound.
 - ‡ Wide RPD limits established for difficult compound.
 - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
No results have been blank subtracted unless specified in the case narrative section.
- B-01 Methylene chloride is a common laboratory contaminant.
 - H-03 Sample received after recommended holding time was exceeded.
 - PR-03 Sample preserved in the laboratory, not in the field as required by the method.
 - PR-15 According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846 5035-L/5035A-L.
 - R-05 Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
 - S-07 One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.
 - V-05 Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
 - V-20 Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 1030 in Soil	
Ignitability	NY,NH,CT,NC,ME,VA
SW-846 6010C in Water	
Arsenic	NY,CT,NC,ME,NH,VA
Barium	NY,CT,ME,NC,NH,VA
Cadmium	NY,CT,ME,NC,NH,VA
Chromium	NY,CT,ME,NC,NH,VA
Lead	NY,CT,ME,NC,NH,VA
Selenium	CT,ME,NC,NH,NY,VA
Silver	CT,ME,NC,NH,NY,VA
SW-846 7470A in Water	
Mercury	CT,ME,NC,NH,NY,VA
SW-846 8015C in Soil	
Gasoline Range Organics (GRO)	NY,VA,NH
Diesel Range Organics	NY,VA,NH
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NY,NC
Aroclor-1262 [2C]	NY,NC
Aroclor-1268	NY,NC
Aroclor-1268 [2C]	NY,NC
SW-846 8260C in Soil	
Acetone	CT,NH,NY,ME,VA
Acrylonitrile	CT,NH,NY,ME,VA
Benzene	CT,NH,NY,ME,VA
Bromobenzene	NH,NY,ME,VA
Bromochloromethane	NH,NY,ME,VA
Bromodichloromethane	CT,NH,NY,ME,VA
Bromoform	CT,NH,NY,ME,VA
Dimethylmethane	CT,NH,NY,ME,VA
2-Butanone (MEK)	CT,NH,NY,ME,VA
n-Butylbenzene	CT,NH,NY,ME,VA
sec-Butylbenzene	CT,NH,NY,ME,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
tert-Butylbenzene	CT,NH,NY,ME,VA
Carbon Disulfide	CT,NH,NY,ME,VA
Carbon Tetrachloride	CT,NH,NY,ME,VA
Chlorobenzene	CT,NH,NY,ME,VA
Chlorodibromomethane	CT,NH,NY,ME,VA
Chloroethane	CT,NH,NY,ME,VA
Chloroform	CT,NH,NY,ME,VA
Chloromethane	CT,NH,NY,ME,VA
2-Chlorotoluene	CT,NH,NY,ME,VA
4-Chlorotoluene	CT,NH,NY,ME,VA
Dibromomethane	NH,NY,ME,VA
1,2-Dichlorobenzene	CT,NH,NY,ME,VA
1,3-Dichlorobenzene	CT,NH,NY,ME,VA
1,4-Dichlorobenzene	CT,NH,NY,ME,VA
Dichlorodifluoromethane (Freon 12)	NH,NY,ME,VA
1,1-Dichloroethane	CT,NH,NY,ME,VA
1,2-Dichloroethane	CT,NH,NY,ME,VA
1,1-Dichloroethylene	CT,NH,NY,ME,VA
cis-1,2-Dichloroethylene	CT,NH,NY,ME,VA
trans-1,2-Dichloroethylene	CT,NH,NY,ME,VA
1,2-Dichloropropane	CT,NH,NY,ME,VA
1,3-Dichloropropane	NH,NY,ME,VA
2,2-Dichloropropane	NH,NY,ME,VA
1,1-Dichloropropene	NH,NY,ME,VA
cis-1,3-Dichloropropene	CT,NH,NY,ME,VA
trans-1,3-Dichloropropene	CT,NH,NY,ME,VA
Ethylbenzene	CT,NH,NY,ME,VA
Hexachlorobutadiene	NH,NY,ME,VA
2-Hexanone (MBK)	CT,NH,NY,ME,VA
Isopropylbenzene (Cumene)	CT,NH,NY,ME,VA
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl tert-Butyl Ether (MTBE)	NY,VA
Methylene Chloride	CT,NH,NY,ME,VA
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,VA
Naphthalene	NH,NY,ME,VA
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME,VA
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME,VA
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME,VA
Tetrachloroethylene	CT,NH,NY,ME,VA
Toluene	CT,NH,NY,ME,VA
1,2,3-Trichlorobenzene	ME
1,2,4-Trichlorobenzene	NH,NY,ME,VA
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NH,NY,ME,VA
1,1,2-Trichloroethane	CT,NH,NY,ME,VA
Trichloroethylene	CT,NH,NY,ME,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME,VA
1,2,3-Trichloropropane	NH,NY,ME,VA
1,2,4-Trimethylbenzene	CT,NH,NY,ME,VA
1,3,5-Trimethylbenzene	CT,NH,NY,ME,VA
Vinyl Chloride	CT,NH,NY,ME,VA
m+p Xylene	CT,NH,NY,ME,VA
o-Xylene	CT,NH,NY,ME,VA
<i>SW-846 8270D in Soil</i>	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
fluorene	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2016
MA	Massachusetts DEP	M-MA100	06/30/2016
CT	Connecticut Department of Public Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2016
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2016
RI	Rhode Island Department of Health	LAO00112	12/30/2015
NC	North Carolina Div. of Water Quality	652	12/31/2015
NJ	New Jersey DEP	MA007 NELAP	06/30/2016
FL	Florida Department of Health	E871027 NELAP	06/30/2016
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2016
WA	State of Washington Department of Ecology	C2065	02/23/2016
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2015
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2016



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 www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
 East long meadow, MA 01028

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Company Name: LIRO Engineers, INC. Telephone: 716 882-9645
 Address: 703 Corimer Street Project # 15-008-0265
Brooklyn NY 11211 Client POC#

Attention: Amy Hewson
 Project Location: Atlantic Ave, Brooklyn, NY
 Sampled By: Eva Jakubowska
 Project Proposal Provided? (for billing purposes)
 Yes No proposal date

DATA DELIVERY (check all that apply)
 FAX EMAIL WEBSITE
 Fax #
 Email: hewsona@liro.com
 Format: PDF EXCEL GIS
 OTHER

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection		"Enhanced Data Package"		Matrix Code	Cont. Code
		Beginning Date/Time	Sealing Date/Time	Composite	Grab		
01	SB-38-14.5-15.0	11-10-15	1100	X	X	S	U
02	SB-38-COMP		1100	X		S	U
03	SB-35-14.5-15.0		1230	X	X	S	U
04	SB-35-COMP		1230	X		S	U
05	SB-33-14.5-15.0		1315	X	X	S	U
06	SB-33-COMP		1315	X		S	U
07	SB-29-14.5-15.0		1415	X	X	S	U
08	SB-29-COMP		1415	X		S	U
09	SB-23-14.5-15.0	11-11-15	0930	X	X	S	U
10	SB-23-COMP	"	0930	X		S	U

Comments:
 Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Cont. Code Box:
 H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature) [Signature] Date/Time: 11/11/2015
 Received by: (signature) [Signature] Date/Time: 10:50
 Inquished by: (signature) [Signature] Date/Time: 11/11/15
 Received by: (signature) [Signature] Date/Time: 11/11/15
 Turnaround 7-Day 10-Day Other 5 day
 Massachusetts:
 Connecticut:
 Other:
 Turnaround Time Starts at 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR INCORRECTLY, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

# of Containers	Preservation	Container Code	Analysis Requested	Matrix Code	Cont. Code
3			TCL VOCs		
1			PCBs		
1			PAHs		
1			TRHC DRO/Geo		
1			ECOA Characterstics		
1			TCP PCPA Metals		

PROJECT ID: WVD10105
 Accredited: NELAC & AIHA-LAP, LLC
 WBE/DBE Certified
 Is your project MCP or RCP?
 MCP Form Required
 RCP Form Required
 MA State DW Form Required PWSID #



Phone: 413-525-2332
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 Email: info@contestlabs.com
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CHAIN OF STUDY RECORD

39 Spruce Street
 East Longmeadow, MA 01028

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Company Name: URO Engineers, Inc.
 Address: 703 Lorimer Street
Brooklyn, NY 11211
 Attention: AMY HEWSON
 Project Location: Atlantic Ave, Brooklyn, NY
 Sampled By: Eva Jakubowski

Telephone: 316 882-9645
 Project # 15-008-0265
 Client PO# -
 DATA DELIVERY (check all that apply)
 FAX EMAIL WEBSITE
 Fax # newson@uro.com
 Email: newson@uro.com
 Format: PDF EXCEL GIS
 OTHER

Project Proposal Provided? (for billing purposes)
 yes proposal date

Con-Test Lab ID (Laboratory use only)	Client Sample ID / Description	Collection		Matrix	Conc	Date
		Beginning Date/Time	Ending Date/Time			
11	SB-22-14.5-15.0'	11-11-15	1015	X	S	U
12	SB-22-COMP		1015	X	S	U
13	SB-20-14.5-15.0'		1100	X	S	U
14	SB-20-COMP		1100	X	S	U

Enhanced Data Package"
 Matrix Conc Date
 Composite Grab Date

Relinquished by: (signature)	Date/Time	Turnaround if	Detection Limit Requirements
<u>[Signature]</u>	11/11/15	<input type="checkbox"/> 7-Day <input type="checkbox"/> 10-Day <input checked="" type="checkbox"/> Other <u>5 day</u>	
<u>[Signature]</u>	11/11/15	<u>RUSH</u> <input type="checkbox"/> 24-Hr <input type="checkbox"/> 148-Hr <input type="checkbox"/> 72-Hr <input type="checkbox"/> 14-Day	
<u>[Signature]</u>	11/11/15	Require lab approval	

# of Containers	** Preservation	*** Container Code	Disolved Metals	*** Cont. Codes:	** Preservation	*** Matrix Codes:	PROJECT ID: HWD10105
			<input type="radio"/> Field Filtered <input type="radio"/> Lab to Filter	A=Amberglass G=glass P=plastic ST=sterile V=vial S=Summa can T=teflon bag O=Other	I=Iced H=HCL M=Methanol N=Nitric Acid S=Sulfuric Acid B=Sodium bisulfate X=Na hydroxide T=Na thiosulfate O=Other	GW=groundwater WW=wastewater DW=drinking water A=air S=soil/solid SL=sludge O=other	

ANALYSIS REQUESTED

Analysis	11	12	13	14
TCL VOCs	X			
PAHs	X	X	X	X
PCBs	X	X	X	X
TRAC	X	X	X	X
PCBA Characterstics	X	X	X	X
TCP PCBA Metals	X	X	X	X

Is your project MCP or RCP?
 MCP Form Required
 RCP Form Required
 MA State DW Form Required PWSID #
 NELAC & AIHA-LAP, LLC Accredited
 WBE/DBE Certified
 ACCEPTED IN ACCORDANCE WITH

TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT. PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Login Sample Receipt Checklist
 (Rejection Criteria Listing - Using Sample Acceptance Policy)
 Any False statement will be brought to the attention of Client

Question	Answer (True/False)	Comment
	T/F/NA	
1) The cooler's custody seal, if present, is intact.	T	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.	T	

Doc #277 Rev. 4 August 2013

Who notified of False statements?
 Log-In Technician Initials:

Date/Time:
 Date/Time:

RLT 11/11/15 1345

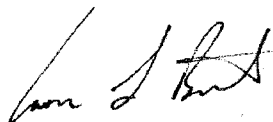
November 23, 2015

Amy Hewson
LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202

Project Location: Atlantic Ave., Brooklyn, NY
Client Job Number:
Project Number: 15-008-0265
Laboratory Work Order Number: 15K0588

Enclosed are results of analyses for samples received by the laboratory on November 13, 2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Aaron L. Benoit
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Amy Hewson

REPORT DATE: 11/23/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 15-008-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15K0588

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave., Brooklyn, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-18- 14.5-15.0'	15K0588-01	Soil		SM 2540G	
				SW-846 8260C	
SB-18- COMP	15K0588-02	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-16- 14.5-15.0'	15K0588-03
SW-846 8260C					
SB-16- COMP	15K0588-04	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-11- 14.5-15.0'	15K0588-05
SW-846 8260C					



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Amy Hewson

REPORT DATE: 11/23/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 15-008-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15K0588

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave., Brooklyn, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB				
SB-111- COMP	15K0588-06	Soil		SM 2540G					
				SW-846 1030					
				SW-846 1311					
				SW-846 6010C					
				SW-846 7470A					
				SW-846 8015C					
				SW-846 8082A					
				SW-846 8270D					
				SW-846 9014					
				SW-846 9030A					
SB-10- 14.5-15.0'	15K0588-07	Soil		SW-846 9045C					
				SW-846 9095B					
				SM 2540G					
				SW-846 8260C					
				SB-10- COMP	15K0588-08	Soil		SM 2540G	
								SW-846 1030	
								SW-846 1311	
								SW-846 6010C	
								SW-846 7470A	
								SW-846 8015C	
SW-846 8082A									
SW-846 8270D									
SW-846 9014									
SW-846 9030A									
SB-08- 9.5-10.0'	15K0588-09	Soil		SW-846 9045C					
				SW-846 9095B					
				SM 2540G					
				SW-846 8260C					
				SB-08- COMP	15K0588-10	Soil		SM 2540G	
								SW-846 1030	
								SW-846 1311	
								SW-846 6010C	
								SW-846 7470A	
								SW-846 8015C	
SW-846 8082A									
SW-846 8270D									
SW-846 9014									
SW-846 9030A									
				SW-846 9045C					
				SW-846 9095B					



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Amy Hewson

REPORT DATE: 11/23/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 15-008-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15K0588

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave., Brooklyn, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-06- 14.5-15.0'	15K0588-11	Soil		SM 2540G	
				SW-846 8260C	
SB-06- COMP	15K0588-12	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-03- 14.5-15.0'	15K0588-13
SW-846 8260C					
SB-03- COMP	15K0588-14	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
				SB-01- 14.5-15.0'	15K0588-15
SW-846 8260C					



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209-2202
ATTN: Amy Hewson

REPORT DATE: 11/23/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 15-008-0265

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15K0588

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Atlantic Ave., Brooklyn, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-01- COMP	15K0588-16	Soil		SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010C	
				SW-846 7470A	
				SW-846 8015C	
				SW-846 8082A	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

SW-846 8260C

Qualifications:**B-01**

Methylene chloride is a common laboratory contaminant.

Analyte & Samples(s) Qualified:**Methylene Chloride**

15K0588-03[SB-16- 14.5-15.0'], 15K0588-05[SB-11- 14.5-15.0'], 15K0588-13[SB-03- 14.5-15.0'], 15K0588-15[SB-01- 14.5-15.0']

PR-03

Sample preserved in the laboratory, not in the field as required by the method.

Analyte & Samples(s) Qualified:

15K0588-01[SB-18- 14.5-15.0'], 15K0588-03[SB-16- 14.5-15.0'], 15K0588-05[SB-11- 14.5-15.0'], 15K0588-07[SB-10- 14.5-15.0'], 15K0588-09[SB-08- 9.5-10.0'], 15K0588-11[SB-06- 14.5-15.0'], 15K0588-13[SB-03- 14.5-15.0'], 15K0588-15[SB-01- 14.5-15.0']

PR-15

According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846 5035-L/5035A-L.

Analyte & Samples(s) Qualified:

15K0588-01[SB-18- 14.5-15.0'], 15K0588-03[SB-16- 14.5-15.0'], 15K0588-05[SB-11- 14.5-15.0'], 15K0588-07[SB-10- 14.5-15.0'], 15K0588-09[SB-08- 9.5-10.0'], 15K0588-11[SB-06- 14.5-15.0'], 15K0588-13[SB-03- 14.5-15.0'], 15K0588-15[SB-01- 14.5-15.0']

V-06

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:**Acetone**

B135952-BS1, B135952-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**1,2,3-Trichloropropane**

B135952-BS1, B135952-BSD1

Carbon Disulfide

B135952-BS1, B135952-BSD1

tert-Butyl Alcohol (TBA)

B135952-BS1, B135952-BSD1

Z-01

Acetone is a common laboratory contaminant

Analyte & Samples(s) Qualified:**Acetone**

15K0588-07[SB-10- 14.5-15.0'], 15K0588-09[SB-08- 9.5-10.0']

SW-846 9045C

Qualifications:**II-03**

Sample received after recommended holding time was exceeded.

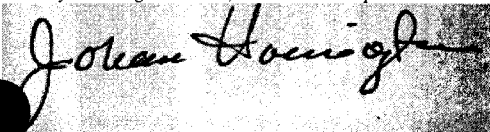
Analyte & Samples(s) Qualified:**pH**

15K0588-02[SB-18- COMP], 15K0588-04[SB-16- COMP], 15K0588-06[SB-111- COMP], 15K0588-08[SB-10- COMP], 15K0588-10[SB-08- COMP], 15K0588-12[SB-06- COMP], 15K0588-14[SB-03- COMP], 15K0588-16[SB-01- COMP]

SW-846 8015C

Gasoline Range Organics (2-Methylpentane through 1,2,4-Trimethylbenzene) is quantitated against a calibration made with an unleaded gasoline composite standard.
Diesel Range Organics (C10-C28) is quantitated against a calibration made with a #2 fuel oil standard.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Johanna K. Harrington
Manager, Laboratory Reporting

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-18- 14.5-15.0'

Sampled: 11/11/2015 12:45

Sample ID: 15K0588-01

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Acrylonitrile	ND	0.0057	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Bromomethane	ND	0.0096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
2-Butanone (MEK)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
tert-Butyl Alcohol (TBA)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
n-Butylbenzene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Carbon Disulfide	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Chlorodibromomethane	ND	0.00096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Chloroethane	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Chloroform	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Chloromethane	ND	0.0096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,2-Dibromoethane (EDB)	ND	0.00096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
trans-1,4-Dichloro-2-butene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,1-Dichloroethylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,3-Dichloropropane	ND	0.00096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
cis-1,3-Dichloropropene	ND	0.00096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
trans-1,3-Dichloropropene	ND	0.00096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Diethyl Ether	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF

HAZ - 578

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-18-14.5-15.0'

Sampled: 11/11/2015 12:45

Sample ID: 15K0588-01

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,4-Dioxane	ND	0.096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Methylene Chloride	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Naphthalene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,1,2,2-Tetrachloroethane	ND	0.00096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Tetrahydrofuran	ND	0.0096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,3,5-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
Vinyl Chloride	ND	0.0096	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
m+p Xylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:02	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	110	70-130	11/20/15 10:02
Toluene-d8	99.4	70-130	11/20/15 10:02
4-Bromofluorobenzene	87.4	70-130	11/20/15 10:02



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-18- 14.5-15.0'

Sampled: 11/11/2015 12:45

Sample ID: 15K0588-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
% Solids	96.7		% Wt	1		SM 2540G	11/13/15	11/14/15 15:08	DRA

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-18- COMP

Sampled: 11/11/2015 12:45

Sample ID: 15K0588-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
rene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 12:57	CMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		94.5	30-130					11/17/15 12:57	
2-Fluorobiphenyl		102	30-130					11/17/15 12:57	
p-Terphenyl-d14		101	30-130					11/17/15 12:57	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-18- COMP

Sampled: 11/11/2015 12:45

Sample ID: 15K0588-02

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:03	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:03	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:03	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:03	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:03	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:03	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:03	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:03	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:03	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		81.6	30-150					11/16/15 22:03	
Decachlorobiphenyl [2]		79.0	30-150					11/16/15 22:03	
Tetrachloro-m-xylene [1]		76.1	30-150					11/16/15 22:03	
Tetrachloro-m-xylene [2]		78.9	30-150					11/16/15 22:03	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-18- COMP

Sampled: 11/11/2015 12:45

Sample ID: 15K0588-02

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/19/15	11/19/15 23:00	EEH
Diesel Range Organics	ND	8.7	mg/Kg dry	1		SW-846 8015C	11/20/15	11/20/15 17:38	SCS
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	115		70-130			11/19/15 23:00			
o-Terphenyl	67.2		40-140			11/20/15 17:38			



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-18- COMP

Sampled: 11/11/2015 12:45

Sample ID: 15K0588-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/16/15	11/16/15 10:30	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/17/15	11/17/15 22:15	DJM
	7.6		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 17:30	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/17/15	11/18/15 11:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/17/15	11/18/15 11:10	AG
% Solids	96.1		% Wt	1		SM 2540G	11/13/15	11/14/15 15:08	DRA

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-18- COMP

Sampled: 11/11/2015 12:45

Sample ID: 15K0588-02

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:06	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/16/15	11/18/15 13:04	SCB
Barium	0.30	0.050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:06	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:06	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:06	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:06	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:06	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:06	AME

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-16- 14.5-15.0'

Sampled: 11/11/2015 13:30

Sample ID: 15K0588-03

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Acrylonitrile	ND	0.0056	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Bromomethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
2-Butanone (MEK)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
tert-Butyl Alcohol (TBA)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
n-Butylbenzene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Carbon Disulfide	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Chlorodibromomethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Chloroethane	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Chloroform	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Chloromethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,2-Dibromoethane (EDB)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
trans-1,4-Dichloro-2-butene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,1-Dichloroethylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,3-Dichloropropane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
cis-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
trans-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Diethyl Ether	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF

HAZ - 586

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-16-14.5-15.0'

Sampled: 11/11/2015 13:30

Sample ID: 15K0588-03

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,4-Dioxane	ND	0.094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Methylene Chloride	0.021	0.019	mg/Kg dry	1	B-01	SW-846 8260C	11/20/15	11/20/15 10:30	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Naphthalene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,1,2,2-Tetrachloroethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Tetrahydrofuran	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,3,5-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
Vinyl Chloride	ND	0.0094	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
m+p Xylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:30	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	112	70-130	11/20/15 10:30
Toluene-d8	96.8	70-130	11/20/15 10:30
4-Bromofluorobenzene	86.6	70-130	11/20/15 10:30



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-16- 14.5-15.0'

Sampled: 11/11/2015 13:30

Sample ID: 15K0588-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.6		% Wt	1		SM 2540G	11/13/15	11/14/15 15:08	DRA

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-16- COMP

Sampled: 11/11/2015 13:30

Sample ID: 15K0588-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
rene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:21	CMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		94.8	30-130					11/17/15 13:21	
2-Fluorobiphenyl		104	30-130					11/17/15 13:21	
p-Terphenyl-d14		114	30-130					11/17/15 13:21	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-16- COMP

Sampled: 11/11/2015 13:30

Sample ID: 15K0588-04

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:16	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:16	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:16	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:16	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:16	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:16	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:16	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:16	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:16	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		95.8	30-150					11/16/15 22:16	
Decachlorobiphenyl [2]		93.5	30-150					11/16/15 22:16	
Tetrachloro-m-xylene [1]		87.7	30-150					11/16/15 22:16	
Tetrachloro-m-xylene [2]		92.5	30-150					11/16/15 22:16	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-16- COMP

Sampled: 11/11/2015 13:30

Sample ID: 15K0588-04

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/19/15	11/19/15 23:36	EEH
Diesel Range Organics	ND	8.6	mg/Kg dry	1		SW-846 8015C	11/20/15	11/20/15 17:55	SCS
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene		113	70-130					11/19/15 23:36	
o-Terphenyl		64.7	40-140					11/20/15 17:55	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-16- COMP

Sampled: 11/11/2015 13:30

Sample ID: 15K0588-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/16/15	11/16/15 10:30	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/17/15	11/17/15 22:15	DJM
pH @25.7°C	7.8		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 17:30	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/17/15	11/18/15 11:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/17/15	11/18/15 11:10	AG
% Solids	96.4		% Wt	1		SM 2540G	11/13/15	11/14/15 15:08	DRA

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-16- COMP

Sampled: 11/11/2015 13:30

Sample ID: 15K0588-04

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:15	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/16/15	11/18/15 13:05	SCB
Barium	0.36	0.050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:15	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:15	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:15	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:15	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:15	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:15	AME

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-11-14.5-15.0'

Sampled: 11/11/2015 14:30

Sample ID: 15K0588-05

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Acrylonitrile	ND	0.0058	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Bromomethane	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
2-Butanone (MEK)	ND	0.039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
tert-Butyl Alcohol (TBA)	ND	0.039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
n-Butylbenzene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Carbon Disulfide	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Chlorodibromomethane	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Chloroethane	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Chloroform	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Chloromethane	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,2-Dibromoethane (EDB)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
trans-1,4-Dichloro-2-butene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,1-Dichloroethylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,3-Dichloropropane	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
cis-1,3-Dichloropropene	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
trans-1,3-Dichloropropene	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Diethyl Ether	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF

HAZ - 594

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-11- 14.5-15.0'

Sampled: 11/11/2015 14:30

Sample ID: 15K0588-05

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Diisopropyl Ether (DIPE)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,4-Dioxane	ND	0.097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Methylene Chloride	0.022	0.019	mg/Kg dry	1	B-01	SW-846 8260C	11/20/15	11/20/15 10:58	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Naphthalene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,1,2,2-Tetrachloroethane	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Tetrahydrofuran	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,3,5-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Vinyl Chloride	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
m+p Xylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 10:58	MFF
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
1,2-Dichloroethane-d4		114	70-130				11/20/15	10:58	
Toluene-d8		98.1	70-130				11/20/15	10:58	
4-Bromofluorobenzene		85.9	70-130				11/20/15	10:58	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-11- 14.5-15.0'

Sampled: 11/11/2015 14:30

Sample ID: 15K0588-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.9		% Wt	1		SM 2540G	11/13/15	11/14/15 15:08	DRA



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-111- COMP

Sampled: 11/11/2015 14:30

Sample ID: 15K0588-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
rene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 13:46	CMR
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Nitrobenzene-d5	102	30-130						11/17/15 13:46	
2-Fluorobiphenyl	114	30-130						11/17/15 13:46	
p-Terphenyl-d14	120	30-130						11/17/15 13:46	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-111- COMP

Sampled: 11/11/2015 14:30

Sample ID: 15K0588-06

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:29	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:29	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:29	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:29	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:29	JMB
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:29	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:29	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:29	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:29	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		96.7	30-150					11/16/15 22:29	
Decachlorobiphenyl [2]		94.5	30-150					11/16/15 22:29	
Tetrachloro-m-xylene [1]		82.9	30-150					11/16/15 22:29	
Tetrachloro-m-xylene [2]		86.8	30-150					11/16/15 22:29	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-111- COMP

Sampled: 11/11/2015 14:30

Sample ID: 15K0588-06

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/19/15	11/20/15 0:12	EEH
Diesel Range Organics	ND	8.8	mg/Kg dry	1		SW-846 8015C	11/20/15	11/20/15 18:13	SCS
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene		117	70-130					11/20/15 0:12	
o-Terphenyl		69.7	40-140					11/20/15 18:13	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-111- COMP

Sampled: 11/11/2015 14:30

Sample ID: 15K0588-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/16/15	11/16/15 10:30	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/17/15	11/17/15 22:15	DJM
pH @23.8°C	7.3		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 17:30	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/17/15	11/18/15 11:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/17/15	11/18/15 11:10	AG
% Solids	95.1		% Wt	1		SM 2540G	11/13/15	11/14/15 15:08	DRA



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-111- COMP

Sampled: 11/11/2015 14:30

Sample ID: 15K0588-06

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:20	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/16/15	11/18/15 13:07	SCB
Barium	0.37	0.050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:20	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:20	AME
Chromium	0.014	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:20	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:20	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:20	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:20	AME

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-10-14.5-15.0'

Sampled: 11/12/2015 09:30

Sample ID: 15K0588-07

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.25	0.097	mg/Kg dry	1	Z-01	SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Acrylonitrile	ND	0.0058	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Bromomethane	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
2-Butanone (MEK)	ND	0.039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
tert-Butyl Alcohol (TBA)	ND	0.039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
n-Butylbenzene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Carbon Disulfide	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Chlorodibromomethane	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Chloroethane	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Chloroform	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Chloromethane	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,2-Dibromoethane (EDB)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
trans-1,4-Dichloro-2-butene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,1-Dichloroethylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,3-Dichloropropane	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
cis-1,3-Dichloropropene	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
trans-1,3-Dichloropropene	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Diethyl Ether	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-10- 14.5-15.0'

Sampled: 11/12/2015 09:30

Sample ID: 15K0588-07

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,4-Dioxane	ND	0.097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Methylene Chloride	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Naphthalene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,1,2,2-Tetrachloroethane	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Tetrahydrofuran	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,3,5-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
Vinyl Chloride	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
m+p Xylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:45	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	110	70-130	11/20/15 13:45
Toluene-d8	99.8	70-130	11/20/15 13:45
4-Bromofluorobenzene	84.7	70-130	11/20/15 13:45



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-10- 14.5-15.0'

Sampled: 11/12/2015 09:30

Sample ID: 15K0588-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.1		% Wt	1		SM 2540G	11/13/15	11/14/15 15:08	DRA

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-10- COMP

Sampled: 11/12/2015 09:30

Sample ID: 15K0588-08

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
rene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:10	CMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		93.3	30-130					11/17/15 14:10	
2-Fluorobiphenyl		94.9	30-130					11/17/15 14:10	
p-Terphenyl-d14		106	30-130					11/17/15 14:10	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-10- COMP

Sampled: 11/12/2015 09:30

Sample ID: 15K0588-08

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:42	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:42	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:42	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:42	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:42	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:42	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:42	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:42	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:42	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	86.1	30-150	
Decachlorobiphenyl [2]	82.9	30-150	
Tetrachloro-m-xylene [1]	81.5	30-150	
Tetrachloro-m-xylene [2]	85.1	30-150	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-10- COMP

Sampled: 11/12/2015 09:30

Sample ID: 15K0588-08

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/19/15	11/20/15 0:48	EEH
Diesel Range Organics	ND	8.6	mg/Kg dry	1		SW-846 8015C	11/20/15	11/20/15 18:31	SCS
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	111		70-130					11/20/15 0:48	
o-Terphenyl	67.7		40-140					11/20/15 18:31	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-10- COMP

Sampled: 11/12/2015 09:30

Sample ID: 15K0588-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/16/15	11/16/15 10:30	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/17/15	11/17/15 22:15	DJM
pH @23.8°C	6.6		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 17:30	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/17/15	11/18/15 11:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/17/15	11/18/15 11:10	AG
% Solids	96.7		% Wt	1		SM 2540G	11/13/15	11/14/15 15:08	DRA



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-10- COMP

Sampled: 11/12/2015 09:30

Sample ID: 15K0588-08

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:40	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/16/15	11/18/15 13:08	SCB
Barium	0.35	0.050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:40	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:40	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:40	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:40	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:40	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:40	AME

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-08-9.5-10.0'

Sampled: 11/12/2015 10:15

Sample ID: 15K0588-09

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.21	0.095	mg/Kg dry	1	Z-01	SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Acrylonitrile	ND	0.0057	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Bromomethane	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
2-Butanone (MEK)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
tert-Butyl Alcohol (TBA)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
n-Butylbenzene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Carbon Disulfide	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Chlorodibromomethane	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Chloroethane	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Chloroform	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Chloromethane	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,2-Dibromoethane (EDB)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
trans-1,4-Dichloro-2-butene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,1-Dichloroethylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,3-Dichloropropane	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
cis-1,3-Dichloropropene	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
trans-1,3-Dichloropropene	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Diethyl Ether	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF

HAZ - 610

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-08-9.5-10.0'

Sampled: 11/12/2015 10:15

Sample ID: 15K0588-09

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,4-Dioxane	ND	0.095	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Methylene Chloride	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Naphthalene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,1,2,2-Tetrachloroethane	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Tetrahydrofuran	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,3,5-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
Vinyl Chloride	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
m+p Xylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 14:13	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	112	70-130	11/20/15 14:13
Toluene-d8	99.6	70-130	11/20/15 14:13
4-Bromofluorobenzene	85.4	70-130	11/20/15 14:13



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-08-9.5-10.0'

Sampled: 11/12/2015 10:15

Sample ID: 15K0588-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
% Solids	95.7		% Wt	1		SM 2540G	11/13/15	11/14/15 15:08	DRA

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-08- COMP

Sampled: 11/12/2015 10:15

Sample ID: 15K0588-10

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
rene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 14:35	CMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		90.0	30-130					11/17/15 14:35	
2-Fluorobiphenyl		96.0	30-130					11/17/15 14:35	
p-Terphenyl-d14		97.2	30-130					11/17/15 14:35	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-08- COMP

Sampled: 11/12/2015 10:15

Sample ID: 15K0588-10

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:55	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:55	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:55	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:55	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:55	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:55	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:55	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:55	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 22:55	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	88.2	30-150	
Decachlorobiphenyl [2]	85.2	30-150	
Tetrachloro-m-xylene [1]	72.8	30-150	
Tetrachloro-m-xylene [2]	75.3	30-150	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-08- COMP

Sampled: 11/12/2015 10:15

Sample ID: 15K0588-10

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/19/15	11/20/15 1:24	EEH
Diesel Range Organics	ND	8.7	mg/Kg dry	1		SW-846 8015C	11/20/15	11/20/15 18:48	SCS
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	114		70-130					11/20/15 1:24	
o-Terphenyl	60.0		40-140					11/20/15 18:48	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-08- COMP

Sampled: 11/12/2015 10:15

Sample ID: 15K0588-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/16/15	11/16/15 10:30	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/17/15	11/17/15 22:15	DJM
pH @24°C	6.1		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 17:30	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/17/15	11/18/15 11:25	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/17/15	11/18/15 11:10	AG
% Solids	96.2		% Wt	1		SM 2540G	11/13/15	11/14/15 15:08	DRA

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-08- COMP

Sampled: 11/12/2015 10:15

Sample ID: 15K0588-10

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:45	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/16/15	11/18/15 13:10	SCB
Barium	0.51	0.050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:45	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:45	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:45	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:45	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:45	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:45	AME

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-06- 14.5-15.0'

Sampled: 11/12/2015 11:15

Sample ID: 15K0588-11

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Acrylonitrile	ND	0.0054	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Bromomethane	ND	0.0090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
tert-Butyl Alcohol (TBA)	ND	0.036	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
n-Butylbenzene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Carbon Disulfide	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Chlorodibromomethane	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Chloroethane	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Chloromethane	ND	0.0090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,2-Dibromoethane (EDB)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
trans-1,4-Dichloro-2-butene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,3-Dichloropropane	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
cis-1,3-Dichloropropene	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
trans-1,3-Dichloropropene	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Diethyl Ether	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF

HAZ - 618

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-06- 14.5-15.0'

Sampled: 11/12/2015 11:15

Sample ID: 15K0588-11

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,4-Dioxane	ND	0.090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Methylene Chloride	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Naphthalene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,1,2,2-Tetrachloroethane	ND	0.00090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Tetrahydrofuran	ND	0.0090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,3,5-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
Vinyl Chloride	ND	0.0090	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:22	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	107	70-130	11/20/15 12:22
Toluene-d8	99.1	70-130	11/20/15 12:22
4-Bromofluorobenzene	85.0	70-130	11/20/15 12:22



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-06- 14.5-15.0'

Sampled: 11/12/2015 11:15

Sample ID: 15K0588-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.8		% Wt	1		SM 2540G	11/13/15	11/14/15 15:08	DRA

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-06- COMP

Sampled: 11/12/2015 11:15

Sample ID: 15K0588-12

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
rene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:00	CMR
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Nitrobenzene-d5	84.3	30-130						11/17/15 15:00	
2-Fluorobiphenyl	90.5	30-130						11/17/15 15:00	
p-Terphenyl-d14	93.8	30-130						11/17/15 15:00	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-06- COMP

Sampled: 11/12/2015 11:15

Sample ID: 15K0588-12

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:46	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:46	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:46	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:46	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:46	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:46	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:46	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:46	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:46	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		84.0	30-150					11/16/15 23:46	
Decachlorobiphenyl [2]		85.0	30-150					11/16/15 23:46	
Tetrachloro-m-xylene [1]		82.9	30-150					11/16/15 23:46	
Tetrachloro-m-xylene [2]		87.5	30-150					11/16/15 23:46	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-06- COMP

Sampled: 11/12/2015 11:15

Sample ID: 15K0588-12

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/19/15	11/20/15 2:00	EEH
Diesel Range Organics	ND	8.7	mg/Kg dry	1		SW-846 8015C	11/20/15	11/20/15 19:06	SCS
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	114		70-130				11/20/15 2:00		
o-Terphenyl	71.4		40-140				11/20/15 19:06		

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-06- COMP

Sampled: 11/12/2015 11:15

Sample ID: 15K0588-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/16/15	11/16/15 10:30	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/17/15	11/17/15 22:15	DJM
pH @23.3°C	6.5		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 17:30	AMM
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/18/15	11/19/15 12:55	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/18/15	11/19/15 12:55	AG
% Solids	95.6		% Wt	1		SM 2540G	11/13/15	11/14/15 15:08	DRA

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-06- COMP

Sampled: 11/12/2015 11:15

Sample ID: 15K0588-12

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:50	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/16/15	11/18/15 13:11	SCB
Barium	0.31	0.050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:50	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:50	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:50	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:50	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:50	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:50	AME

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-03-14.5-15.0'

Sampled: 11/12/2015 12:15

Sample ID: 15K0588-13

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Acrylonitrile	ND	0.0060	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Bromomethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
2-Butanone (MEK)	ND	0.040	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
n-Butylbenzene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Carbon Disulfide	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Chloroethane	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Chloroform	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,1-Dichloroethylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Diethyl Ether	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF

HAZ - 626

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-03- 14.5-15.0'

Sampled: 11/12/2015 12:15

Sample ID: 15K0588-13

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Methylene Chloride	0.022	0.020	mg/Kg dry	1	B-01	SW-846 8260C	11/20/15	11/20/15 12:50	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Naphthalene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Toluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
m+p Xylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 12:50	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	108	70-130	11/20/15 12:50
Toluene-d8	99.2	70-130	11/20/15 12:50
4-Bromofluorobenzene	84.0	70-130	11/20/15 12:50



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-03- 14.5-15.0'

Sampled: 11/12/2015 12:15

Sample ID: 15K0588-13

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.2		% Wt	1		SM 2540G	11/13/15	11/14/15 15:08	DRA

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-03- COMP

Sampled: 11/12/2015 12:15

Sample ID: 15K0588-14

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
rene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:24	CMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		91.4	30-130					11/17/15 15:24	
2-Fluorobiphenyl		95.4	30-130					11/17/15 15:24	
p-Terphenyl-d14		102	30-130					11/17/15 15:24	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-03- COMP

Sampled: 11/12/2015 12:15

Sample ID: 15K0588-14

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:59	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:59	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:59	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:59	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:59	JMB
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:59	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:59	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:59	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/15/15	11/16/15 23:59	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		93.7	30-150					11/16/15 23:59	
Decachlorobiphenyl [2]		92.4	30-150					11/16/15 23:59	
Tetrachloro-m-xylene [1]		84.7	30-150					11/16/15 23:59	
Tetrachloro-m-xylene [2]		88.8	30-150					11/16/15 23:59	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-03- COMP

Sampled: 11/12/2015 12:15

Sample ID: 15K0588-14

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/19/15	11/20/15 2:36	EEH
Diesel Range Organics	ND	8.8	mg/Kg dry	1		SW-846 8015C	11/20/15	11/20/15 19:24	SCS
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1-Chloro-3-fluorobenzene	113		70-130					11/20/15 2:36	
o-Terphenyl	68.5		40-140					11/20/15 19:24	



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-03- COMP

Sampled: 11/12/2015 12:15

Sample ID: 15K0588-14

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/16/15	11/16/15 10:30	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/17/15	11/17/15 22:15	DJM
pH @23.4°C	7.6		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 17:30	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/18/15	11/19/15 12:55	AG
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	11/18/15	11/19/15 12:55	AG
% Solids	95.2		% Wt	1		SM 2540G	11/13/15	11/14/15 15:08	DRA



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-03- COMP

Sampled: 11/12/2015 12:15

Sample ID: 15K0588-14

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:54	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/16/15	11/18/15 13:16	SCB
Barium	0.38	0.050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:54	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:54	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:54	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:54	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:54	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:54	AME

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-01- 14.5-15.0'

Sampled: 11/12/2015 13:00

Sample ID: 15K0588-15

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Acrylonitrile	ND	0.0058	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Bromomethane	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
2-Butanone (MEK)	ND	0.039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
tert-Butyl Alcohol (TBA)	ND	0.039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
n-Butylbenzene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Carbon Disulfide	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Chlorodibromomethane	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Chloroethane	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Chloroform	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Chloromethane	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,2-Dibromoethane (EDB)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
trans-1,4-Dichloro-2-butene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,1-Dichloroethylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,3-Dichloropropane	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
cis-1,3-Dichloropropene	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
trans-1,3-Dichloropropene	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Diethyl Ether	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF

HAZ - 634

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-01-14.5-15.0'

Sampled: 11/12/2015 13:00

Sample ID: 15K0588-15

Sample Matrix: Soil

Sample Flags: PR-03, PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,4-Dioxane	ND	0.097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Methylene Chloride	0.022	0.019	mg/Kg dry	1	B-01	SW-846 8260C	11/20/15	11/20/15 13:17	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Naphthalene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,1,2,2-Tetrachloroethane	ND	0.00097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Tetrahydrofuran	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,3,5-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
Vinyl Chloride	ND	0.0097	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
m+p Xylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/20/15	11/20/15 13:17	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	110	70-130	11/20/15 13:17
Toluene-d8	97.8	70-130	11/20/15 13:17
4-Bromofluorobenzene	84.4	70-130	11/20/15 13:17



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-01-14.5-15.0'

Sampled: 11/12/2015 13:00

Sample ID: 15K0588-15

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.7		% Wt	1		SM 2540G	11/13/15	11/14/15 15:08	DRA

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-01- COMP

Sampled: 11/12/2015 13:00

Sample ID: 15K0588-16

Sample Matrix: Soil

Semivolatiles Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/15/15	11/17/15 15:48	CMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		81.1	30-130					11/17/15 15:48	
2-Fluorobiphenyl		87.5	30-130					11/17/15 15:48	
p-Terphenyl-d14		93.5	30-130					11/17/15 15:48	

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-01-COMP

Sampled: 11/12/2015 13:00

Sample ID: 15K0588-16

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/17/15 0:12	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/17/15 0:12	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/17/15 0:12	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/17/15 0:12	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/17/15 0:12	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/17/15 0:12	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/17/15 0:12	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/17/15 0:12	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	11/15/15	11/17/15 0:12	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	96.6	30-150	11/17/15 0:12
Decachlorobiphenyl [2]	94.4	30-150	11/17/15 0:12
Tetrachloro-m-xylene [1]	89.4	30-150	11/17/15 0:12
Tetrachloro-m-xylene [2]	94.5	30-150	11/17/15 0:12



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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-01- COMP

Sampled: 11/12/2015 13:00

Sample ID: 15K0588-16

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	1.1	mg/Kg dry	1		SW-846 8015C	11/19/15	11/20/15 3:12	EEH
Diesel Range Organics	ND	8.8	mg/Kg dry	1		SW-846 8015C	11/20/15	11/20/15 19:41	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1-Chloro-3-fluorobenzene	113	70-130	
o-Terphenyl	66.7	40-140	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-01- COMP

Sampled: 11/12/2015 13:00

Sample ID: 15K0588-16

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date		Analyst
							Prepared	Analyzed	
Free Liquid	Absent		present/absent	1		SW-846 9095B	11/16/15	11/16/15 10:30	LL
Ignitability	Absent		present/absent	1		SW-846 1030	11/17/15	11/17/15 22:15	DJM
pH @24.6°C	7.8		pH Units	1	H-03	SW-846 9045C	11/16/15	11/16/15 17:30	AMM
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/18/15	11/19/15 12:55	AG
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/18/15	11/19/15 12:55	AG
% Solids	95.1		% Wt	1		SM 2540G	11/13/15	11/14/15 15:08	DRA

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Project Location: Atlantic Ave., Brooklyn, NY

Sample Description:

Work Order: 15K0588

Date Received: 11/13/2015

Field Sample #: SB-01- COMP

Sampled: 11/12/2015 13:00

Sample ID: 15K0588-16

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:59	AME
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	11/16/15	11/18/15 13:18	SCB
Barium	0.23	0.050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:59	AME
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:59	AME
Chromium	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:59	AME
Lead	ND	0.010	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:59	AME
Selenium	ND	0.050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:59	AME
Silver	ND	0.0050	mg/L	1		SW-846 6010C	11/16/15	11/18/15 17:59	AME

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
15K0588-01 [SB-18- 14.5-15.0']	B135421	11/13/15
15K0588-02 [SB-18- COMP]	B135421	11/13/15
15K0588-03 [SB-16- 14.5-15.0']	B135421	11/13/15
15K0588-04 [SB-16- COMP]	B135421	11/13/15
15K0588-05 [SB-11- 14.5-15.0']	B135421	11/13/15
15K0588-06 [SB-111- COMP]	B135421	11/13/15
15K0588-07 [SB-10- 14.5-15.0']	B135421	11/13/15
15K0588-08 [SB-10- COMP]	B135421	11/13/15
15K0588-09 [SB-08- 9.5-10.0']	B135421	11/13/15
15K0588-10 [SB-08- COMP]	B135421	11/13/15
15K0588-11 [SB-06- 14.5-15.0']	B135421	11/13/15
15K0588-12 [SB-06- COMP]	B135421	11/13/15
15K0588-13 [SB-03- 14.5-15.0']	B135421	11/13/15
15K0588-14 [SB-03- COMP]	B135421	11/13/15
15K0588-15 [SB-01- 14.5-15.0']	B135421	11/13/15
15K0588-16 [SB-01- COMP]	B135421	11/13/15

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
15K0588-02 [SB-18- COMP]	B135698	50.0	11/17/15
15K0588-04 [SB-16- COMP]	B135698	50.0	11/17/15
15K0588-06 [SB-111- COMP]	B135698	50.0	11/17/15
15K0588-08 [SB-10- COMP]	B135698	50.0	11/17/15
15K0588-10 [SB-08- COMP]	B135698	50.0	11/17/15
15K0588-12 [SB-06- COMP]	B135698	50.0	11/17/15
15K0588-14 [SB-03- COMP]	B135698	50.0	11/17/15
15K0588-16 [SB-01- COMP]	B135698	50.0	11/17/15

Prep Method: SW-846 3010A-SW-846 6010C

Leachates were extracted on 11/14/2015 per SW-846 1311 in Batch B135465

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15K0588-02 [SB-18- COMP]	B135518	50.0	50.0	11/16/15
15K0588-04 [SB-16- COMP]	B135518	50.0	50.0	11/16/15
15K0588-06 [SB-111- COMP]	B135518	50.0	50.0	11/16/15
15K0588-08 [SB-10- COMP]	B135518	50.0	50.0	11/16/15
15K0588-10 [SB-08- COMP]	B135518	50.0	50.0	11/16/15
15K0588-12 [SB-06- COMP]	B135518	50.0	50.0	11/16/15
15K0588-14 [SB-03- COMP]	B135518	50.0	50.0	11/16/15
15K0588-16 [SB-01- COMP]	B135518	50.0	50.0	11/16/15

Prep Method: SW-846 7470A Prep-SW-846 7470A

Leachates were extracted on 11/14/2015 per SW-846 1311 in Batch B135465

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15K0588-02 [SB-18- COMP]	B135528	6.00	6.00	11/16/15
15K0588-04 [SB-16- COMP]	B135528	6.00	6.00	11/16/15
15K0588-06 [SB-111- COMP]	B135528	6.00	6.00	11/16/15
15K0588-08 [SB-10- COMP]	B135528	6.00	6.00	11/16/15
15K0588-10 [SB-08- COMP]	B135528	6.00	6.00	11/16/15
15K0588-12 [SB-06- COMP]	B135528	6.00	6.00	11/16/15
15K0588-14 [SB-03- COMP]	B135528	6.00	6.00	11/16/15

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Sample Extraction Data

Prep Method: SW-846 7470A Prep-SW-846 7470A

Leachates were extracted on 11/14/2015 per SW-846 1311 in Batch B135465

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15K0588-16 [SB-01- COMP]	B135528	6.00	6.00	11/16/15

Prep Method: SW-846 5035/5030B-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0588-02 [SB-18- COMP]	B135830	15.3	15.7	11/19/15
15K0588-04 [SB-16- COMP]	B135830	15.2	15.6	11/19/15
15K0588-06 [SB-111- COMP]	B135830	15.7	15.9	11/19/15
15K0588-08 [SB-10- COMP]	B135830	15.3	15.6	11/19/15
15K0588-10 [SB-08- COMP]	B135830	15.2	15.7	11/19/15
15K0588-12 [SB-06- COMP]	B135830	15.0	15.8	11/19/15
15K0588-14 [SB-03- COMP]	B135830	15.5	15.8	11/19/15
15K0588-16 [SB-01- COMP]	B135830	15.9	15.9	11/19/15

Prep Method: SW-846 3546-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0588-02RE1 [SB-18- COMP]	B135966	30.0	1.00	11/20/15
15K0588-04RE1 [SB-16- COMP]	B135966	30.0	1.00	11/20/15
15K0588-06RE1 [SB-111- COMP]	B135966	30.0	1.00	11/20/15
15K0588-08RE1 [SB-10- COMP]	B135966	30.0	1.00	11/20/15
15K0588-10RE1 [SB-08- COMP]	B135966	30.0	1.00	11/20/15
15K0588-12RE1 [SB-06- COMP]	B135966	30.0	1.00	11/20/15
15K0588-14RE1 [SB-03- COMP]	B135966	30.0	1.00	11/20/15
15K0588-16RE1 [SB-01- COMP]	B135966	30.0	1.00	11/20/15

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0588-02 [SB-18- COMP]	B135435	10.1	10.0	11/15/15
15K0588-04 [SB-16- COMP]	B135435	10.0	10.0	11/15/15
15K0588-06 [SB-111- COMP]	B135435	10.0	10.0	11/15/15
15K0588-08 [SB-10- COMP]	B135435	10.0	10.0	11/15/15
15K0588-10 [SB-08- COMP]	B135435	10.0	10.0	11/15/15
15K0588-12 [SB-06- COMP]	B135435	10.1	10.0	11/15/15
15K0588-14 [SB-03- COMP]	B135435	10.0	10.0	11/15/15
15K0588-16 [SB-01- COMP]	B135435	10.2	10.0	11/15/15

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0588-01 [SB-18- 14.5-15.0']	B135952	5.40	10.0	11/20/15
15K0588-03 [SB-16- 14.5-15.0']	B135952	5.50	10.0	11/20/15
15K0588-05 [SB-11- 14.5-15.0']	B135952	5.30	10.0	11/20/15
15K0588-07 [SB-10- 14.5-15.0']	B135952	5.40	10.0	11/20/15
15K0588-09 [SB-08- 9.5-10.0']	B135952	5.50	10.0	11/20/15
15K0588-11 [SB-06- 14.5-15.0']	B135952	5.80	10.0	11/20/15
15K0588-13 [SB-03- 14.5-15.0']	B135952	5.20	10.0	11/20/15
15K0588-15 [SB-01- 14.5-15.0']	B135952	5.40	10.0	11/20/15

Sample Extraction Data

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0588-02 [SB-18- COMP]	B135469	30.2	1.00	11/15/15
15K0588-04 [SB-16- COMP]	B135469	30.2	1.00	11/15/15
15K0588-06 [SB-111- COMP]	B135469	30.0	1.00	11/15/15
15K0588-08 [SB-10- COMP]	B135469	30.0	1.00	11/15/15
15K0588-10 [SB-08- COMP]	B135469	30.0	1.00	11/15/15
15K0588-12 [SB-06- COMP]	B135469	30.2	1.00	11/15/15
15K0588-14 [SB-03- COMP]	B135469	30.2	1.00	11/15/15
15K0588-16 [SB-01- COMP]	B135469	30.0	1.00	11/15/15

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0588-02 [SB-18- COMP]	B135632	25.4	250	11/17/15
15K0588-04 [SB-16- COMP]	B135632	25.1	250	11/17/15
15K0588-06 [SB-111- COMP]	B135632	25.5	250	11/17/15
15K0588-08 [SB-10- COMP]	B135632	25.5	250	11/17/15
15K0588-10 [SB-08- COMP]	B135632	25.4	250	11/17/15

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0588-12 [SB-06- COMP]	B135739	25.2	250	11/18/15
15K0588-14 [SB-03- COMP]	B135739	25.8	250	11/18/15
15K0588-16 [SB-01- COMP]	B135739	25.5	250	11/18/15

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0588-02 [SB-18- COMP]	B135670	25.4	250	11/17/15
15K0588-04 [SB-16- COMP]	B135670	25.1	250	11/17/15
15K0588-06 [SB-111- COMP]	B135670	25.5	250	11/17/15
15K0588-08 [SB-10- COMP]	B135670	25.5	250	11/17/15
15K0588-10 [SB-08- COMP]	B135670	25.4	250	11/17/15

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0588-12 [SB-06- COMP]	B135740	25.2	250	11/18/15
15K0588-14 [SB-03- COMP]	B135740	25.8	250	11/18/15
15K0588-16 [SB-01- COMP]	B135740	25.5	250	11/18/15

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
15K0588-02 [SB-18- COMP]	B135460	20.0	11/16/15
15K0588-04 [SB-16- COMP]	B135460	20.0	11/16/15
15K0588-06 [SB-111- COMP]	B135460	20.0	11/16/15
15K0588-08 [SB-10- COMP]	B135460	20.0	11/16/15
15K0588-10 [SB-08- COMP]	B135460	20.0	11/16/15

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Sample Extraction Data

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
15K0588-12 [SB-06- COMP]	B135460	20.0	11/16/15
15K0588-14 [SB-03- COMP]	B135460	20.0	11/16/15
15K0588-16 [SB-01- COMP]	B135460	20.0	11/16/15

SW-846 9095B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
15K0588-02 [SB-18- COMP]	B135489	100	100	11/16/15
15K0588-04 [SB-16- COMP]	B135489	100	100	11/16/15
15K0588-06 [SB-111- COMP]	B135489	100	100	11/16/15
15K0588-08 [SB-10- COMP]	B135489	100	100	11/16/15
15K0588-10 [SB-08- COMP]	B135489	100	100	11/16/15
15K0588-12 [SB-06- COMP]	B135489	100	100	11/16/15
15K0588-14 [SB-03- COMP]	B135489	100	100	11/16/15
15K0588-16 [SB-01- COMP]	B135489	100	100	11/16/15

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B135952 - SW-846 5035

Blank (B135952-BLK1)

Prepared & Analyzed: 11/20/15

Acetone	ND	0.10	mg/Kg wet							
Acrylonitrile	ND	0.0060	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0040	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.020	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							

HAZ - 646

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135952 - SW-846 5035										
Blank (B135952-BLK1)										
Prepared & Analyzed: 11/20/15										
Methylene Chloride	ND	0.020	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0523		mg/Kg wet	0.0500		105	70-130			
Surrogate: Toluene-d8	0.0492		mg/Kg wet	0.0500		98.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.0438		mg/Kg wet	0.0500		87.7	70-130			
LCS (B135952-BS1)										
Prepared & Analyzed: 11/20/15										
Acetone	0.212	0.10	mg/Kg wet	0.200		106	70-160			V-06 †
Acrylonitrile	0.0207	0.0060	mg/Kg wet	0.0200		103	70-130			
tert-Amyl Methyl Ether (TAME)	0.0208	0.0010	mg/Kg wet	0.0200		104	70-130			
Benzene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130			
Bromobenzene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130			
Bromochloromethane	0.0253	0.0020	mg/Kg wet	0.0200		127	70-130			
Bromodichloromethane	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130			
Bromoform	0.0182	0.0020	mg/Kg wet	0.0200		91.0	70-130			
Bromomethane	0.0159	0.010	mg/Kg wet	0.0200		79.7	40-130			†
2-Butanone (MEK)	0.200	0.040	mg/Kg wet	0.200		100	70-160			†
tert-Butyl Alcohol (TBA)	0.204	0.040	mg/Kg wet	0.200		102	40-130			V-20 †
n-Butylbenzene	0.0225	0.0040	mg/Kg wet	0.0200		113	70-130			
sec-Butylbenzene	0.0252	0.0020	mg/Kg wet	0.0200		126	70-130			
tert-Butylbenzene	0.0246	0.0020	mg/Kg wet	0.0200		123	70-160			†
tert-Butyl Ethyl Ether (TBEE)	0.0210	0.0010	mg/Kg wet	0.0200		105	70-130			
Carbon Disulfide	0.0228	0.020	mg/Kg wet	0.0200		114	70-130			V-20
Carbon Tetrachloride	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
Chlorobenzene	0.0242	0.0020	mg/Kg wet	0.0200		121	70-130			
1,1-Dibromomethane	0.0198	0.0010	mg/Kg wet	0.0200		98.8	70-130			
1,1-Dichloroethane	0.0214	0.020	mg/Kg wet	0.0200		107	70-130			
Chloroform	0.0220	0.0040	mg/Kg wet	0.0200		110	70-130			
Chloromethane	0.0191	0.010	mg/Kg wet	0.0200		95.7	70-130			
2-Chlorotoluene	0.0252	0.0020	mg/Kg wet	0.0200		126	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135952 - SW-846 5035										
LCS (B135952-BS1)										
Prepared & Analyzed: 11/20/15										
4-Chlorotoluene	0.0239	0.0020	mg/Kg wet	0.0200		120	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0174	0.0020	mg/Kg wet	0.0200		87.2	70-130			
1,2-Dibromoethane (EDB)	0.0239	0.0010	mg/Kg wet	0.0200		119	70-130			
Dibromomethane	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130			
1,2-Dichlorobenzene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
1,3-Dichlorobenzene	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130			
1,4-Dichlorobenzene	0.0233	0.0020	mg/Kg wet	0.0200		116	70-130			
trans-1,4-Dichloro-2-butene	0.0202	0.0040	mg/Kg wet	0.0200		101	70-130			
Dichlorodifluoromethane (Freon 12)	0.0166	0.020	mg/Kg wet	0.0200		83.1	40-160			†
1,1-Dichloroethane	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
1,2-Dichloroethane	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
1,1-Dichloroethylene	0.0212	0.0040	mg/Kg wet	0.0200		106	70-130			
cis-1,2-Dichloroethylene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130			
trans-1,2-Dichloroethylene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
1,2-Dichloropropane	0.0237	0.0020	mg/Kg wet	0.0200		118	70-130			
1,3-Dichloropropane	0.0219	0.0010	mg/Kg wet	0.0200		110	70-130			
2,2-Dichloropropane	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
1,1-Dichloropropene	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130			
cis-1,3-Dichloropropene	0.0200	0.0010	mg/Kg wet	0.0200		99.8	70-130			
trans-1,3-Dichloropropene	0.0214	0.0010	mg/Kg wet	0.0200		107	70-130			
Diethyl Ether	0.0198	0.020	mg/Kg wet	0.0200		98.8	70-130			
Diisopropyl Ether (DIPE)	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130			
1,4-Dioxane	0.172	0.10	mg/Kg wet	0.200		85.9	40-160			†
Ethylbenzene	0.0245	0.0020	mg/Kg wet	0.0200		122	70-130			
Hexachlorobutadiene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-160			
2-Hexanone (MBK)	0.210	0.020	mg/Kg wet	0.200		105	70-160			†
Isopropylbenzene (Cumene)	0.0248	0.0020	mg/Kg wet	0.0200		124	70-130			
p-Isopropyltoluene (p-Cymene)	0.0255	0.0020	mg/Kg wet	0.0200		128	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0204	0.0040	mg/Kg wet	0.0200		102	70-130			
Methylene Chloride	0.0203	0.020	mg/Kg wet	0.0200		102	40-160			†
4-Methyl-2-pentanone (MIBK)	0.213	0.020	mg/Kg wet	0.200		107	70-160			†
Naphthalene	0.0156	0.0040	mg/Kg wet	0.0200		77.9	40-130			†
n-Propylbenzene	0.0256	0.0020	mg/Kg wet	0.0200		128	70-130			
Styrene	0.0237	0.0020	mg/Kg wet	0.0200		118	70-130			
1,1,1,2-Tetrachloroethane	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
1,1,2,2-Tetrachloroethane	0.0228	0.0010	mg/Kg wet	0.0200		114	70-130			
Tetrachloroethylene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
Tetrahydrofuran	0.0215	0.010	mg/Kg wet	0.0200		108	70-130			
Toluene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130			
1,2,3-Trichlorobenzene	0.0170	0.0020	mg/Kg wet	0.0200		85.1	70-130			
1,2,4-Trichlorobenzene	0.0166	0.0020	mg/Kg wet	0.0200		82.9	70-130			
1,3,5-Trichlorobenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
1,1,1-Trichloroethane	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
1,1,2-Trichloroethane	0.0243	0.0020	mg/Kg wet	0.0200		122	70-130			
Trichloroethylene	0.0227	0.0020	mg/Kg wet	0.0200		113	70-130			
Trichlorofluoromethane (Freon 11)	0.0198	0.010	mg/Kg wet	0.0200		99.1	70-130			
1,2,3-Trichloropropane	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			V-20
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0198	0.010	mg/Kg wet	0.0200		99.2	70-130			
1,2,4-Trimethylbenzene	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130			
1,3,5-Trimethylbenzene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130			
Vinyl Chloride	0.0191	0.010	mg/Kg wet	0.0200		95.7	40-130			†

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135952 - SW-846 5035										
LCS (B135952-BS1)										
Prepared & Analyzed: 11/20/15										
m+p Xylene	0.0493	0.0040	mg/Kg wet	0.0400		123	70-130			
o-Xylene	0.0233	0.0020	mg/Kg wet	0.0200		116	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0492		mg/Kg wet	0.0500		98.4	70-130			
Surrogate: Toluene-d8	0.0501		mg/Kg wet	0.0500		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.0495		mg/Kg wet	0.0500		98.9	70-130			
LCS Dup (B135952-BSD1)										
Prepared & Analyzed: 11/20/15										
Acetone	0.217	0.10	mg/Kg wet	0.200		109	70-160	2.25	25	V-06 †
Acrylonitrile	0.0208	0.0060	mg/Kg wet	0.0200		104	70-130	0.482	25	
tert-Amyl Methyl Ether (TAME)	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130	0.967	25	
Benzene	0.0229	0.0020	mg/Kg wet	0.0200		115	70-130	0.261	25	
Bromobenzene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	0.259	25	
Bromochloromethane	0.0252	0.0020	mg/Kg wet	0.0200		126	70-130	0.475	25	
Bromodichloromethane	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130	0.735	25	
Bromoform	0.0190	0.0020	mg/Kg wet	0.0200		95.1	70-130	4.41	25	
Bromomethane	0.0164	0.010	mg/Kg wet	0.0200		82.1	40-130	2.97	25	†
2-Butanone (MEK)	0.208	0.040	mg/Kg wet	0.200		104	70-160	3.74	25	†
tert-Butyl Alcohol (TBA)	0.236	0.040	mg/Kg wet	0.200		118	40-130	14.3	25	V-20 †
n-Butylbenzene	0.0226	0.0040	mg/Kg wet	0.0200		113	70-130	0.177	25	
sec-Butylbenzene	0.0251	0.0020	mg/Kg wet	0.0200		126	70-130	0.318	25	
tert-Butylbenzene	0.0245	0.0020	mg/Kg wet	0.0200		123	70-160	0.163	25	†
tert-Butyl Ethyl Ether (TBEE)	0.0214	0.0010	mg/Kg wet	0.0200		107	70-130	1.89	25	
Carbon Disulfide	0.0228	0.020	mg/Kg wet	0.0200		114	70-130	0.00	25	V-20
Carbon Tetrachloride	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	0.00	25	
Chlorobenzene	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130	1.42	25	
Chlorodibromomethane	0.0204	0.0010	mg/Kg wet	0.0200		102	70-130	3.09	25	
Chloroethane	0.0217	0.020	mg/Kg wet	0.0200		108	70-130	1.21	25	
Chloroform	0.0224	0.0040	mg/Kg wet	0.0200		112	70-130	1.44	25	
Chloromethane	0.0191	0.010	mg/Kg wet	0.0200		95.6	70-130	0.105	25	
2-Chlorotoluene	0.0244	0.0020	mg/Kg wet	0.0200		122	70-130	3.23	25	
4-Chlorotoluene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130	1.94	25	
1,2-Dibromo-3-chloropropane (DBCP)	0.0173	0.0020	mg/Kg wet	0.0200		86.7	70-130	0.575	25	
1,2-Dibromoethane (EDB)	0.0241	0.0010	mg/Kg wet	0.0200		120	70-130	1.00	25	
Dibromomethane	0.0237	0.0020	mg/Kg wet	0.0200		118	70-130	0.421	25	
1,2-Dichlorobenzene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	0.0877	25	
1,3-Dichlorobenzene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	2.00	25	
1,4-Dichlorobenzene	0.0235	0.0020	mg/Kg wet	0.0200		118	70-130	1.11	25	
trans-1,4-Dichloro-2-butene	0.0208	0.0040	mg/Kg wet	0.0200		104	70-130	2.93	25	
Dichlorodifluoromethane (Freon 12)	0.0162	0.020	mg/Kg wet	0.0200		80.8	40-160	2.81	25	†
1,1-Dichloroethane	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130	0.0907	25	
1,2-Dichloroethane	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130	0.00	25	
1,1-Dichloroethylene	0.0212	0.0040	mg/Kg wet	0.0200		106	70-130	0.0942	25	
cis-1,2-Dichloroethylene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	1.04	25	
trans-1,2-Dichloroethylene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	0.190	25	
1,2-Dichloropropane	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130	2.48	25	
1,3-Dichloropropane	0.0225	0.0010	mg/Kg wet	0.0200		113	70-130	2.88	25	
2,2-Dichloropropane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	0.584	25	
1,1-Dichloropropene	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130	0.789	25	
1,3-Dichloropropene	0.0203	0.0010	mg/Kg wet	0.0200		101	70-130	1.59	25	
trans-1,3-Dichloropropene	0.0222	0.0010	mg/Kg wet	0.0200		111	70-130	3.49	25	
Diethyl Ether	0.0203	0.020	mg/Kg wet	0.0200		101	70-130	2.50	25	
Diisopropyl Ether (DIPE)	0.0208	0.0010	mg/Kg wet	0.0200		104	70-130	0.868	25	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135952 - SW-846 5035										
LCS Dup (B135952-BSD1)										
Prepared & Analyzed: 11/20/15										
1,4-Dioxane	0.198	0.10	mg/Kg wet	0.200		98.9	40-160	14.1	50	† ‡
Ethylbenzene	0.0242	0.0020	mg/Kg wet	0.0200		121	70-130	1.23	25	
Hexachlorobutadiene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-160	2.33	25	
2-Hexanone (MBK)	0.220	0.020	mg/Kg wet	0.200		110	70-160	4.56	25	†
Isopropylbenzene (Cumene)	0.0243	0.0020	mg/Kg wet	0.0200		122	70-130	1.87	25	
p-Isopropyltoluene (p-Cymene)	0.0253	0.0020	mg/Kg wet	0.0200		126	70-130	0.866	25	
Methyl tert-Butyl Ether (MTBE)	0.0214	0.0040	mg/Kg wet	0.0200		107	70-130	4.60	25	
Methylene Chloride	0.0206	0.020	mg/Kg wet	0.0200		103	40-160	1.37	25	†
4-Methyl-2-pentanone (MIBK)	0.225	0.020	mg/Kg wet	0.200		112	70-160	5.32	25	†
Naphthalene	0.0158	0.0040	mg/Kg wet	0.0200		79.0	40-130	1.40	25	†
n-Propylbenzene	0.0256	0.0020	mg/Kg wet	0.0200		128	70-130	0.156	25	
Styrene	0.0235	0.0020	mg/Kg wet	0.0200		118	70-130	0.762	25	
1,1,1,2-Tetrachloroethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	2.45	25	
1,1,2,2-Tetrachloroethane	0.0237	0.0010	mg/Kg wet	0.0200		118	70-130	3.61	25	
Tetrachloroethylene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130	0.449	25	
Tetrahydrofuran	0.0225	0.010	mg/Kg wet	0.0200		113	70-130	4.54	25	
Toluene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	1.03	25	
1,2,3-Trichlorobenzene	0.0162	0.0020	mg/Kg wet	0.0200		80.8	70-130	5.18	25	
1,2,4-Trichlorobenzene	0.0161	0.0020	mg/Kg wet	0.0200		80.5	70-130	2.94	25	
1,3,5-Trichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130	3.87	25	
1,1,1-Trichloroethane	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130	0.0879	25	
1,1,2-Trichloroethane	0.0248	0.0020	mg/Kg wet	0.0200		124	70-130	1.96	25	
Trichloroethylene	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130	0.878	25	
Trichlorofluoromethane (Freon 11)	0.0194	0.010	mg/Kg wet	0.0200		97.0	70-130	2.14	25	
1,2,3-Trichloropropane	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130	1.40	25	V-20
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0204	0.010	mg/Kg wet	0.0200		102	70-130	2.98	25	
1,2,4-Trimethylbenzene	0.0239	0.0020	mg/Kg wet	0.0200		119	70-130	0.501	25	
1,3,5-Trimethylbenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	2.34	25	
Vinyl Chloride	0.0190	0.010	mg/Kg wet	0.0200		94.8	40-130	0.945	25	†
m+p Xylene	0.0486	0.0040	mg/Kg wet	0.0400		121	70-130	1.47	25	
o-Xylene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	0.345	25	
Surrogate: 1,2-Dichloroethane-d4	0.0498		mg/Kg wet	0.0500		99.5	70-130			
Surrogate: Toluene-d8	0.0505		mg/Kg wet	0.0500		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.0490		mg/Kg wet	0.0500		98.0	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135469 - SW-846 3546										
Blank (B135469-BLK1)										
Prepared: 11/15/15 Analyzed: 11/17/15										
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Surrogate: Nitrobenzene-d5	3.04		mg/Kg wet	3.33		91.3	30-130			
Surrogate: 2-Fluorobiphenyl	3.12		mg/Kg wet	3.33		93.7	30-130			
Surrogate: p-Terphenyl-d14	3.32		mg/Kg wet	3.33		99.7	30-130			
LCS (B135469-BS1)										
Prepared: 11/15/15 Analyzed: 11/17/15										
Acenaphthene	1.62	0.17	mg/Kg wet	1.67		97.1	40-140			
Acenaphthylene	1.60	0.17	mg/Kg wet	1.67		95.8	40-140			
Anthracene	1.62	0.17	mg/Kg wet	1.67		97.1	40-140			
Benzo(a)anthracene	1.65	0.17	mg/Kg wet	1.67		99.2	40-140			
Benzo(a)pyrene	1.67	0.17	mg/Kg wet	1.67		100	40-140			
Benzo(b)fluoranthene	1.60	0.17	mg/Kg wet	1.67		96.2	40-140			
Benzo(g,h,i)perylene	1.39	0.17	mg/Kg wet	1.67		83.3	40-140			
Benzo(k)fluoranthene	1.62	0.17	mg/Kg wet	1.67		97.0	40-140			
Chrysene	1.61	0.17	mg/Kg wet	1.67		96.8	40-140			
Dibenz(a,h)anthracene	1.41	0.17	mg/Kg wet	1.67		84.5	40-140			
Fluoranthene	1.58	0.17	mg/Kg wet	1.67		94.5	40-140			
Fluorene	1.64	0.17	mg/Kg wet	1.67		98.7	40-140			
Indeno(1,2,3-cd)pyrene	1.57	0.17	mg/Kg wet	1.67		94.1	40-140			
2-Methylnaphthalene	1.56	0.17	mg/Kg wet	1.67		93.4	40-140			
Naphthalene	1.46	0.17	mg/Kg wet	1.67		87.9	40-140			
Phenanthrene	1.65	0.17	mg/Kg wet	1.67		99.1	40-140			
Pyrene	1.74	0.17	mg/Kg wet	1.67		104	40-140			
Surrogate: Nitrobenzene-d5	3.36		mg/Kg wet	3.33		101	30-130			
Surrogate: 2-Fluorobiphenyl	3.67		mg/Kg wet	3.33		110	30-130			
Surrogate: p-Terphenyl-d14	3.78		mg/Kg wet	3.33		113	30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135469 - SW-846 3546										
LCS Dup (B135469-BSD1) Prepared: 11/15/15 Analyzed: 11/17/15										
Acenaphthene	1.58	0.17	mg/Kg wet	1.67		95.0	40-140	2.25	30	
Acenaphthylene	1.59	0.17	mg/Kg wet	1.67		95.7	40-140	0.125	30	
Anthracene	1.67	0.17	mg/Kg wet	1.67		100	40-140	2.98	30	
Benzo(a)anthracene	1.69	0.17	mg/Kg wet	1.67		101	40-140	2.23	30	
Benzo(a)pyrene	1.75	0.17	mg/Kg wet	1.67		105	40-140	4.53	30	
Benzo(b)fluoranthene	1.68	0.17	mg/Kg wet	1.67		101	40-140	4.73	30	
Benzo(g,h,i)perylene	1.55	0.17	mg/Kg wet	1.67		93.1	40-140	11.1	30	
Benzo(k)fluoranthene	1.67	0.17	mg/Kg wet	1.67		100	40-140	3.29	30	
Chrysene	1.67	0.17	mg/Kg wet	1.67		100	40-140	3.35	30	
Dibenz(a,h)anthracene	1.67	0.17	mg/Kg wet	1.67		100	40-140	17.0	30	
Fluoranthene	1.64	0.17	mg/Kg wet	1.67		98.2	40-140	3.88	30	
Fluorene	1.68	0.17	mg/Kg wet	1.67		101	40-140	2.28	30	
Indeno(1,2,3-cd)pyrene	1.68	0.17	mg/Kg wet	1.67		101	40-140	7.14	30	
2-Methylnaphthalene	1.57	0.17	mg/Kg wet	1.67		94.1	40-140	0.683	30	
Naphthalene	1.49	0.17	mg/Kg wet	1.67		89.1	40-140	1.45	30	
Phenanthrene	1.72	0.17	mg/Kg wet	1.67		103	40-140	3.96	30	
Pyrene	1.80	0.17	mg/Kg wet	1.67		108	40-140	3.36	30	
Surrogate: Nitrobenzene-d5	3.42		mg/Kg wet	3.33		102	30-130			
Surrogate: 2-Fluorobiphenyl	3.58		mg/Kg wet	3.33		107	30-130			
Surrogate: p-Terphenyl-d14	3.84		mg/Kg wet	3.33		115	30-130			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135435 - SW-846 3546										
Blank (B135435-BLK1)										
Prepared: 11/15/15 Analyzed: 11/16/15										
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.168		mg/Kg wet	0.200		83.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.189		mg/Kg wet	0.200		94.6	30-150			
Surrogate: Tetrachloro-m-xylene	0.163		mg/Kg wet	0.200		81.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.199		mg/Kg wet	0.200		99.3	30-150			
LCS (B135435-BS1)										
Prepared: 11/15/15 Analyzed: 11/16/15										
Aroclor-1016	0.18	0.020	mg/Kg wet	0.200		92.1	40-140			
Aroclor-1016 [2C]	0.20	0.020	mg/Kg wet	0.200		100	40-140			
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		91.9	40-140			
Aroclor-1260 [2C]	0.20	0.020	mg/Kg wet	0.200		100	40-140			
Surrogate: Decachlorobiphenyl	0.171		mg/Kg wet	0.200		85.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.196		mg/Kg wet	0.200		98.0	30-150			
Surrogate: Tetrachloro-m-xylene	0.167		mg/Kg wet	0.200		83.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.203		mg/Kg wet	0.200		102	30-150			
LCS Dup (B135435-BSD1)										
Prepared: 11/15/15 Analyzed: 11/16/15										
Aroclor-1016	0.18	0.020	mg/Kg wet	0.200		90.2	40-140	2.04	30	
Aroclor-1016 [2C]	0.20	0.020	mg/Kg wet	0.200		99.1	40-140	1.33	30	
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		89.7	40-140	2.47	30	
Aroclor-1260 [2C]	0.19	0.020	mg/Kg wet	0.200		97.4	40-140	2.83	30	
Surrogate: Decachlorobiphenyl	0.162		mg/Kg wet	0.200		81.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.186		mg/Kg wet	0.200		92.8	30-150			
Surrogate: Tetrachloro-m-xylene	0.163		mg/Kg wet	0.200		81.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.197		mg/Kg wet	0.200		98.4	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135435 - SW-846 3546										
Matrix Spike (B135435-MS1)		Source: 15K0588-02			Prepared: 11/15/15 Analyzed: 11/17/15					
Aroclor-1016	0.22	0.10	mg/Kg dry	0.206	ND	109	40-140			
Aroclor-1016 [2C]	0.23	0.10	mg/Kg dry	0.206	ND	110	40-140			
Aroclor-1260	0.23	0.10	mg/Kg dry	0.206	ND	109	40-140			
Aroclor-1260 [2C]	0.22	0.10	mg/Kg dry	0.206	ND	108	40-140			
Surrogate: Decachlorobiphenyl	0.197		mg/Kg dry	0.206		95.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.194		mg/Kg dry	0.206		94.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.182		mg/Kg dry	0.206		88.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.191		mg/Kg dry	0.206		92.7	30-150			
Matrix Spike Dup (B135435-MSD1)		Source: 15K0588-02			Prepared: 11/15/15 Analyzed: 11/17/15					
Aroclor-1016	0.20	0.10	mg/Kg dry	0.206	ND	97.3	40-140	11.2	30	
Aroclor-1016 [2C]	0.20	0.10	mg/Kg dry	0.206	ND	97.9	40-140	11.2	30	
Aroclor-1260	0.21	0.10	mg/Kg dry	0.206	ND	104	40-140	4.90	30	
Aroclor-1260 [2C]	0.21	0.10	mg/Kg dry	0.206	ND	103	40-140	5.02	30	
Surrogate: Decachlorobiphenyl	0.191		mg/Kg dry	0.206		92.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.191		mg/Kg dry	0.206		92.6	30-150			
Surrogate: Tetrachloro-m-xylene	0.157		mg/Kg dry	0.206		76.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.163		mg/Kg dry	0.206		79.0	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135830 - SW-846 5035/5030B										
Blank (B135830-BLK1)										
Prepared & Analyzed: 11/19/15										
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg wet							
Surrogate: 1-Chloro-3-fluorobenzene	0.0162		mg/Kg wet	0.0150		108	70-130			
LCS (B135830-BS1)										
Prepared & Analyzed: 11/19/15										
Gasoline Range Organics (GRO)	0.206	0.010	mg/Kg wet	0.250		82.3	80-120			
Surrogate: 1-Chloro-3-fluorobenzene	0.0155		mg/Kg wet	0.0150		103	70-130			
LCS Dup (B135830-BSD1)										
Prepared & Analyzed: 11/19/15										
Gasoline Range Organics (GRO)	0.208	0.010	mg/Kg wet	0.250		83.1	80-120	1.02	30	
Surrogate: 1-Chloro-3-fluorobenzene	0.0168		mg/Kg wet	0.0150		112	70-130			
Batch B135966 - SW-846 3546										
Blank (B135966-BLK1)										
Prepared & Analyzed: 11/20/15										
Diesel Range Organics	ND	8.3	mg/Kg wet							
Surrogate: o-Terphenyl	2.21		mg/Kg wet	3.33		66.2	40-140			
LCS (B135966-BS1)										
Prepared & Analyzed: 11/20/15										
Diesel Range Organics	21.8	8.3	mg/Kg wet	33.3		65.4	40-140			
Surrogate: o-Terphenyl	2.40		mg/Kg wet	3.33		72.0	40-140			
LCS Dup (B135966-BSD1)										
Prepared & Analyzed: 11/20/15										
Diesel Range Organics	21.1	8.3	mg/Kg wet	33.3		63.4	40-140	3.03		
Surrogate: o-Terphenyl	2.29		mg/Kg wet	3.33		68.6	40-140			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135421 - % Solids										
Duplicate (B135421-DUP4)		Source: 15K0588-01			Prepared: 11/13/15 Analyzed: 11/14/15					
% Solids	96.8		% Wt			96.7		0.103	20	
Batch B135460 - SW-846 9045C										
LCS (B135460-BS1)		Prepared & Analyzed: 11/16/15								
pH	6.04		pH Units	6.00		101	98.6-102			
LCS (B135460-BS2)		Prepared & Analyzed: 11/16/15								
pH	6.04		pH Units	6.00		101	98.6-102			
Duplicate (B135460-DUP1)		Source: 15K0588-04			Prepared & Analyzed: 11/16/15					
pH	7.8		pH Units		7.8			0.00	5	
Batch B135632 - SW-846 9014										
Blank (B135632-BLK1)		Prepared: 11/17/15 Analyzed: 11/18/15								
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B135632-BS1)		Prepared: 11/17/15 Analyzed: 11/18/15								
Reactive Cyanide	9.6	0.40	mg/Kg	10.0		95.9	86.4-107			
Batch B135670 - SW-846 9030A										
Blank (B135670-BLK1)		Prepared: 11/17/15 Analyzed: 11/18/15								
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B135670-BS1)		Prepared: 11/17/15 Analyzed: 11/18/15								
Reactive Sulfide	14	2.0	mg/Kg	14.8		94.6	42.9-132			
Batch B135739 - SW-846 9014										
Blank (B135739-BLK1)		Prepared: 11/18/15 Analyzed: 11/19/15								
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B135739-BS1)		Prepared: 11/18/15 Analyzed: 11/19/15								
Reactive Cyanide	9.6	0.40	mg/Kg	10.0		95.9	86.4-107			
Batch B135740 - SW-846 9030A										
Blank (B135740-BLK1)		Prepared: 11/18/15 Analyzed: 11/19/15								
Reactive Sulfide	ND	2.0	mg/Kg							

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135740 - SW-846 9030A										
LCS (B135740-BS1)										
				Prepared: 11/18/15 Analyzed: 11/19/15						
Reactive Sulfide	15	2.0	mg/Kg	14.8		100	42.9-132			

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QUALITY CONTROL

TCLP - Metals Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B135518 - SW-846 3010A

Blank (B135518-BLK1)

Prepared: 11/16/15 Analyzed: 11/18/15

Arsenic	ND	0.010	mg/L							
Barium	ND	0.050	mg/L							
Cadmium	ND	0.0040	mg/L							
Chromium	ND	0.010	mg/L							
Lead	ND	0.010	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.0050	mg/L							

LCS (B135518-BS1)

Prepared: 11/16/15 Analyzed: 11/18/15

Arsenic	0.537	0.010	mg/L	0.500		107	80-120			
Barium	0.496	0.050	mg/L	0.500		99.1	80-120			
Cadmium	0.508	0.0040	mg/L	0.500		102	80-120			
Chromium	0.480	0.010	mg/L	0.500		96.0	80-120			
Lead	0.460	0.010	mg/L	0.500		92.0	80-120			
Selenium	0.548	0.050	mg/L	0.500		110	80-120			
Silver	0.496	0.0050	mg/L	0.500		99.2	80-120			

LCS Dup (B135518-BSD1)

Prepared: 11/16/15 Analyzed: 11/18/15

Arsenic	0.533	0.010	mg/L	0.500		107	80-120	0.606	20	
Barium	0.490	0.050	mg/L	0.500		98.0	80-120	1.18	20	
Cadmium	0.499	0.0040	mg/L	0.500		99.8	80-120	1.78	20	
Chromium	0.477	0.010	mg/L	0.500		95.3	80-120	0.706	20	
Lead	0.455	0.010	mg/L	0.500		90.9	80-120	1.22	20	
Selenium	0.532	0.050	mg/L	0.500		106	80-120	2.98	20	
Silver	0.490	0.0050	mg/L	0.500		98.0	80-120	1.21	20	

Matrix Spike (B135518-MS1)

Source: 15K0588-02

Prepared: 11/16/15 Analyzed: 11/18/15

Arsenic	0.537	0.010	mg/L	0.500	ND	107	75-125			
Barium	0.790	0.050	mg/L	0.500	0.297	98.6	75-125			
Cadmium	0.506	0.0040	mg/L	0.500	ND	101	75-125			
Chromium	0.480	0.010	mg/L	0.500	0.00300	95.4	75-125			
Lead	0.462	0.010	mg/L	0.500	ND	92.3	75-125			
Selenium	0.544	0.050	mg/L	0.500	ND	109	75-125			
Silver	0.493	0.0050	mg/L	0.500	ND	98.6	75-125			

Batch B135528 - SW-846 7470A Prep

Blank (B135528-BLK1)

Prepared: 11/16/15 Analyzed: 11/18/15

Mercury	ND	0.00010	mg/L							
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LCS (B135528-BS1)

Prepared: 11/16/15 Analyzed: 11/18/15

Mercury	0.00215	0.00010	mg/L	0.00200		107	80-120			
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QUALITY CONTROL

TCLP - Metals Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B135528 - SW-846 7470A Prep										
LCS Dup (B135528-BSD1)				Prepared: 11/16/15 Analyzed: 11/18/15						
Mercury	0.00212	0.00010	mg/L	0.00200		106	80-120	1.53	20	
Matrix Spike (B135528-MS1)				Source: 15K0588-02 Prepared: 11/16/15 Analyzed: 11/18/15						
Mercury	0.00212	0.00010	mg/L	0.00200	0.0000547	103	75-125			

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS

Lab Sample ID: B135435-BS1 Date(s) Analyzed: 11/16/2015 11/16/2015
 Instrument ID (1): _____ Instrument ID (2): _____
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.18	
	2	0.00	0.00	0.00	0.20	8
Aroclor-1260	1	0.00	0.00	0.00	0.18	
	2	0.00	0.00	0.00	0.20	8

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

SW-846 8082A

Lab Sample ID: B135435-BSD1 Date(s) Analyzed: 11/16/2015 11/16/2015

Instrument ID (1): _____ Instrument ID (2): _____

GC Column (1): ID: _____ (mm) GC Column (2): ID: _____ (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.18	
	2	0.00	0.00	0.00	0.20	11
Aroclor-1260	1	0.00	0.00	0.00	0.18	
	2	0.00	0.00	0.00	0.19	6

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B135435-MSD1 Date(s) Analyzed: 11/17/2015 11/17/2015

Instrument ID (1): _____ Instrument ID (2): _____

GC Column (1): ID: _____ (mm) GC Column (2): ID: _____ (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.20	
	2	0.00	0.00	0.00	0.20	0
Aroclor-1260	1	0.00	0.00	0.00	0.21	
	2	0.00	0.00	0.00	0.21	2

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
B-01	Methylene chloride is a common laboratory contaminant.
H-03	Sample received after recommended holding time was exceeded.
PR-03	Sample preserved in the laboratory, not in the field as required by the method.
PR-15	According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846 5035-L/5035A-L.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
Z-01	Acetone is a common laboratory contaminant

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 1030 in Soil	
Ignitability	NY,NH,CT,NC,ME,VA
SW-846 6010C in Water	
Arsenic	NY,CT,NC,ME,NH,VA
Barium	NY,CT,ME,NC,NH,VA
Cadmium	NY,CT,ME,NC,NH,VA
Chromium	NY,CT,ME,NC,NH,VA
Lead	NY,CT,ME,NC,NH,VA
Selenium	CT,ME,NC,NH,NY,VA
Silver	CT,ME,NC,NH,NY,VA
SW-846 7470A in Water	
Mercury	CT,ME,NC,NH,NY,VA
SW-846 8015C in Soil	
Gasoline Range Organics (GRO)	NY,VA,NH
Diesel Range Organics	NY,VA,NH
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NY,NC
Aroclor-1262 [2C]	NY,NC
Aroclor-1268	NY,NC
Aroclor-1268 [2C]	NY,NC
SW-846 8260C in Soil	
Acetone	CT,NH,NY,ME,VA
Acrylonitrile	CT,NH,NY,ME,VA
Benzene	CT,NH,NY,ME,VA
Bromobenzene	NH,NY,ME,VA
Bromochloromethane	NH,NY,ME,VA
Bromodichloromethane	CT,NH,NY,ME,VA
Bromoform	CT,NH,NY,ME,VA
Bromomethane	CT,NH,NY,ME,VA
2-Butanone (MEK)	CT,NH,NY,ME,VA
n-Butylbenzene	CT,NH,NY,ME,VA
sec-Butylbenzene	CT,NH,NY,ME,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
tert-Butylbenzene	CT,NH,NY,ME,VA
Carbon Disulfide	CT,NH,NY,ME,VA
Carbon Tetrachloride	CT,NH,NY,ME,VA
Chlorobenzene	CT,NH,NY,ME,VA
Chlorodibromomethane	CT,NH,NY,ME,VA
Chloroethane	CT,NH,NY,ME,VA
Chloroform	CT,NH,NY,ME,VA
Chloromethane	CT,NH,NY,ME,VA
2-Chlorotoluene	CT,NH,NY,ME,VA
4-Chlorotoluene	CT,NH,NY,ME,VA
Dibromomethane	NH,NY,ME,VA
1,2-Dichlorobenzene	CT,NH,NY,ME,VA
1,3-Dichlorobenzene	CT,NH,NY,ME,VA
1,4-Dichlorobenzene	CT,NH,NY,ME,VA
Dichlorodifluoromethane (Freon 12)	NH,NY,ME,VA
1,1-Dichloroethane	CT,NH,NY,ME,VA
1,2-Dichloroethane	CT,NH,NY,ME,VA
1,1-Dichloroethylene	CT,NH,NY,ME,VA
cis-1,2-Dichloroethylene	CT,NH,NY,ME,VA
trans-1,2-Dichloroethylene	CT,NH,NY,ME,VA
1,2-Dichloropropane	CT,NH,NY,ME,VA
1,3-Dichloropropane	NH,NY,ME,VA
2,2-Dichloropropane	NH,NY,ME,VA
1,1-Dichloropropene	NH,NY,ME,VA
cis-1,3-Dichloropropene	CT,NH,NY,ME,VA
trans-1,3-Dichloropropene	CT,NH,NY,ME,VA
Ethylbenzene	CT,NH,NY,ME,VA
Hexachlorobutadiene	NH,NY,ME,VA
2-Hexanone (MBK)	CT,NH,NY,ME,VA
Isopropylbenzene (Cumene)	CT,NH,NY,ME,VA
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl tert-Butyl Ether (MTBE)	NY,VA
Methylene Chloride	CT,NH,NY,ME,VA
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,VA
Naphthalene	NH,NY,ME,VA
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME,VA
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME,VA
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME,VA
Tetrachloroethylene	CT,NH,NY,ME,VA
Toluene	CT,NH,NY,ME,VA
1,2,3-Trichlorobenzene	ME
1,2,4-Trichlorobenzene	NH,NY,ME,VA
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NH,NY,ME,VA
1,1,2-Trichloroethane	CT,NH,NY,ME,VA
Trichloroethylene	CT,NH,NY,ME,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME,VA
1,2,3-Trichloropropane	NH,NY,ME,VA
1,2,4-Trimethylbenzene	CT,NH,NY,ME,VA
1,3,5-Trimethylbenzene	CT,NH,NY,ME,VA
Vinyl Chloride	CT,NH,NY,ME,VA
m+p Xylene	CT,NH,NY,ME,VA
o-Xylene	CT,NH,NY,ME,VA
<i>SW-846 8270D in Soil</i>	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
fluorene	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2016
MA	Massachusetts DEP	M-MA100	06/30/2016
CT	Connecticut Department of Public Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2016
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2016
RI	Rhode Island Department of Health	LAO00112	12/30/2015
NC	North Carolina Div. of Water Quality	652	12/31/2015
NJ	New Jersey DEP	MA007 NELAP	06/30/2016
FL	Florida Department of Health	E871027 NELAP	06/30/2016
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2016
WA	State of Washington Department of Ecology	C2065	02/23/2016
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2015
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2016



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 www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
 East Longmeadow, MA 01028

Page 1 of 2

Company Name: Leo Engineers, Inc.
 Address: 703 Kanimers Street
Brooklyn NY 11211
 Attention: Amy Hewson
 Project Location: Atlantic Ave, Brooklyn, NY
 Sampled By: Eva Jakubowska

Telephone: 716 882 9645
 Project # 15-008-0265
 Client PO# —

DATA DELIVERY (check all that apply)
 FAX EMAIL WEBSITE
 Fax # _____
 Email: hewson@leo.com
 Format: PDF EXCEL GIS
 OTHER

Project Proposal Provided? (for billing purposes)
 yes proposal date

Con-Test Lab ID <small>(laboratory use only)</small>	Client Sample ID / Description	Collection		Matrix Conc Date
		Beginning Date/Time	Ending Date/Time	
01	SB-18-14.5-15.0'	11-11-15	1245	X S U
02	SB-18-COMP		1245	X S U
03	SB-16-14.5-15.0'		1330	X S U
04	SB-16-COMP		1330	X S U
05	SB-11-14.5-15.0'		1430	X S U
06	SB-11-COMP		1430	X S U
07	SB-10-14.5-15.0'	11-12-15	0930	X S U
08	SB-10-COMP		0930	X S U
09	SB-08-9.5-10.0'		1015	X S U
10	SB-08-COMP		1015	X S U

Comments: _____
 Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
 H - High; M - Medium; L - Low; C - Clean; U - Unknown

# of Containers	** Preservation	*** Container Code	Disolved Metals	** Matrix Code
			<input type="radio"/> Field Filled <input type="radio"/> Lab to Filter	<input type="radio"/> GW = groundwater <input type="radio"/> WW = wastewater <input type="radio"/> DW = drinking water <input type="radio"/> A = air <input type="radio"/> S = soil/solid <input type="radio"/> SL = sludge <input type="radio"/> O = other

ANALYSES REQUESTED

Analysis	01	02	03	04	05	06	07	08	09	10
TEL VOCs 826013	X	X	X	X	X	X	X	X	X	X
PHHs 8270C	X	X	X	X	X	X	X	X	X	X
PCBs 35508/8082	X	X	X	X	X	X	X	X	X	X
TPH Cdn/dco 8015B	X	X	X	X	X	X	X	X	X	X
PCPA Charact SW 8015B	X	X	X	X	X	X	X	X	X	X
TEL PCPA Metals SW 8015B	X	X	X	X	X	X	X	X	X	X

PROJECT ID: WD10105

Signature: _____ Date/Time: 11/13/15
 Recieved by: [Signature] Date/Time: 12:00
 Signature: _____ Date/Time: 11/13/15 3:30
 Signature: _____ Date/Time: 11/17/15 1:50

Turnaround: 7-Day 10-Day Other _____
 RUSH: 24-Hr 48-Hr 72-Hr 4-Day

Detection Limit Requirements: _____
 Messages: _____

is your project MCP or RCP?
 MCP Form Required
 RCP Form Required
 MA State DW Form Required PWSID # _____

MELAC & AIHA-LAP, LLC Accredited
 WBE/DBE Certified

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CHAIN OF STUDY RECORD

39 Spruce Street
 East Longmeadow, MA 01028

Page 2 of 2

Company Name: Lined Engineers, Inc.
 Address: 103 Corimel Street
Brooklyn, NY 11211
 Attention: Amy Johnson
 Project Location: Atlantic Ave, Brooklyn, NY
 Sampled By: Eva Jakubowska

Telephone: 718 986 8399
 Project # 15-008-0265
 Client PO# ---
 DATA DELIVERY (check all that apply)
 FAX EMAIL WEBSITE
 Fax # ---
 Email: news@lined.com
 Format: PDF EXCEL GIS
 OTHER

Con-Test Lab ID (Laboratory use only)	Client Sample ID / Description	Collection		Enhanced Data Package*	Matrix	Conc. Code
		Regulatory Date/Time	Swabbing Date/Time			
11	SB-06-14.5-15.0'	11-12-15	1115	X	S	U
12	SB-06-COMP		1115	X	S	U
13	SB-03-14.5-15.0'		1215	X	S	U
14	SB-03-COMP		1215	X	↓	↓
15	SB-01-14.5-15.0'		1300	X	↓	↓
16	SB-01-COMP		1300	X	↓	↓

Project Proposal Provided? (for billing purposes)
 yes proposal date

Relinquished by: (signature)	Date/Time	Turnaround	Detection Limit Requirements
<i>[Signature]</i>	11/13/15	<input type="checkbox"/> 7-Day <input checked="" type="checkbox"/> 10-Day Other <u>Sched</u>	Massachusetts: _____ Connecticut: _____ Other: _____
Received by: (signature)	Date/Time	<input type="checkbox"/> 24-Hr <input type="checkbox"/> 48-Hr <input type="checkbox"/> 72-Hr <input type="checkbox"/> 14-Day	
Inquired by: (signature)	Date/Time	<input type="checkbox"/> Require lab approval	
Sealed by: (signature)	Date/Time		

# of Containers Preservation	Container Code	Dissolved Metals	Cont. Codes	Preservation	Matrix Code
3		Field Filled	A=amber glass	I=Ice	GW=groundwater
1		Lab to Filter	G=glass	H=HCL	WW=wastewater
1			P=plastic	M=Methanol	DW=drinking water
			ST=sterile	N=Nitric Acid	A=air
			V=vial	S=Sulfuric Acid	S=soli/solid
			S=Summa can	X=Na hydroxide	SL=sludge
			T=Teledyne bag	T=Na thiosulfate	O=other
			O=Other		

ANALYSIS REQUESTED

Analysis	TRC VOGs	PATHs	RCB	TRC Deo/Geo	PCPA Characteris	TCR PCPA metals
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
 H - High; M - Medium; L - Low; C - Clean; U - Unknown

Is your project MCP or RCP?

- MCP Form Required
- RCP Form Required
- MA State DW Form Required PWSID # _____



PROJECT ID: HWD10105

UNCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.
 TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR
 WBE/DBE Certified
 NELAC & AIHA-LAP, LLC
 Accredited
 PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

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 East Longmeadow, MA. 01028
 P: 413-525-2332
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Sample Receipt Checklist



CLIENT NAME: Liro RECEIVED BY: JDL DATE: 11/13/15

- 1) Was the chain(s) of custody relinquished and signed? Yes No No CoC Included
- 2) Does the chain agree with the samples?
 If not, explain: Yes No
- 3) Are all the samples in good condition?
 If not, explain: Yes No

4) How were the samples received:
 On Ice Direct from Sampling Ambient In Cooler(s)

Were the samples received in Temperature Compliance of (2-6°C)? Yes No N/A

Temperature °C by Temp blank _____ Temperature °C by Temp gun 43

5) Are there Dissolved samples for the lab to filter? Yes No
 Who was notified _____ Date _____ Time _____

6) Are there any RUSH or SHORT HOLDING TIME samples? Yes No
 Who was notified David Date 11/13/15 Time 1550

7) Location where samples are stored: 19
 Permission to subcontract samples? Yes No
 (Walk-in clients only) if not already approved
 Client Signature: _____

8) Do all samples have the proper Acid pH: Yes No N/A

9) Do all samples have the proper Base pH: Yes No N/A

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		6 oz amber/clear jar	8
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	8
1 Liter Plastic		Plastic Bag / Ziploc	
500 mL Plastic		SOC Kit	
250 mL plastic		Non-ConTest Container	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar <u>16 oz</u>	8
Encore		Other	

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol _____
 # Bisulfate _____ # DI Water _____
 # Thiosulfate _____ Unpreserved _____
 Time and Date Frozen: _____

Login Sample Receipt Checklist
 (Rejection Criteria Listing - Using Sample Acceptance Policy)
 Any False statement will be brought to the attention of Client

Question	Answer (True/False)	Comment
	T/F/NA	
1) The cooler's custody seal, if present, is intact.	NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.	T	

Doc #277 Rev. 4 August 2013

Who notified of False statements?
 Log-In Technician Initials: JDL

Date/Time:
 Date/Time: 11/13/15 1550

**END OF HAZMAT SECTION
THIS SECTION CONSISTS OF SIX HUNDREDS SEVENTY TWO (672) PAGES**

U - PAGES

SECTION U (VERSION 2.0)

NOTICE

THE PAGES CONTAINED IN THIS SECTION U VERSION 2.0 (U-PAGES) REPRESENT ADDITIONAL CONTRACT REQUIREMENTS APPLYING TO WORK PERFORMED IN THE PRESENCE OF PRIVATELY OWNED UTILITY FACILITIES.

(NO TEXT ON THIS PAGE)

SECTION U (VERSION 2.0)

DATED: November 15, 2016

1. The Contractor shall be responsible for compliance with all the provisions of the following Sections and Schedules, which are hereby made a part of the original contract documents:
 - A. "SECTION U: Additional Contract Requirements Applying to Work Performed in the Presence of Privately Owned Utility Facilities" (Pages U-3 through U-13)
 - B. Schedule U-1 (Page U-15)
 - C. Schedule U-2 listing scope of utility interferences is no longer included in City contract. Such information will be part of Interference Agreement between Utility Operator and the Contractor.
 - D. Schedule U-3 Page U-16 (as per the Private Utilities reference document for SECTION U called "CET SPECIFICATIONS AND SKETCHES", dated November 2010).
2. Each facility operator shall provide inspectors at the work site to inspect methods of interference work, verify quantities and items of Utility Work, and coordinate all phases of the facility operator operations.
3. In addition, the following statements are made to provide clarification of various paragraphs under Section U:
 - A. Section U, Paragraph 3, requires the Contractor to immediately commence negotiations with each Company for an Interference Agreement under which the Company will compensate the Contractor for any Interference Work which the Company does not elect to perform with its own forces or by specialty contractors retained by the Company. Thus the Contractor is on notice that its work under the Contract may be affected by Interference Work performed by (a) the Contractor pursuant to a separate Interference Agreement with the Company, (b) the Company, or (c) partly by each.

- B. The City has no contract with any of the Companies for work on or adjacent to the site of work under this Contract, and the Companies are not "Other Contractors" as defined for the purposes of this Contract. The Contractor is reminded, however, that pursuant to Section U, Paragraph 3, the City will not compensate the Contractor for any direct and/or indirect costs related to Interference Work, regardless of whether such Interference Work is covered by an Interference Agreement between the Contractor and the Company or is performed by the Company using its own forces or by specialty contractors retained by the Company.
- C. Section U, Paragraph 13, provides that the provisions of Section U are material provisions of the Contract and that the Contractor's failure to comply with the procedures set forth in Section U are sufficient for the Commissioner to declare the Contractor in default pursuant to Article 48 of the Contract.

Pursuant to this Section, the Contractor is informed that the Performance Bond required of the Contractor pursuant to the Contract is not deemed to guarantee performance of any of the Interference Work.

Section U: Additional Contract Requirements Applicable to Work Performed in the Presence of Privately Owned Utility Facilities

The Contractor is hereby notified that pursuant to the law and franchise agreements issued by the City, certain private utility and public service companies named in Schedule U-1 ("the Companies") own and/or operate surface and/or subsurface facilities within the limits of this contract. The existence of these facilities impacts the productivity of the City work called for in the contract. In order to improve coordination of the City construction with the private utility facilities owned and/or operated by the Companies named in Schedule U-1, Article 1.06.30 of the Standard Highway Specifications of the New York City Department of Transportation, Dated August 1, 2015; and/or Articles 10.15 through 10.18 of the Standard Sewer and Water Main Specifications of the New York City Department of Environmental Protection, Dated July 1, 2014; as applicable, are amended and will be implemented as follows:

1. Means and methods for City work:

- a) The Contractor is hereby notified that the utility interferences may impact the performance of, and/or interferes with, City work. The Contractor will be required to perform such utility work as directed by the Resident Engineer in order to clear all utility interferences from the project site as required for satisfactory completion of City work within specified contract schedule.
- b) In areas serviced by overhead lines on poles carrying electric, telecommunication and cable system, the Contractor understands and by bidding for this contract agrees that he/she will be required to perform the public work in the presence of energized electrical overhead lines and appurtenances located in areas adjacent and/or within the project area. As a consequence he/she will select means and method of construction appropriate to maintain the safety clearances required or as permitted by electric operators in order to avoid damaging the insulation or shielding of these lines and also to prevent knocking them down.

2. Field inspection prior to construction:

Prior to the start of any contract work in areas serviced by overhead electric lines, and after the award to the apparent low bidder for this contract, the Contractor must request a field walk of the project area along with the operator of the overhead electrical facilities and the DDC Engineer-In-Charge. At that time the facility operator will confirm the type and condition of the overhead electrical lines and the sufficiency of their insulating properties with respect to the means and methods proposed by the Contractor. The Contractor must be prepared to describe in enough details his/her proposed means and methods of construction operations in order to anticipate the likelihood that electric lines insulation would be cut or otherwise compromised. Also such details will allow the facility operator to anticipate the need for added insulation and/or shielding of non-insulated lines.

3. Compensation for interference work:

Compensation for Interference Work is a matter of adjustment between the Contractor and each private utility company located within the limits of the project area and whose utility facilities are affected by City contract work. In particular, the City will not compensate the Contractor for any direct and/or indirect costs related to Interference Work, including, but not limited to, delay, lost profit, increased overhead, or any other impact costs. Upon receipt of a Notice of Award from the City, the Contractor shall immediately commence negotiations with each of the Companies concerning the manner in which and the price for which the Contractor, through its own forces or by others hired by it, will perform and be paid by the Company for all necessary Interference Work as defined above, and at known locations of City contract work, that the Company(ies) choose(s) not to perform with its(their) own forces or by specialty contractors hired by it (them) (as per "Interference Agreement"). Specialty contractors' work is limited to (i) insulation installation and removal, (ii) live gas and steam work, (iii) cleanup and disposal of hazardous materials, (iv) splicing live electrical and telecommunications facilities, and (v) work not traditionally performed by general construction contractors.

4. Interference Agreement:

- a) Although the parties may negotiate an Interference Agreement in any format or manner they deem fit, the Contractor is hereby advised that the Companies have indicated to the City that they will agree to compensate the Contractor on a unit price basis for Types of Interferences encountered on this Contract in accordance to the Private Utilities reference document for SECTION U called "CET SPECIFICATIONS AND SKETCHES", dated November 2010, copy of which is available on demand.
- b) The Contractor shall notify the City upon concluding an Interference Agreement with each of the Companies.

5. City contract work to continue without Interference Agreement :

If, prior to the start of construction, as directed by the City's Order to work / Notice To Proceed (OTW/ NTP) date any of the Companies and the Contractor have not concluded an Interference Agreement as described above, then the City shall issue a written "48 Hours' notice to Public Corporation" as prescribed by the City of New York Administrative Code, commonly referred to as "Order-Outs" and City construction will proceed as ordered and the Contractor will be directed by the Resident Engineer (RE) to perform the City work on Time, Material and Equipment basis (T&M) as specified in standard City contract agreement Article 26.2. T&M records will include identification of types of utility facilities interfering with City work, utility facility owners, specifying the nature and quantity of any materials, plant and equipment furnished or used in connection with the performance of such work and crew size, such as: name and number of each worker employed on such work. T&M records will also indicate the hours of active time, standby time and idle time. The Company (ies) and the Contractor will maintain separate records of the actual quantity and cost of labor, materials, and equipment expended, and will provide copies of this information to the other party on a daily basis for reconciliation. These T&M records along with cost evaluations will be submitted daily to the Resident Engineer for review and approval. The total cost of City work will be based on quantity of work performed multiplied by unit price contract bid items. The total interference cost will be calculated as the difference between the total

T&M cost and total cost for City work. The Resident Engineer will conduct a monthly reconciliation session of the daily T&M records with the affected Company (ies) and the Contractor. If the Contractor and affected utility companies cannot reconcile their T&M records, by the last day of each month, then the Resident Engineer will submit the approved City's T&M records along with total cost evaluations to the DDC Director of Construction who will review these records and recommend approval and validity certification by the DDC Construction Assistant Commissioner.

- a) Copies of the DDC approved and certified T&M records will then be transmitted by the DDC to the Contractor and the utility companies. These certified records may be used by the Contractor for compensation claims against the responsible private facility owners, or may be used by any party as supporting documentation in dispute regarding compensation for performing Interference Work. The Contractor will be required to perform City work while invoices are submitted by the Contractor to the Utility companies for payment within 30 days, or while compensation disputes between the Contractor and affected company (ies) are submitted to Binding Arbitration process described in Paragraph 9.
- b) All issues related to utility work and/or delays due to compensation disputes or claims against utility companies are not allowable as justification for granting contract time extensions or delay claims against the City. The City may assess liquidated damages specified in the contract for net overall delays suffered by City contract work as a result of utility issues, disputes and claims.
- c) The standard City contract dispute resolution process specified in Article 27 "Presentation of disputes to Commissioner", of the standard City contract agreement is not applicable to any disputes related to utility work and/or compensation for such work or claim against utility companies. Utility work issues, disputes and claims may only be submitted to Binding Arbitration process described in Paragraph 9.
- d) The Contractor will notify the Resident Engineer when utility work that require the intervention of company utility specialty crews causes excessive contractor's labor and equipment standby or idleness and, thereby jeopardizing the City project

schedule. The Resident Engineer will submit the facts to the DDC Director of Construction who will recommend to the DDC Deputy Commissioner regarding the issuance of a "48 Hours' notice to Public Corporation" to the concerned utility company as authorized by the New York City Administrative Code Section 19-143 and/or Section 24-521 as applicable.

- e) Utility delays caused by utility and/or by unavailability of utility specialty crews cannot be discounted for earning any contractual bonus when such bonus clause is included in a contract. However, if such specified bonus is not earned or is disallowed by the City or if the City assesses specified liquidated damages as a result of such excessive delays, the Contractor may seek damages from the responsible utility company (ies).

6. Extra utility work with Interference Agreement:

If during construction the Contractor encounters utility facilities interferences or utility scope of work that it believes is not covered by the Interference Agreement as described above, then the Contractor shall immediately notify the Company in writing, with a copy to the City, describing the nature and location of the extra work in question. The Company then has five (5) business days to investigate the conditions and then:

- a) Advise the Contractor and the City in writing that no interference with its facilities exists at the location in question, and hence that the Contractor may proceed with City work without providing for any impact from Company facilities;
- b) Advise the Contractor and the City in writing that the Interference Agreement negotiated pursuant to Paragraph 4, provides for the scope of work encountered.
- c) Advise the Contractor and the City in writing that it intends to perform the necessary utility Work with company forces or with its own contractor including, but not limited to, relocating its facility out of the way of the proposed City work. In this case, the Company shall provide a written schedule for the performance of the utility work it proposes to perform, which shall be subject to approval by

the City based on its impact to the Contractor's currently approved progress schedule. Upon approval of the Company's schedule by the City, the Contractor shall provide access to the worksite to the Company and/or any contractors hired by it to perform this utility work. If necessary, the City may grant a contract time extension for delays caused by the performance of such utility work by the company.

- d) Reasonably specify in writing the scope of work to be performed by the Contractor on behalf of the Company that is not covered under the Interference Agreement negotiated pursuant to Paragraph 5, including, but not limited to, relocating, supporting, and/or protecting the Company's facilities, and/or shifting the City facility if approved by the Resident Engineer, and/or otherwise changing its operations to work in the presence of the Company's facilities. Should the Company elect this option, it must adequately define and provide an initial price offer for the work required to be performed.

7. Means and Methods for utility work:

Upon receipt of the Company's determination pursuant to Paragraphs 6.b, or 6.d, above, the Contractor shall determine reasonable means and methods of performing the work defined by the Company. These means and methods are subject to approval of the Company, which shall not be unreasonably withheld. If, however, the Company objects to the Contractor's proposed means and methods then it shall define an alternate method of construction. Upon receipt of the Company's approval or its proposed alternate method of construction, the Contractor shall commence performance of the work defined by the Company as soon as possible, and shall perform the work in a good, workmanlike, and efficient manner, using the means and methods approved by the Company, in order to permit the City work to proceed in the most expeditious manner possible, but without imposing unreasonable and/or unnecessary costs on the Company. It is expressly understood by all parties that the City's rights pursuant to Article 4 of the Contract apply to Utility Work performed pursuant to this Section.

8. Disputed utility work covered by an interference agreement:

The City Work will continue as described in Paragraph 5 above. In the event of any dispute between the Company (ies) and the Contractor regarding any issue related to the performance of, or payment for, utility work, including, but not limited to, any indirect or impact costs incurred by the Contractor due to the Utility Work and/or to the existence of facilities owned or operated by the Company (ies) on the line of the work. The Company (ies) and the Contractor hereby agree to submit to each other a "Final Offer," in writing, by certified mail. Each party shall then have three business days to consider each other's Final Offer. In the event that neither party accepts the other's Final Offer within those three days, the Company (ies) and the Contractor agree to immediately submit the dispute to binding arbitration as described in Paragraph 9. During the pendency of any arbitration, the Company (ies) and the Contractor shall maintain separate records of the actual quantity and cost of labor, materials, and equipment expended, and to provide copies of this information to the other party on a daily basis for reconciliation. Any and all disagreement with the records maintained and provided by the other, must be documented in writing to all parties. However, these records are solely for the benefit of presentation to the arbitrator, whose decision may not necessarily be based on these records and in any event is final. Both parties should be aware that the City will not confirm or deny the accuracy of any records that is not certified by DDC.. While the arbitration is pending, the Company shall pay the Contractor on a monthly basis, based on the price offered by the Company to the Contractor for the performance of the work.

9. Arbitration of utility work:

The arbitration of the issues described above shall be conducted pursuant to the Construction Industry Arbitration Rules of the American Arbitration Association (hereinafter "the Rules" and "AAA") in effect on the date the arbitration is initiated except as set forth herein. The arbitration award shall be final and binding upon the parties to the arbitration and judgment upon the award may be entered in a court having jurisdiction.

- (a) Once an arbitrator(s) has been appointed by the AAA, the arbitration shall be scheduled as promptly as possible given the arbitrator(s) and the parties' schedules.
- (b) No later than seven days prior to the first arbitration hearing, Company and the Contractor shall submit to the arbitrator(s), and to each other, a summary of each party's respective position and such other information as is deemed appropriate, along with a copy of each party's Final Offer as specified in Paragraph 8.
- (c) The arbitration shall be conducted and concluded in two days.
- (d) On the morning of the first day of the arbitration, the Contractor and/or representatives shall have 3 ½ hours to make a presentation of its claim to the arbitrator. During its presentation, the Contractor shall not be permitted to produce any documents or cost records which have not already been provided to the Company. The Contractor shall be permitted to produce any analysis or description of its claim which has been prepared for the purpose of its presentation.
- (e) Company and/or its representatives shall have two hours to ask the Contractor questions about its claim and its presentation. Thereafter the arbitrator(s) shall have two hours to ask the Contractor questions about its claim and its presentation.
- (f) On the morning of the second day of the arbitration, Company and/or its representatives shall have 3 ½ hours to make a presentation of its claim to the arbitrator. During its presentation, the Company shall not be permitted to produce any documents or cost records which have not already been provided to the Contractor. The Company shall be permitted to produce any analysis or description of its claim which has been prepared for the purpose of its presentation.
- (g) The Contractor and/or its representatives shall have two hours to ask Company questions about its claim and its presentation. Thereafter the arbitrator(s) shall have two hours to ask Company questions about its claim and its presentation.
- (h) Subject to the above time limitations, the arbitrator(s) may conduct the arbitration in such manner as the arbitrator(s) deems reasonable.

- (i) The arbitrator(s) shall then have one week to select in writing, as the arbitrator ('s) award, that party's Final Offer which appears to be more reasonable, based on the presentations at the arbitration hearings.
- (j) The arbitrator shall have no discretion to grant an award other than one of the two Final Offers submitted by the parties.
- (k) Any award for work that has already been performed shall be paid on the 7th day after receipt of the arbitrator's decision, or on the 30th day after completion of the work, whichever is later. Payment for work not yet completed at the time of the arbitrator's decision shall be paid within 30 days of completion of work. Interest shall accrue from the date payment is due at the rate of 9% per annum. Either party may cause judgment to be entered in accordance with the arbitrator(s) decision in a court in the State of New York, County of New York.
- (l) The arbitrator's fees and any other costs of the arbitration shall be initially shared equally by Company and the Contractor. The non-prevailing party shall then pay all arbitrator's fees and costs of the arbitration and shall reimburse the prevailing party for its share of such fees and costs theretofore paid.
- (m) The parties may, at any time, settle any matter submitted to arbitration.

10. Order-out waiver:

The Contractor and all subcontractors hired by it, if an Interference Agreement is executed as specified between the concerned parties, agree to waive any rights they may have, if any, under law, contract or otherwise to compel the City to assert any right the City may have, including the issuance of any directives required under the New York City Administrative Code, Section 19-143 and Section 24-521, to require any or all of the Companies to maintain, repair, replace, protect, support, shift, alter, relocate, and/or remove utility facilities in connection with the work to be performed under this contract. However, nothing in this Section shall preclude the City from exercising its rights under the Law to issue such a directive to the Company.

11. Cost of insurance:

Each of the named Companies, at their option and if an Interference Agreement is executed as specified between the concerned parties, may be named as an additional insured on all insurance policies required to be maintained under this contract. In the event that a Company opts to be so named as an additional insured, the actual incremental cost, if any, to the Contractor of providing such insurance coverage shall be borne by that Company. The Contractor shall provide a written statement from its insurance provider documenting the actual cost of this added coverage to the Company. Under no circumstances shall the cost of insurance coverage on behalf of any Company be borne by the City. Nothing in this paragraph shall be interpreted to imply the City's acceptance of any additional responsibility or liability for any matter related to the performance of Utility Work. In particular, the Company and the Contractor bear joint and full responsibility to ensure that any Utility Work performed by the Contractor is in compliance with all applicable government and Company regulations.

12. Cost of utility interference work:

The Companies, by virtue of a prior agreement with the City, have agreed to perform their obligations described in this section. It is expressly understood that the cost of Utility Work or any delays cost caused by such utility work shall not be a charge against the City, but shall be a matter for adjustment between the Contractor and the Company or Companies concerned. The City and the Contractor agree that the Companies are third party beneficiaries of this Section of the contract, if an Interference Agreement is executed between the Contractor and utility company (ies). The provisions of this Section shall govern in all cases where Company property interferes with or is about to be disturbed by the City work, notwithstanding any other provision of the Contract, except for Natural Gas transmission/distribution facilities covered subject to the Gas Facility Cost Allocation Act (GFCAA) and covered separately in this contract.

13. Default declaration:

The Contractor agrees that the provisions of this Section are material provisions of the contract, and that the Contractor's failure to comply with the procedures set forth above are sufficient for the Commissioner to declare the Contractor in default pursuant to Article 48 of the Contract.

14. NYS Labor Law:

The Contractor is hereby advised that New York State Labor Law and/or, Davis-Bacon Act if federally funded, applies to public work. The work described in this Section U of the contract performed by utility company (ies) with their own forces or vendors hired by such company (ies) is not public work.

15. Facility operators:

The insurance requirements in Paragraph 11 of this Section U apply to: (i) additional Companies, if any, who were not named in Schedule "A" but which have executed an Interference Agreement with the Contractor for utility work; and (ii) additional coverage, if any, paid for by Utility Companies whose utility facilities are located within the project limits, that they may require for the utility work pursuant to an Interference Agreement between the Contractor and such utility company (ies).

[End]

"STANDARD UTILITY LETTER OF AGREEMENT"

(Name)
Deputy Commissioner, Infrastructure Division
Department of Design and Construction
30-30 Thomson Avenue
Long Island City, NY 11101

RE: City Work Performed in the Presence of Private Utility Facilities
Project No: _____

Dear (Name):

This letter is to certify that _____, has requested the inclusion of the attached "Section U: Additional contract requirements applying to work performed in the presence of privately owned utility." The company agrees to abide by the terms of this Section U at the company's own expenses due to their facilities interferences with the Public work.

Sincerely,

By: Authorized Company Representative

Title

NOTARY PUBLIC

CERTIFIED AS TO FORM
AND LEGAL AUTHORITY:

By: _____

SCHEDULE U-1

LISTING OF COMPANIES NAMED FOR THIS CONTRACT

<u>COMPANY NAME</u>	<u>CONTACT NAME</u>	<u>CONTACT TELEPHONE</u>
CON EDISON	THERESA KONG	212-460-4834
VERIZON	AUBREY MAKHANLALL	718-977-8165
NATIONAL GRID	NEVILLE JACOBS JR.	718-963-5612

SCHEDULE U-3

(NO TEXT IN THIS SECTION)



ATTACH TO CONTRACT DOCUMENTS

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

PROJECT ID: **HWD10105**

ATLANTIC AVENUE SAFETY IMPROVEMENTS

FROM GEORGIA AVENUE TO LOGAN STREET

INCLUDING SEWER, WATER MAIN, STREET LIGHTING AND
TRAFFIC SIGNAL WORK
Together With All Work Incidental Thereto

BOROUGH OF BROOKLYN
CITY OF NEW YORK

ADDENDUM NO. 1

DATED: March 2, 2017

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

- (1) Refer to the Bid and Contract Documents, Volume 1 of 3;
Insert the attached SPECIAL NOTICE TO BIDDERS following the cover of the BID BOOKLET, Volume 1 of 3.
- (2) Refer to the Bid and Contract Documents, Volume 1 of 3, Attachment 1, Page A-1 ;
Delete Page A-1 in its entirety.
Insert the attached Page A-1R.
- (3) Refer to the Bid and Contract Documents, Volume 1 of 3, Page 2;
Delete Page 2 in its entirety.
Insert the attached Page 2-R.
- (4) Refer to the Bid and Contract Documents, Volume 1 of 3, Attachment 1 BID INFORMATION, Page A-4;
Insert the attached Pages A-5 through A-9 following Page A-4.
- (5) Refer to the Bid and Contract Documents, Volume 3 of 3, SCHEDULE A Pages SA-1 and SA-2;
Delete Pages SA-1 and SA-2 in its entirety.
Insert the attached Pages SA-1R and SA-2R.

(6) Refer to the Bid and Contract Documents, Volume 3 of 3, TF-PAGES;
Insert the attached FTA-PAGES FEDERAL TRANSIT ADMINISTRATION PROJECTS,
FEDERAL TRANSIT ADMINISTRATION ATTACHMENTS package following TF-
PAGES (78 Sheets).

END OF ADDENDUM NO. 1

**By signing in the space provided below, the bidder acknowledges receipt
of this Addendum consisting of two(2) pages and ninety one (91) pages of attachment.**

THIS ADDENDUM MUST BE SIGNED BY ALL BIDDERS AND ATTACHED TO THEIR BID

Purnima Dharia.

PURNIMA DHARIA, P.E.

Assistant Commissioner / Design I

Name of Bidder

By: _____



SPECIAL NOTICE TO BIDDERS

Please be advised that there are no M/WBE requirements for this project. However, the Contractor is subject to DBE goals of 13% in accordance with the requirements of the FEDERAL TRANSIT ADMINISTRATION (FTA) and FEDERAL HIGHWAY ADMINISTRATION.

The Contractor is also advised that there are three (3) separate funding sources for this project: City; Federal Transit Administration (FTA) (see FTA-PAGES); and, Federal Highway Administration (FHWA) (see TF-PAGES).

The Contractor has to submit all required documents which may require duplicate submissions.

CONFLICTS AND TERMS OF AGREEMENT

During the term of the Contract, conflicts between the FTA, FHWA and City required provisions shall be resolved in the following order of precedence, such documents constituting the entire Contract between parties:

- FTA Rules and Guidelines
- FHWA Rider Rules and Guidelines
- New York City Rules and Guidelines

Please note that the Contractor has to submit the Contractor-signed and notarized (if required) Buy America Certification, Debarment History Certification, and DBE Schedule of Utilization with the bid.



(NO TEXT ON THIS PAGE)

ATTACHMENT 1 - BID INFORMATION

PROJECT ID: HWD10105

PIN: 8502017HW0034C

Description and Location of Work:

ATLANTIC AVENUE SAFETY IMPROVEMENTS

FROM GEORGIA AVENUE TO LOGAN STREET

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING AND
TRAFFIC SIGNAL WORK**

Together With All Work Incidental Thereto

**BOROUGH OF BROOKLYN
CITY OF NEW YORK**

Documents Available At:

30-30 Thomson Avenue
First Floor Bid Procurement Room
Long Island City, New York 11101
8:30 A.M. to 4:00 P.M. – Monday through Friday

Submission of Bids To:

30-30 Thomson Avenue
First Floor Bid Procurement Room
Long Island City, New York 11101
Before 11:00 A.M. on **MARCH 15, 2017**

Bid Opening:

30-30 Thomson Avenue
First Floor Bid Procurement Room
Long Island City, New York 11101

Time and Date: 11:00 A.M. on **MARCH 15, 2017**

Pre-Bid Conference:

Yes _____ No _____ X
If Yes, Mandatory _____ Optional: _____
Time and Date: _____
Location: _____

Bid Security:

Bid Security is required in the amount set forth below; provided, however, bid security is not required if the TOTAL BID PRICE set forth on the Bid Form is less than \$ 1,000,000.00.

- (1) Bond in an amount not less than 10% of the TOTAL BID PRICE set forth on the Bid Form, OR
- (2) Certified Check in an amount not less than 10% of the TOTAL BID PRICE set forth on the Bid Form.

Performance and Payment Security: Required for contracts in the amount of \$1,000,000 or more. Performance Security and Payment Security shall each be in an amount equal to 100% of the Contract Price.

Agency Contact Person:

Lorraine Holley
Phone: 718-391-2601 FAX: 718-391-2627

(NO TEXT ON THIS PAGE)

**CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

SPECIAL NOTICE TO BIDDERS

BID SUBMISSION REQUIREMENTS

THE FOLLOWING DOCUMENTS ARE TO BE COMPLETED AND SUBMITTED WITH THE BID:

1. Bid Schedule and Bid Form, including Affirmation
2. Bid Security (if required, see Attachment 1 on Page A-1)
3. Buy America Certification (Appendix A in FTA - PAGES)
4. Debarment History Certification (See Page TF-J1 in the TF-Pages)
5. DBE Schedule of Utilization (See Page TF-D6 in the TF-Pages)

**FAILURE TO SUBMIT ITEMS (1), THROUGH (5)
WILL RESULT IN THE DISQUALIFICATION OF THE BID.**

6. Safety Questionnaire
7. Construction Employment Report (if bid is \$1,000,000 or more)
8. Contract Certificate (if bid is less than \$1,000,000)
9. Confirmation of Vendex Compliance
10. Bidder's Certification of Compliance with Iran Divestment Act
11. Special Experience Requirements (if applicable)
12. Apprenticeship Program Questionnaire (if applicable)
13. FTA DBE Goal Page
14. Disclosure of Lobbying Activities (Appendix A1 in FTA - PAGES)
15. Disclosure of Lobbying Activities (if applicable) (See Page TF-J3 in the TF-Pages)
16. Debarment and Suspension Certification (Appendix A2 in FTA - PAGES) (To be submitted by successful Bidder)
17. Any addenda issued prior to the receipt of bids

This Contract must meet the requirements of 49 CFR Part 29. As such, the Contractor is required to verify that neither the Contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945 from transactions by any federal department or agency.

**FAILURE TO SUBMIT ITEMS (6) THROUGH (17)
MAY RESULT IN THE DISQUALIFICATION OF THE BID.**

NOTES:

- (1) All of the above referred to blank forms to be completed and submitted with the bid are included in the BID BOOKLET.
- (2) If the bidder has any questions or requires additional information, please contact the Department of Design and Construction by phone (718-391- 2601) or by fax (718-391-2627).
- (3) VENDEX QUESTIONNAIRES: The Bidder is advised that Vendex Questionnaires and procedures have been changed. Vendex Questionnaires, as well as detailed instructions, may be obtained at www.nyc.gov/vendex. The bidder may also obtain Vendex forms and instructions by contacting the Agency Chief Contracting Officer or the contact person for this contract.
- (4) SPECIAL EXPERIENCE REQUIREMENTS: The Bidder is advised that Special Experience Requirements may apply to this contract. Such requirements are set forth on pages 3, 3a, 3b, and 4 of this Bid Booklet.
- (5) Apparent low bidder to submit DBE Utilization Goal Forms in Compliance with FTA DBE requirements (AAP 15, AAP 19, AAPHC-89, AAP 10) within 7 calendar days of the bid date.

(NO TEXT ON THIS PAGE)

1. **Participation by Disadvantaged Business Enterprises (DBE)**

- 1.1. Bidders' attention is called to NYCDOT DBE Utilization Goal in Compliance with FTA DBE Requirements included in the FTA Third Party Requirements (annexed to FTA - PAGES). A DBE utilization goal of thirteen percent (13%) has been established for this Contract.
- 1.2. Bidders are required to document sufficient DBE participation to meet the contract specific goal of thirteen percent (13%) DBE participation or, alternatively, document adequate good faith efforts to do so, as provided for in 49 CFR 26.53. Award of this contract is conditioned on submission of the following:
- NYCDOT DBE Utilization Goal Forms attached hereto as part of the FTA DBE Requirements. Please complete and submit with the bid the following (annexed to FTA - PAGES) :
 - a) (Form AAP 15) Please fill out to provide the Name of Bidder's Designated DBE Officer;
 - b) (Form AAP 19 FTA - DBE Schedule of Utilization).

In preparation of the Bid Form, Bidders shall consider the Dollar Value of work to be performed by the potential DBE subcontractors. Please note that for Materials or Suppliers (MS) utilized to attain the thirteen percent (13%) DBE goal, only 60% of associated supplier contract value could be accounted for the Dollar Value of Utilization.

The following forms shall be provided by the successful bidder:

- Complete form AAPHC 89 FTA (DBE Utilization Worksheet) and 89-1 FTA to report if there has been any changes from original utilization plan (annexed to FTA - PAGES) to be submitted by the successful Bidder as a part of post-bid submission.

2. **Federal Aid Requirements**

- 2.1. Payments for the Contract Work will be funded in part by Federal funds from the Federal Transit Administration ("FTA") and New York State Department of Transportation (NYSDOT). The receipt of such funds is conditioned upon the Bidder's compliance with certain Federal and State provisions with respect to the submission of bids. The Bidder must comply with the applicable provisions set forth in the FTA Third Party Requirements (annexed to FTA - PAGES), as well as Standard Clauses for All New York State Contracts (annexed to FTA - PAGES). The Bidder shall be responsible for submitting all certifications, schedules, documents and any other materials required hereunder.

3. **Federal Requirements Compliance Certifications**

- 3.1. FTA regulations require Bidders to complete and submit the following certifications which are annexed to the FTA Requirements:

3.1.1. **Buy America Certification (To be submitted with bid)**

- This solicitation and the resulting contract are subject to the Buy America requirements of 49 U.S.C. Section 5323(j) and the Federal Transit Administration's implementing regulations found at 49 C.F.R. Part 661. These regulations require, as a matter of responsiveness, that the Bidder submits with its bid a completed certification in accordance with Part 661.6 or 661.12, as appropriate. These certifications are set forth in this solicitation at Appendix A (annexed to FTA - PAGES). **Bids that are not accompanied by a completed Buy America Certification shall be rejected as non-responsive.**
- If the Bidder seeks a waiver to the Buy America provision, an application for a waiver must be submitted. The application should contain its justification to support the waiver and must be submitted within five (5) working days of the bid opening. (The Bidder is referred to 49 CFR 661.7, for guidance on preparation of a Buy America waiver application).

3.1.2. Debarment and Suspension Certification (To be submitted by successful Bidder)

- 3.1.2.1. This Contract must meet the requirements of 49 CFR Part 29. As such, the contractor is required to verify that neither the contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945 from transactions by any federal department or agency.
- 3.1.2.2. Fill out and submit form on Appendix A2 (annexed to FTA - PAGES).
- 3.1.2.3. The Contractor must also ensure that they and their subcontractors are not included in the Excluded Parties list by visiting the Federal website and inserting their name in the "search exclusions" in the left hand bar and must provide the printout of the search result that shows that they are not listed in the Excluded Parties list <https://www.epls.gov/>.

3.1.3. Lobbying Certification (To be submitted by successful Bidder)

- 3.1.3.1. Contractors who apply or bid for an award of \$100,000 or more shall file the certification required by 49 CFR part 20, "New Restrictions on Lobbying." Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to that Federal contract, grant or award covered by 31 U.S.C. 1352.

- 3.1.3.2. Fill out and submit form on Appendix A1 (annexed to FTA - PAGES).

3.1.4. Non-Collusive Bidding (See "Standard Clauses for all State Contracts" annexed to FTA - PAGES)

3.1.4.1. Both State law and Federal regulation require that for work performed under competitively bid contracts, financed with State and/or Federal funds, contractor submitting bids for such contracts certify that they have not engaged in any activity that would artificially affect prices or restrict competition through the exchange or sharing of information among bidders. In addition, Federal law required that the bidder certify that he/she is an eligible bidder under Federal regulations and is not under, or about to be faced with, any sanction imposed by any Federal agency.

3.1.5. DBE (See FTA Third Party Requirements and Appendix B annexed to FTA - PAGES)

3.1.6. Federal Davis-Bacon Wage Rates. All Bidders are directed to the specific provisions of the Contract, that Applicable Statutes and Applicable Agreements that mandate compliance with legal requirements related to payment of wages, in particular, Federal Davis-Bacon Wage Rates applicable to the Contract work to be performed by the contractor at the time the work is performed.

3.1.6.1. A copy of the current federal Davis-Bacon Wage rates as of the date this IFB was prepared is attached to TF- PAGES Volume 3 of 3. Bidders and the selected Contractor, if any, shall be responsible for confirming and adhering to the actual Davis-Bacon Wage rates in effect at the time after the issuance of this IFB including, without limitation, during the contract term. Federal Davis-Bacon Wage rates may be accessed through the US department of Labor's Website at: <http://www.wdol.gov/wdol/scafiles/davisbacon/ny.html>.

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DISADVANTAGE BUSINESS ENTERPRISE UTILIZATION GOALS
For
Federal Transit Administration Projects
New York City Department of Transportation

The New York City Department has established the following Disadvantaged Business Enterprise (DBE) utilization goal for this contract. The goal is expressed as a percentage of the total federal share of the contract. It is the Contractor's responsibility to secure DBE participation in the contract work to satisfy this goal, and to document acceptable good-faith efforts taken to fulfill the goal. Utilization is measured as the amount actually paid to DBE's, not the contract bid price for the work.

Disadvantaged Business Enterprise Utilization Goal 13%

A list of currently certified Disadvantage Business Enterprises can be obtained by contacting the Unified Certification program for NYS on the web:
<http://biznet.nysucp.net/>

Disadvantaged Business Enterprise Officer

The Bidder shall designate and enter below the name of a Disadvantaged Business Enterprise Officer who have the responsibility for effectively administering and promoting an active Disadvantaged Business Enterprise Program and who must be assigned adequate authority and responsibility to do so.

Bidder-Designated DBE Officer: _____
(Name, Title)

Telephone: _____

Fax Number: _____

E-Mail Address _____

RETURN THIS PAGE WITH BID

All applicants and recipients shall agree to abide by the statements in paragraphs (1) and (2) listed below:

1. "Policy. It is the policy of USDOT that DBE's as defined in 49 CFR Part 26 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal funds under this agreement. Consequently, the DBE requirements of 49 CFR Part 26 apply to this agreement."
2. "DBE Obligation. The recipient or its contractor agrees to ensure that DBE's as defined in 49 CFR Part 26 have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds provided under this agreement. In this regard, all recipients or contractors shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 to ensure that DBE's have the maximum opportunity to compete for and perform contracts. Recipients and their contractors shall not discriminate on the basis of race, color national origin, or sex in the award and performance of US DOT assisted contracts.

Because this is a federally funded project with its own DBE requirement (noted above) no separate NYC M/WBE program condition will apply to this contract. Further information or questions can be directed to:

**New York City Department of Design and Construction
Internal Audit Division
Contract Compliance Unit
30-30 Thomson Avenue
L.I.C., New York 10001
Telephone: (718) 391-1716
Email: LibonatTh@ddc.nyc.gov
Attention: Thomas Libonati, Federal Contracts Compliance Officer**

SCHEDULE A**GENERAL CONDITIONS TO CONSTRUCTION CONTRACT
(INCLUDING GENERAL CONDITIONS RELATED TO ARTICLE 22 – INSURANCE)****PART I. REQUIRED INFORMATION**

<p><u>INFORMATION FOR BIDDERS SECTION 26 BID SECURITY</u></p> <p>The Contractor shall obtain a bid security in the amount indicated to the right.</p>	<p>Required provided the TOTAL BID PRICE set forth on the Bid Form is \$1,000,000 or more.</p> <p>Certified Check: 10% of Bid Amount or Bond: 10% of Bid Amount</p>
<p><u>INFORMATION FOR BIDDERS SECTION 26 PERFORMANCE AND PAYMENT BONDS</u></p> <p>The Contractor shall obtain performance and payment bonds in the amount indicated to the right.</p>	<p>Required for contracts in the amount of \$1,000,000 or more.</p> <p>Performance Security and Payment Security shall each be in an amount equal to 100% of the Contract Price.</p>
<p><u>CONTRACT ARTICLE 14. DATE FOR SUBSTANTIAL COMPLETION</u></p> <p>The Contractor shall substantially complete the Work in the number of calendar days indicated to the right.</p>	<p>See Page SA-4</p>
<p><u>CONTRACT ARTICLE 15. LIQUIDATED DAMAGES</u></p> <p>If the Contractor fails to substantially complete the Work within the time fixed for substantial completion plus authorized time extensions or if the Contractor, in the sole determination of the Commissioner, has abandoned the Work, the Contractor shall pay to the City the amount indicated to the right.</p>	<p>\$7,000.00 for each consecutive calendar day over the Completion Time as set forth for each Task Order</p>
<p><u>CONTRACT ARTICLE 17. SUB-CONTRACTOR</u></p> <p>The Contractor shall not make subcontracts totaling an amount more than the percentage of the total Contract price indicated to the right.</p>	<p>Not to exceed <u>49</u> % of the Contract price</p>
<p><u>CONTRACT ARTICLE 21. RETAINAGE</u></p> <p>The Commissioner shall deduct and retain until the substantial completion of the Work the percent value of the Work indicated to the right.</p>	<p><u>0</u> % of the value of the Work</p>

<p><u>CONTRACT ARTICLE 22.</u></p> <p>(Per Directions Below)</p>	<p>See pages SA-5 through SA-13</p>
<p><u>CONTRACT ARTICLE 24.</u> <u>DEPOSIT GUARANTEE</u></p> <p>As security for the faithful performance of its obligations, the Contractor, upon filing its requisition for payment on Substantial Completion, shall deposit with the Commissioner a sum equal to the percentage of the Contract price indicated to the right.</p>	<p>1% of Contract price</p>
<p><u>CONTRACT ARTICLE 24.</u> <u>PERIOD OF GUARANTEE</u></p> <p>Periods of maintenance and guarantee other than the period set forth in Article 24.1 are indicated to the right.</p>	<p>Twenty-Four (24) Months for Tree Planting.</p>
<p><u>CONTRACT ARTICLE 74.</u> <u>STATEMENT OF WORK</u></p> <p>The Contractor shall furnish all labor and materials and perform all Work in strict accordance with the Contract Drawings, Specifications, and all Addenda hereto.</p>	<p>See Contract Article 74</p>
<p><u>CONTRACT ARTICLE 75.</u> <u>COMPENSATION TO BE PAID TO CONTRACTOR</u></p> <p>The City shall pay and the Contractor shall accept in full consideration for the performance of the Contract, subject to additions and deductions as provided in Contract Article 75, this said sum being the amount at which the Contract was awarded to the Contractor at a public letting thereof, based upon the Contractor's bid for the Contract.</p>	<p>See Contract Article 75</p>
<p><u>CONTRACT ARTICLE 78.</u> <u>PARTICIPATION BY MINORITY-OWNED AND WOMEN-OWNED BUSINESS ENTERPRISES IN CITY PROCUREMENT</u></p>	<p>EXEMPT</p> <p>A) FHWA DBE goal of 13%, see page TF-H1, herein this book Volume 3 of 3</p> <p>B) FTA DBE utilization goal of thirteen percent (13%) has been established for this Contract</p>

FTA - PAGES

**FEDERAL TRANSIT ADMINISTRATION
PROJECTS
FEDERAL TRANSIT ADMINISTRATION
ATTACHMENTS**

(NO TEXT ON THIS PAGE

FEDERAL TRANSIT ADMINISTRATION (FTA) FUNDING ATTACHMENT

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

THIS ATTACHMENT IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

1. Any substantial modification of the Contract shall be subject to approval by the State Commissioner of Transportation and the Federal Transit Administration, in addition to the City agencies involved.
2. The Contractor shall be responsible for compliance with all the provisions of the following Federal Transit Administration (FTA) Third Party Requirements, Standard Clauses for all New York State Contracts, and Exhibits which are hereby made a part of the original contract documents and are annexed hereto:

FEDERAL TRANSIT ADMINISTRATION (FTA) THIRD PARTY REQUIREMENTS

Appendix A - BUY AMERICA CERTIFICATION

Appendix A1 - DISCLOSURE OF LOBBYING ACTIVITIES

Appendix A2 - CERTIFICATION OF A CONTRACTOR REGARDING
DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS

Appendix A3 - CERTIFICATION OF A SUBCONTRACTOR/SUPPLIER
REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY
MATTERS

Appendix B - REQUIRED CONTRACT PROVISIONS DBE Program

Appendix C - DETERMINING GOOD FAITH EFFORTS

Appendix D - PROMPT PAYMENT AFFIDAVIT

Appendix E - SAMPLE PRIME CONTRACTOR AWARD LETTER

Appendix F - MINORITY OWNED FINANCIAL INSTITUTIONS

Appendix G - PREVAILING WAGE RATES, CURRENT DAVIS-BACON
PREVAILING WAGE RATES

STANDARD CLAUSES FOR ALL NEW YORK STATE CONTRACTS

DBE FORMS:

AAP 15 FTA Rev. (1/14)	DESIGNATION OF AFFIRMATIVE ACTION (REPRESENTATIVES BY CONTRACTORS/SUBCONTRACTORS)
AAP10 (01/14)	NYC Department of Transportation DBE SOLICITATIONS LOG
AAP 19 FTA (1/14)	NEW YORK CITY DEPARTMENT OF TRANSPORTATION DISADVANTAGED BUSINESS ENTERPRISE SCHEDULE OF UTILIZATION
AAPHC 89 FTA (1/14)	NEW YORK CITY DEPARTMENT OF TRANSPORTATION DBE UTILIZATION WORKSHEET
AAPHC 89-1 FTA (1/14)	NEW YORK CITY DEPARTMENT OF TRANSPORTATION DBE UTILIZATION WORKSHEET AMENDMENT
AAP 21LL (FTA) (rev. 1/14)	NYC Department of Transportation Contractor Report of Contract Payments
AAP 22 (12/08)	PRE-AWARD D/M/WBE MATERIAL SUPPLIER COMMITMENT INFORMATION
AAP 23LL (2/11)	PRE-AWARD DBE TRUCKING COMMITMENT INFORMATION SUBCONTRACTOR/CONSULTANT PROFILE FORM INITIAL LIST OF SUBCONTRACTORS SUBCONTRACTOR/SUBCONSULTANT MONTHLY PAYMENT REPORT AGENCY CHIEF CONTRACTING OFFICE, CIVIL RIGHTS COMPLAINT FORM ANNUAL LIST OF SUBCONTRACTORS

In addition to compliance with the above FTA requirements, the Contractor shall also be required to comply with all City requirements as depicted in the Information for Bidders and Standard Construction Contract herein. Wherever a conflict may exist, the FTA Regulations shall take precedence.

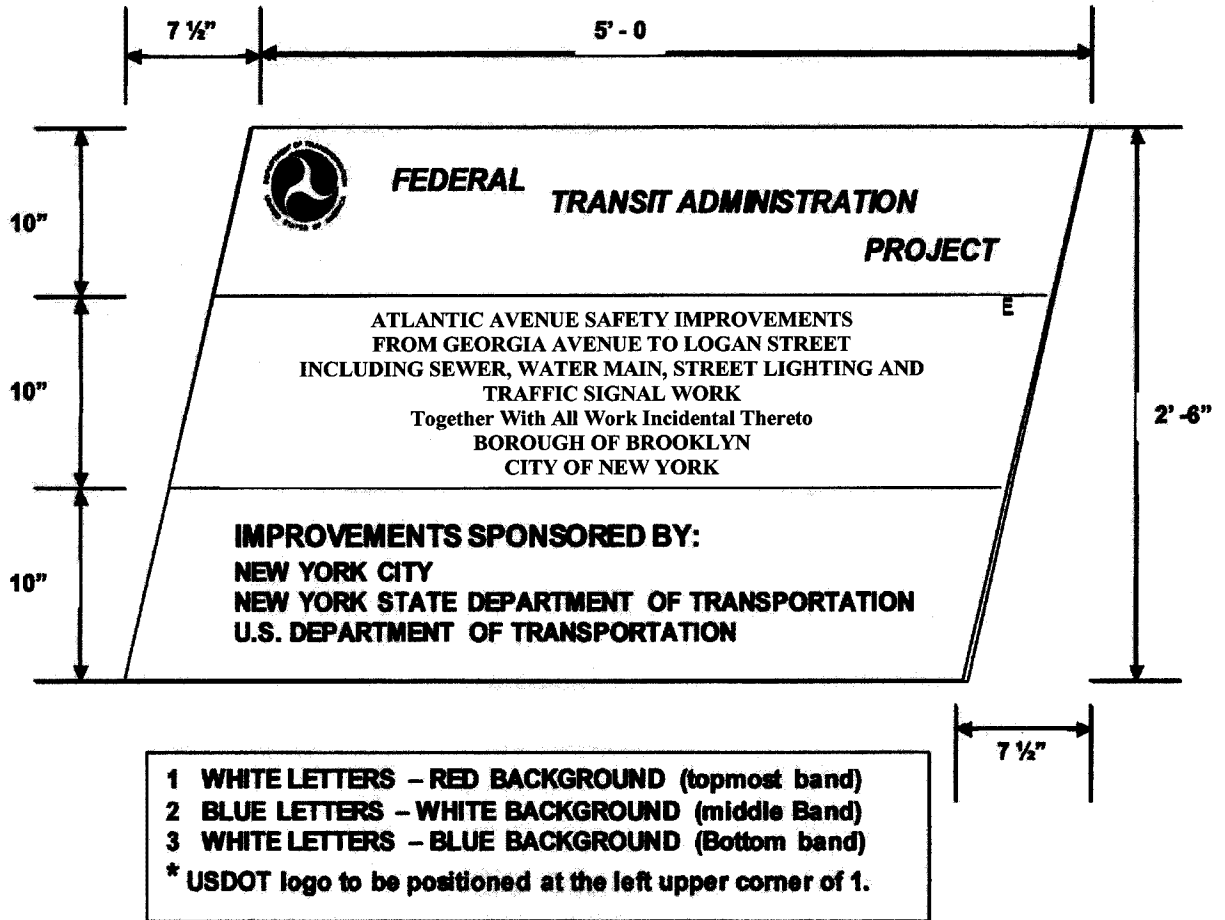
3. All references to M/WBE within the Bid Documents shall be deleted and the Disadvantaged Business Enterprise (DBE) requirements with a goal of 5% shall be substituted.
4. Amendments to Information for Bidders:
 - a) Refer to Page 6, SECTION 20. Low Tie Bids;
Delete Article 20, in its entirety, and substitute the words "ARTICLE 20. (NO TEXT)".
 - b) Refer to Pages 12 and 13, SECTION 37. Locally Based Enterprise Requirements (LBE);
Delete the SECTION 37, in its entirety, and substitute the words "ARTICLE 37. (NO TEXT)". See FEDERAL TRANSIT ADMINISTRATION (FTA) THIRD PARTY REQUIREMENTS attachment, Article 28. Disadvantaged Business Enterprise (DBE) (49 CFR Part 26) and Appendices B, C, D, and E.
5. Amendments to Standard Construction Contract:
 - a) Refer to Page 29, ARTICLE 21. RETAINED PERCENTAGE;
Delete Article 29, in its entirety;
Substitute the following:

"ARTICLE 21. (NO TEXT)"
 - b) Refer to Page 74 and 75, ARTICLE 67. LOCALLY BASED ENTERPRISE PROGRAM;
Delete Article 67, in its entirety, and substitute the words "ARTICLE 67. (NO TEXT)". See FEDERAL TRANSIT ADMINISTRATION (FTA) THIRD PARTY REQUIREMENTS attachment, Article 29. Disadvantaged Business Enterprise (DBE) (49 CFR Part 26) and Appendices B, C, D, and E.
6. Amendments to the NYC Department of Transportation Standard Highway Specifications, Volume I, General Conditions:
 - a) Refer to Pages 36 through 38, Article 1.06.46. Project Sign;
Add the following text to the end of Article 1.06.46:

"(B) ADDITIONAL FTA PROJECT SIGN

In addition to the Project Sign specified in Subsection 1.06.46.(A), above, the Contractor shall also be required to furnish and install an FTA Project Sign as shown on the attached drawing. The FTA Project Sign shall be posted and maintained upon the site at a point and in a prominent position where directed by the Commissioner. The Contractor shall protect and repair the sign from damage during the continuance of work under the Contract. In addition, the requirements for Sign Quality, Schedule, and Removal as specified under Subsection 1.06.46.(A)2, 3, and 4 shall also apply to the FTA Project Sign and the sign panel material shall be the same as that used for the Project Sign required under Subsection 1.06.46.(A), but with the dimensions of the sign as shown on the attached drawing."

FTA PROJECT SIGN



(NO TEXT ON THIS PAGE)

**FEDERAL TRANSIT ADMINISTRATION
(FTA)
THIRD PARTY REQUIREMENTS**

March 2015

The Third Party Requirements in this contract comply with the standard terms and conditions as outlined in the Federal Transit Administration (FTA) Fiscal Year (FY) 2015 Master Agreement authorized by 49 U.S.C. chapter 53, as amended, Title 23, United States Code (Highways), the Moving Ahead for Progress in the 21st Century Act (MAP-21), the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), as amended by the SAFETEA-LU Technical Corrections Act of 2008, or other Federal laws that FTA administers.

For purposes of the FTA Third Party Requirements, "the City" shall mean the New York City agency that procured the contract in which this document is incorporated.

This contract is subject to the Federal Transit Administration (FTA) requirements for implementing the U.S. Department of Transportation (USDOT) regulations for the following areas:

1. FLY AMERICA (49 U.S.C. § 40118, 41 CFR Part 301-10)

Fly America Requirements - The Contractor agrees to comply with 49 U.S.C. 40118 (the "Fly America" Act) in accordance with the General Services Administration's regulations at 41 CFR Part 301-10, which provide that recipients and subrecipients of Federal funds and their contractors are required to use U.S. Flag air carriers for U.S. Government-financed international air travel and transportation of their personal effects or property, to the extent such service is available, unless travel by foreign air carrier is a matter of necessity, as defined by the Fly America Act. The Contractor shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately explaining why service by a U.S. flag air carrier was not available or why it was necessary to use a foreign air carrier and shall, in any event, provide a certificate of compliance with the Fly America requirements. The Contractor agrees to include the requirements of this section in all subcontracts that may involve international air transportation.

2. BUY AMERICA (49 U.S.C. 5323 (j), 49 CFR Part 661)

Buy America - The contractor agrees to comply with 49 U.S.C. 5323(j) and 49 C.F.R. Part 661, which provide that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. 661.7, and include final assembly in the United States for 15 passenger vans and 15 passenger wagons produced by Chrysler Corporation, and microcomputer equipment and software. Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11. Rolling stock must be assembled in the United States and have a 60 percent domestic content.

A bidder or offeror must submit to the FTA recipient the appropriate Buy America certification with all bids or offers on FTA-funded contracts, except those subject to a general waiver. Bids or offers that are not accompanied by a completed Buy America certification must be rejected as nonresponsive. This requirement does not apply to lower tier subcontractors.

3. CHARTER BUS REQUIREMENTS (49 U.S.C. 5323(d), 49 CFR Part 604)

Charter Service Operations - The contractor agrees to comply with 49 U.S.C. 5323(d) and 49 CFR Part 604, which provides that recipients and subrecipients of FTA assistance are prohibited from providing charter service using federally funded equipment or facilities if there is at least one private charter operator willing and able to provide the service, except under one of the exceptions at 49 CFR 604.9. Any charter service provided under one of the exceptions must be "incidental," i.e., it must not interfere with or detract from the provision of mass transportation.

4. SCHOOL BUS REQUIREMENTS (49 U.S.C. 5323(F), 49 CFR Part 605)

School Bus Operations - Pursuant to 49 U.S.C. 5323(f) and 49 CFR Part 605, recipients and subrecipients of FTA assistance may not engage in school bus operations exclusively for the transportation of students and school personnel in competition with private school bus operators unless qualified under specified exemptions. When operating exclusive school bus service under an allowable exemption, recipients and subrecipients may not use federally funded equipment, vehicles, or facilities.

5. CARGO PREFERENCE (46 U.S.C. 55305, 46 CFR Part 381)

Cargo Preference – Use of United States-Flag Vessels - The contractor agrees: a. privately owned United States-Flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to the underlying contract to the extent such vessels are available at fair and reasonable rates for United States-Flag commercial vessels; b. to furnish within 20 working days following the date of loading for shipments originating within the United States or within 30 working days following the date of leading for shipments originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described in the preceding paragraph to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590 and to the FTA recipient (through the contractor in the case of a subcontractor's bill of lading.) c. to include these requirements in all subcontracts issued pursuant to this contract when the subcontract may involve the transport of equipment, material, or commodities by ocean vessel.

6. SEISMIC SAFETY REQUIREMENTS (42 U.S.C. 7701 et seq., 49 CFR Part 41)

Seismic Safety - The contractor agrees that any new building or addition to an existing building will be designed and constructed in accordance with the standards for Seismic Safety required in Department of Transportation Seismic Safety Regulations 49 CFR Part 41 and will certify to compliance to the extent required by the regulation. The contractor also agrees to ensure that all work performed under this contract including work performed by a subcontractor is in compliance with the standards required by the Seismic Safety Regulations and the certification of compliance issued on the project.

7. ENERGY CONSERVATION (42 U.S.C. 6321 et seq., 49 CFR Part 622, subpart C)

Energy Conservation - The Contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

8. CLEAN WATER (33 U.S.C. 1251-1377)

Clean Water - (1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Water Act, as amended, 33 U.S.C. 1251-1377. The Contractor agrees to report each violation to recipient and understands and agrees that recipient will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.

(2) The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

9. BUS TESTING (49 U.S.C. 5318(e), 49 CFR Part 665)

Bus Testing - The Contractor agrees to comply with 49 USC 5318 (e) and FTA's implementing regulation at 49 CFR Part 665 and shall perform the following:

1) A manufacturer of a new bus model or a bus produced with a major change in components or configuration shall provide a copy of the final test report to the recipient at a point in the procurement process specified by the recipient which will be prior to the recipient's final acceptance of the first vehicle.

2) A manufacturer who releases a report under paragraph 1 above shall provide notice to the operator of the testing facility that the report is available to the public.

3) If the manufacturer represents that the vehicle was previously tested, the vehicle being sold should have the identical configuration and major components as the vehicle in the test report, which must be provided to the recipient prior to recipient's final acceptance of the first vehicle. If the configuration or components are not identical, the manufacturer shall provide a description of the change and the manufacturer's basis for concluding that it is not a major change requiring additional testing.

4) If the manufacturer represents that the vehicle is "grandfathered" (has been used in mass transit service in the United States before October 1, 1988, and is currently being produced without a major change in configuration or components), the manufacturer shall provide the name and address of the recipient of such a vehicle and the details of that vehicle's configuration and major components.

10. PRE-AWARD AND POST DELIVERY AUDITS REQUIREMENTS (49 U.S.C. 5323, 49 CFR Part 663)

The Contractor agrees to comply with 49 U.S.C. §5323(m) and FTA's implementing regulation 49 CFR Part 663 and to submit the following certifications:

(1) Buy America Requirements: The Contractor shall complete and submit a declaration certifying either compliance or noncompliance with Buy America. If the Bidder/Offeror certifies compliance with Buy America, it shall submit documentation which lists 1) component and subcomponent parts of the rolling stock to be purchased identified by manufacturer of the parts, their country of origin and costs; and 2) the location of the final assembly point for the rolling stock, including a description of the activities that will take place at the final assembly point and the cost of final assembly.

(2) Solicitation Specification Requirements: The Contractor shall submit evidence that it will be capable of meeting the bid specifications.

(3) Federal Motor Vehicle Safety Standards (FMVSS): The Contractor shall submit 1) manufacturer's FMVSS self-certification sticker information that the vehicle complies with relevant FMVSS or 2) manufacturer's certified statement that the contracted buses will not be subject to FMVSS regulations.

11. LOBBYING (31 U.S.C. 1352, 49 CFR Part 20)

Contractors who apply or bid for an award of \$100,000 or more shall file the certification required by 49 CFR part 20, "New Restrictions on Lobbying." Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to that Federal contract, grant or award covered by 31 U.S.C. 1352. Such disclosures are forwarded from tier to tier up to the recipient.

12. ACCESS TO RECORDS AND REPORTS (49 U.S.C. 5325 (g), 49 CFR §18.36(i)(10), 49 CFR § 19.53 (e) until USDOT promulgates new regulations that will supersede and apply in lieu of 49 CFR parts 18 and 19 and 49 CFR 633.15)

The Contractor shall comply with the following access to records requirements:

1. In accordance with 49 CFR 18.36(i), the Contractor agrees to provide the City, the FTA Administrator, the Comptroller General of the United States or any of their authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions. Contractor also agrees, pursuant to 49 C. F. R. § 18.40 (e) or 49 CFR § 19.51 (g) to provide the FTA Administrator or his/her authorized representatives including any PMO Contractor access to Contractor's records and construction sites pertaining to a major capital project, defined at 49 U.S.C. 5302(a) 1, which is receiving federal financial assistance through the programs described at 49 U.S.C. 5307, 5309 or 5311.

2. Where the City, in accordance with 49 U.S.C. 5325(a) enters into a contract for a capital project or improvement (defined in 49 U.S.C. 5302(a) (1) through other than competitive bidding, the Contractor shall make available records related to the contract to the City, the Secretary of Transportation and the Comptroller General or any authorized officer or employee of any of them for the purposes of conducting an audit and inspection.

3. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

4. The Contractor agrees to maintain all books, records, accounts, reports and other related documents required under this contract for a period of not less than three years after the date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from the performance of this contract, in which case Contractor agrees to maintain same until the City, the FTA Administrator, the Comptroller General, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto. (Reference 49 CFR 18.39 (i)(11)).

5. FTA does not require the inclusion of these requirements in subcontracts.

Requirements for Access to Records and Reports by Types of Contract

Contract Characteristics	Operational Service Contract	Turnkey	Construction	Architectural Engineering	Acquisition of Rolling Stock	Professional Services
I. State Grantees						
a. Contracts below SAT (\$100,000)	None	Those imposed on state pass thru to Contractor	None	None	None	None
b. Contracts above \$100,000/ Capital Projects	None unless ¹ non-competitive award		Yes, if non-competitive award or if funded thru ² 5307/5309/ 5311	None unless non-competitive award	None unless non-competitive award	None unless non-competitive award
II. Non State Grantees						
a. Contracts below SAT (\$100,000)	Yes ³	Those imposed on non-state Grantee pass thru to Contractor	Yes	Yes	Yes	Yes
b. Contracts above \$100,000/Capital Project	Yes ³		Yes	Yes	Yes	Yes

Sources of Authority:

¹ 49 USC 5325 (g)

² 49 CFR 633.15

³ 49 CFR 18.36 (i)

SAT: Source Acquisition Threshold

13. FEDERAL CHANGES (49 CFR Part 18)

Federal Changes - The Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between the City and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.

14. BONDING REQUIREMENTS

(a) Bid Security

A Bid Bond must be issued by a fully qualified surety company acceptable to the City and listed as a company currently authorized under 31 CFR, Part 223 as possessing a Certificate of Authority as described thereunder.

(b) Rights Reserved

In submitting this Bid, it is understood and agreed by bidder that the right is reserved by the City to reject any and all bids, or part of any bid, and it is agreed that the Bid may not be withdrawn for a period of [ninety (90)] days subsequent to the opening of bids, without the written consent of the City.

It is also understood and agreed that if the undersigned bidder should withdraw any part or all of his bid within [ninety (90)] days after the bid opening without the written consent of the City, shall refuse or be unable to enter into this Contract, as provided above, or refuse or be unable to furnish adequate and acceptable Performance Bonds and Labor and Material Payments Bonds, as provided above, or refuse or be unable to furnish adequate and acceptable insurance, as provided above, he shall forfeit his bid security to the extent of the City's damages occasioned by such withdrawal, or refusal, or inability to enter into an agreement, or provide adequate security therefor.

It is further understood and agreed that to the extent the defaulting bidder's Bid Bond, Certified Check, Cashier's Check, Treasurer's Check, and/or Official Bank Check (excluding any income generated thereby which has been retained by the City as provided in [Item x "Bid Security" of the Instructions to Bidders]) shall prove inadequate to fully recompense the City for the damages occasioned by default, then the undersigned bidder agrees to indemnify the City and pay over to the City the difference between the bid security and the City's total damages, so as to make the City whole.

The undersigned understands that any material alteration of any of the above or any of the material contained on this form, other than that requested, will render the bid unresponsive.

Performance and Payment Bonding Requirements (Construction)

The Contractor shall be required to obtain performance and payment bonds as follows:

(a) Performance bonds

1. The penal amount of performance bonds shall be 100 percent of the original contract price, unless the City determines that a lesser amount would be adequate for the protection of the City.

2. The City may require additional performance bond protection when a contract price is increased. The increase in protection shall generally equal 100 percent of the increase in contract price. The City may secure additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(b) Payment bonds

1. The penal amount of the payment bonds shall equal:

(i) Fifty percent of the contract price if the contract price is not more than \$1 million.

(ii) Forty percent of the contract price if the contract price is more than \$1 million but not more than \$5 million;
or

(iii) Two and one half million if the contract price is more than \$5 million.

2. If the original contract price is \$5 million or less, the City may require additional protection as required by subparagraph 1 if the contract price is increased.

Performance and Payment Bonding Requirements (Non-Construction)

The Contractor may be required to obtain performance and payment bonds when necessary to protect the City's interest.

(a) The following situations may warrant a performance bond:

1. The City property or funds are to be provided to the Contractor for use in performing the contract or as partial compensation (as in retention of salvaged material).

2. A Contractor sells assets to or merges with another concern, and the City, after recognizing the latter concern as the successor in interest, desires assurance that it is financially capable.

3. Substantial progress payments are made before delivery of end items starts.

4. Contracts are for dismantling, demolition, or removal of improvements.

(b) When it is determined that a performance bond is required, the Contractor shall be required to obtain performance bonds as follows:

1. The penal amount of performance bonds shall be 100 percent of the original contract price, unless the City determines that a lesser amount would be adequate for the protection of the City.

2. The City may require additional performance bond protection when a contract price is increased. The increase in protection shall generally equal 100 percent of the increase in contract price. The City may secure additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(c) A payment bond is required only when a performance bond is required, and if the use of payment bond is in the City's interest.

(d) When it is determined that a payment bond is required, the Contractor shall be required to obtain payment bonds as follows:

1. The penal amount of payment bonds shall equal:

(i) Fifty percent of the contract price if the contract price is not more than \$1 million;

(ii) Forty percent of the contract price if the contract price is more than \$1 million

but not more than \$5 million; or

(iii) Two and one half million if the contract price is increased.

Advance Payment Bonding Requirements

The Contractor may be required to obtain an advance payment bond if the contract contains an advance payment provision and a performance bond is not furnished. The City shall determine the amount of the advance payment bond necessary to protect the City.

Patent Infringement Bonding Requirements (Patent Indemnity)

The Contractor may be required to obtain a patent indemnity bond if a performance bond is not furnished and the financial responsibility of the Contractor is unknown or doubtful. The City shall determine the amount of the patent indemnity to protect the City.

Warranty of the Work and Maintenance Bonds

1. The Contractor warrants to the City, the Architect and/or Engineer that all materials and equipment furnished under this Contract will be of highest quality and new unless otherwise specified by the City, free from faults and defects and in conformance with the Contract Documents. All work not so conforming to these standards shall be considered defective. If required by the City, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

2. The Work furnished must be of first quality and the workmanship must be the best obtainable in the various trades. The Work must be of safe, substantial and durable construction in all respects. The Contractor hereby guarantees the Work against defective materials or faulty workmanship for a minimum period of one (1) year after Final Payment by the City and shall replace or repair any defective materials or equipment or faulty workmanship during the period of the guarantee at no cost to the City. As additional security for these guarantees, the Contractor shall, prior to the release of Final Payment [as provided in Item X below], furnish separate Maintenance (or Guarantee) Bonds in form acceptable to the City written by the same corporate surety that provides the Performance Bond and Labor and Material Payment Bond for this Contract. These bonds shall secure the Contractor's obligation to replace or repair defective materials and faulty workmanship for a minimum period of one (1) year after Final Payment and shall be written in an amount equal to ONE HUNDRED PERCENT (100%) of the CONTRACT SUM, as adjusted (if at all).

15. CLEAN AIR (42 U.S.C. § 7606, 42 U.S.C. § 7401-7671, 40 CFR 15.61, 49 CFR Part 18)

(1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 et seq. The Contractor agrees to report each violation to

NYCDOT and understands and agrees that NYCDOT will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.

(2) The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

16. RECYCLED PRODUCTS (42 U.S.C. 6962, 40 CFR Part 247)

The Contractor agrees to comply with all the requirements of Section 6002 of the Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. 6962), including but not limited to the regulatory provisions of 40 CFR Part 247, as they apply to the procurement of the items designated in Subpart B of 40 CFR Part 247.

17. DAVIS-BACON AND COPELAND ANTI-KICKBACK ACTS

1) **Minimum wages** - (i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)(A) The Contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) Except with respect to helpers as defined as 29 CFR 5.2(n)(4), the work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) With respect to helpers as defined in 29 CFR 5.2(n)(4), such a classification prevails in the area in which the work is performed.

(B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the Contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(v)(A) The Contracting officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination with 30 days of receipt and so advise the Contracting officer or will notify the Contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(v) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

2) **Withholding** - The City shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same Contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the City may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3) **Payrolls and basic records** - (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the City for transmission to the Federal Transit Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under section 5.5(a)(3)(i) of Regulations, 29 CFR part 5. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The Contractor is responsible for the submission of copies of payrolls by all subcontractors.

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be maintained under section 5.5(a)(3)(i) of Regulations, 29 CFR part 5 and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The Contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the Federal Transit Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the Contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4) **Apprentices and trainees** - (i) **Apprentices** - Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator of the Wage and Hour Division of the U.S. Department of Labor determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be

permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees - Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity - The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

5) Compliance with Copeland Act requirements - The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6) Subcontracts - The Contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the Federal Transit Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7) Contract termination: debarment - A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8) Compliance with Davis-Bacon and Related Act requirements - All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9) Disputes concerning labor standards - Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10) Certification of eligibility - (i) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

18. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

(1) **Overtime requirements** - No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) **Violation; liability for unpaid wages; liquidated damages** - In the event of any violation of the clause set forth in paragraph (1) of this section the Contractor and any Subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and Subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

(3) **Withholding for unpaid wages and liquidated damages** - The City shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or Subcontractor under any such contract or any other Federal contract with the same Contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or Subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

(4) **Subcontracts** - The Contractor or Subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The Contractor shall be responsible for compliance by any Subcontractor or lower tier Subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.

19. NO GOVERNMENT OBLIGATION TO THIRD PARTIES

No Obligation by the Federal Government

(1) The City and the Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this contract and shall not be subject to any obligations or liabilities to the City, Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.

(2) The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the Subcontractor who will be subject to its provisions.

20. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS AND RELATED ACTS (31 U.S.C 3801 et seq., 49 CFR Part 31, 18 U.S.C. 1001, 49 U.S.C. 5323(l))

(1) The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.

(2) The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. chapter 53 or any other Federal law, the Federal Government reserves the right to impose on the contractor the penalties of 49 U.S.C. 5323(l), 18 U.S.C. § 1001, or other applicable federal law to the extent the Federal Government deems appropriate.

(3) The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

21. TERMINATION (49 U.S.C. Part 18, FTA Circular 4220.1F)

The Contractor agrees to include these provisions in all subcontracts in excess of \$10,000.

a. Termination for Convenience (General Provision) - The City may terminate this contract, in whole or in part, at any time by written notice to the Contractor when it is in the City's best interest. The Contractor shall be paid its costs, including contract close-out costs, and profit on work performed up to the time of termination. The Contractor shall promptly submit its termination claim to the City to be paid to the Contractor. If the Contractor has any property in its possession belonging to the City, the Contractor will account for the same, and dispose of it in the manner the City directs.

b. Termination for Default [Breach or Cause] (General Provision) - If the Contractor does not deliver supplies in accordance with the contract delivery schedule, or, if the contract is for services and the Contractor fails to perform in the manner called for in the contract, or if the Contractor fails to comply with any other provisions of the contract, the City may terminate this contract for default. Termination shall be effected by serving a notice of termination on the contractor setting forth the manner in which the Contractor is in default. The Contractor will only be paid the contract price for supplies delivered and accepted, or services performed in accordance with the manner of performance set forth in the contract.

If it is later determined by the City that the Contractor had an excusable reason for not performing, such as a strike, fire, or flood, events which are not the fault of or are beyond the control of the Contractor, the City, after setting up a new delivery of performance schedule, may allow the Contractor to continue work, or treat the termination as a termination for convenience.

c. Opportunity to Cure (General Provision) - The City, in its sole discretion may, in the case of a termination for breach or default, allow the Contractor [an appropriately short period of time] in which to cure the defect. In such case, the notice of termination will state the time period in which cure is permitted and other appropriate conditions.

If Contractor fails to remedy to the City's satisfaction the breach or default or any of the terms, covenants, or conditions of this Contract within the period of time specified by the City after receipt by Contractor or written notice from the City setting forth the nature of said breach or default, the City shall have the right to terminate the

Contract without any further obligation to Contractor. Any such termination for default shall not in any way operate to preclude the City from also pursuing all available remedies against Contractor and its sureties for said breach or default.

d. Waiver of Remedies for any Breach - In the event that the City elects to waive its remedies for any breach by Contractor of any covenant, term or condition of this Contract, such waiver by the City shall not limit the City's remedies for any succeeding breach of that or of any other term, covenant, or condition of this Contract.

e. Termination for Convenience (Professional or Transit Service Contracts) - The City, by written notice, may terminate this contract, in whole or in part, when it is in the Government's interest. If this contract is terminated, the City shall be liable only for payment under the payment provisions of this contract for services rendered before the effective date of termination.

f. Termination for Default (Supplies and Service) - If the Contractor fails to deliver supplies or to perform the services within the time specified in this contract or any extension or if the Contractor fails to comply with any other provisions of this contract, the City may terminate this contract for default. The City shall terminate by delivering to the Contractor a Notice of Termination specifying the nature of the default. The Contractor will only be paid the contract price for supplies delivered and accepted, or services performed in accordance with the manner or performance set forth in this contract.

If, after termination for failure to fulfill contract obligations, it is determined that the Contractor was not in default, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the City.

g. Termination for Default (Transportation Services) - If the Contractor fails to pick up the commodities or to perform the services, including delivery services, within the time specified in this contract, or any extension thereto, or if the Contractor fails to comply with any other provisions of this contract, the City may terminate this contract for default. The City shall terminate by delivering to the Contractor a Notice of Termination specifying the nature of default. The Contractor will only be paid the contract price for services performed in accordance with the manner of performance set forth in this contract.

h. Termination for Default (Construction) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified in this contract or any extension or fails to complete the work within this time, or if the Contractor fails to comply with any other provisions of this contract, the City may terminate this contract for default. the City shall terminate by delivering to the Contractor a Notice of Termination specifying the nature of the default. In this event, the City may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the City resulting from the Contractor's refusal or failure to complete the work within specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the City in completing the work.

The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause if:

1. the delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include: acts of God, acts of the City, acts of another Contractor in the performance of a contract with the City, epidemics, quarantine restrictions, strikes, freight embargoes; and

2. the Contractor, within [10] days from the beginning of any delay, notifies the City in writing of the causes of delay. If in the judgment of the City, the delay is excusable, the time for completing the work shall be extended.

The judgment of the City shall be final and conclusive on the parties, but subject to appeal under the Disputes clauses.

If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the City.

i. Termination for Convenience of Default (Cost-Type Contracts) -The City may terminate this contract, or any portion of it, by serving a notice or termination to the Contractor. The notice shall state whether the termination is for convenience of the City or for the default of the Contractor. If the termination is for default, the notice shall state the manner in which the contractor has failed to perform the requirements of the contract. The Contractor shall account for any property in its possession paid for from funds received from the City, or property supplied to the Contractor by the City. If the termination is for default, the City may fix the fee, if the contract provides for a fee, to be paid the contractor in proportion to the value, if any, of work performed up to the time of termination. The Contractor shall promptly submit its termination claim to the City and the parties shall negotiate the termination settlement to be paid the Contractor.

If the termination is for the convenience of the City, the Contractor shall be paid its contract close-out costs, and a fee, if the contract provided for payment of a fee, in proportion to the work performed up to the time of termination.

If, after serving a notice of termination for default, the City determines that the Contractor has an excusable reason for not performing, such as strike, fire, flood, events which are not the fault of and are beyond the control of the contractor, the City, after setting up a new work schedule, may allow the Contractor to continue work, or treat the termination as a termination for convenience.

22. GOVERNMENT-WIDE DEBARMENT AND SUSPENSION (NON-PROCUREMENT)
(2 C.F.R. part 180, 2 C.F.R. part 1200, Executive Orders 12549/12689)

Suspension and Debarment - The Contractor agrees to comply, and assures the compliance of each subcontractor, lessee, third party contractor, or other participant at any tier of the Project, with Executive Orders Nos. 12549 and 12689, "Debarment and Suspension," 31 U.S.C. § 6101 note, and U.S. DOT regulations, "Nonprocurement Suspension and Debarment," 2 C.F.R. Part 1200, which adopts and supplements the provisions of U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Government-wide Debarment and Suspension (Nonprocurement)," 2 C.F.R. Part 180. The Contractor agrees to, and assures that its subcontractors, lessees, third party contractors, and other participants at any tier of the Project will, review the "Excluded Parties Listing System" at <http://www.sam.gov/portal/public/SAM/> before entering into any subagreement, lease, third party contract, or other arrangement in connection with the Project.

By signing and submitting its bid or proposal, the bidder or proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by the City. If it is later determined that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to the City, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of Executive Orders Nos. 12549 and 12689, "Debarment and Suspension," 31 U.S.C. § 6101 note, and U.S. DOT regulations, "Nonprocurement Suspension and Debarment," 2 C.F.R. Part 1200, which adopts and supplements the provisions of U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Government-wide Debarment and Suspension (Nonprocurement)," 2 C.F.R. Part 180, while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

23. PRIVACY ACT (5 U.S.C. 552)

The following requirements apply to the Contractor and its employees that administer any system of records on behalf of the Federal Government under any contract:

(1) The Contractor agrees to comply with, and assures the compliance of its employees with, the information restrictions and other applicable requirements of the Privacy Act of 1974, 5 U.S.C. § 552a. Among other things, the Contractor agrees to obtain the express consent of the Federal Government before the Contractor or its employees operate a system of records on behalf of the Federal Government. The Contractor understands that the requirements of the Privacy Act, including the civil and criminal penalties for violation of that Act, apply to those individuals involved, and that failure to comply with the terms of the Privacy Act may result in termination of the underlying contract.

(2) The Contractor also agrees to include these requirements in each subcontract to administer any system of records on behalf of the Federal Government financed in whole or in part with Federal assistance provided by FTA.

24. CIVIL RIGHTS REQUIREMENTS (29 U.S.C. 623, 42 U.S.C. 2000, 42 U.S.C. § 6101 et seq., 42 U.S.C. 12112, 42 U.S.C. § 12101 et seq., 49 U.S.C. § 5332, 29 CFR Part 1630, 41 CFR Part 60 et seq.)

(1) Nondiscrimination - In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. § 2000d, section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6101 et seq., section 202 of the Americans with Disabilities Act of 1990, 42 U.S.C. § 12101 et seq., and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.

(2) Equal Employment Opportunity – The following equal employment opportunity requirements apply to the underlying contract:

(a) Race, Color, Creed, National Origin, Sex - In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e, and Federal transit laws at 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. Parts 60 et seq., (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e note and as further amended by Executive Order 13672), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, disability, sex, gender identity, age, or status as a parent. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(b) Age - In accordance with The Age Discrimination Act of 1975, as amended, 42 U.S.C. §§ 6101 et seq., and with implementing U.S. Health and Human Services regulations, "Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance," 45 C.F.R. Part 90, Section 4 of the Age Discrimination in Employment Act, as amended, 29 U.S.C. § §621 through 634, and 29 CFR Part 1625, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(c) **Disabilities** – In accordance with 49 U.S.C. § 5301(d), which states the Federal policy that elderly individuals and individuals with disabilities have the same right as other individuals to use public transportation services and facilities, and that special efforts shall be made in planning and designing those services and facilities to implement transportation accessibility rights for elderly individuals and individuals with disabilities. The Contractor shall also agree to comply with all applicable provisions of Section 504 of the Rehabilitation Act of 1973, as amended, with 29 U.S.C. § 794, which prohibits discrimination on the basis of disability; with the Americans with Disabilities Act of 1990 (ADA), as amended, 42 U.S.C. §§ 12101 *et seq.*, which requires that accessible facilities and services be made available to individuals with disabilities; and with the Architectural Barriers Act of 1968, as amended, 42 U.S.C. §§ 4151 *et seq.*, which requires that buildings and public accommodations be accessible to individuals with disabilities, and any subsequent amendments to these laws or other laws pertaining to access for individuals with disabilities to the extent applicable. In addition, the Contractor agrees to comply with applicable implementing Federal regulations and directives and any subsequent amendments that the FTA may issue.

(d) **Limited English Proficiency (LEP)** - Executive Order No. 13166, “Improving Access to Services for Persons with Limited English Proficiency,” August 11, 2000, 42 U.S.C. Section 2000d-1 note, and USDOT/FTA , “Policy Guidance Concerning Recipients’ Responsibilities to Limited English Proficient (LEP) Persons,” December 14, 2005. Contractors will comply, based on receipt of Federal funding through the City and assisting the City in fulfilling its responsibilities to LEP persons, pursuant to Title VI of the Civil Rights Act of 1964 and implementing regulations in accordance to FTA Circular 4702.1.

(3) The Contractor also agrees to include these requirements in each subcontract financed in whole or in part with Federal assistance provided by FTA, modified only if necessary to identify the affected parties.

25. BREACHES AND DISPUTE RESOLUTION (49 CFR Part 18, FTA Circular 4220.1F)

Disputes - Disputes arising in the performance of this Contract which are not resolved by agreement of the parties shall be decided in writing by the authorized representative of the City. This decision shall be final and conclusive unless within ten (10) days from the date of receipt of its copy, the Contractor mails or otherwise furnishes a written appeal to the [title of employee]. In connection with any such appeal, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the [title of employee] shall be binding upon the Contractor and the Contractor shall abide by the decision.

Performance During Dispute - Unless otherwise directed by the City, Contractor shall continue performance under this Contract while matters in dispute are being resolved.

Claims for Damages - Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the party or of any of his employees, agents or others for whose acts he is legally liable, a claim for damages therefore shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

Remedies - Unless this contract provides otherwise, all claims, counterclaims, disputes and other matters in question between the City and the Contractor arising out of or relating to this agreement or its breach will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the State in which the City is located.

Rights and Remedies - The duties and obligations imposed by the Contract Documents and the rights and remedies available there under shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by the City or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach there under, except as may be specifically agreed in writing.

26. PATENT AND RIGHTS IN DATA (35 U.S.C. § 200 et seq., 37 CFR Part 401, 49 CFR Parts 18 / 19)

A. Rights in Data - The following requirements apply to each contract involving experimental, developmental or research work:

(1) The term "subject data" used in this clause means recorded information, whether or not copyrighted, that is delivered or specified to be delivered under the contract. The term includes graphic or pictorial delineation in media such as drawings or photographs; text in specifications or related performance or design-type documents; machine forms such as punched cards, magnetic tape, or computer memory printouts; and information retained in computer memory. Examples include, but are not limited to: computer software, engineering drawings and associated lists, specifications, standards, process sheets, manuals, technical reports, catalog item identifications, and related information. The term "subject data" does not include financial reports, cost analyses, and similar information incidental to contract administration.

(2) The following restrictions apply to all subject data first produced in the performance of the contract to which this Attachment has been added:

(a) Except for its own internal use, the Purchaser or Contractor may not publish or reproduce subject data in whole or in part, or in any manner or form, nor may the Purchaser or Contractor authorize others to do so, without the written consent of the Federal Government, until such time as the Federal Government may have either released or approved the release of such data to the public; this restriction on publication, however, does not apply to any contract with an academic institution.

(b) In accordance with 49 C.F.R. § 18.34 and 49 C.F.R. § 19.36, the Federal Government reserves a royalty-free, non-exclusive and irrevocable license to reproduce, publish, or otherwise use, and to authorize others to use, for "Federal Government purposes," any subject data or copyright described in subsections (2)(b)1 and (2)(b)2 of this clause below. As used in the previous sentence, "for Federal Government purposes," means use only for the direct purposes of the Federal Government. Without the copyright owner's consent, the Federal Government may not extend its Federal license to any other party.

1. Any subject data developed under that contract, whether or not a copyright has been obtained; and

2. Any rights of copyright purchased by the Purchaser or Contractor using Federal assistance in whole or in part provided by FTA.

(c) When FTA awards Federal assistance for experimental, developmental, or research work, it is FTA's general intention to increase transportation knowledge available to the public, rather than to restrict the benefits resulting from the work to participants in that work. Therefore, unless FTA determines otherwise, the Purchaser and the Contractor performing experimental, developmental, or research work required by the underlying contract to which this Attachment is added agrees to permit FTA to make available to the public, either FTA's license in the copyright to any subject data developed in the course of that contract, or a copy of the subject data first produced under the contract for which a copyright has not been obtained. If the experimental, developmental, or research work, which is the subject of the underlying contract, is not completed for any reason whatsoever, all data developed under that contract shall become subject data as defined in subsection (a) of this clause and shall be delivered as the Federal Government may direct. This subsection (c), however, does not apply to adaptations of automatic data processing equipment or programs for the Purchaser or Contractor's use whose costs are financed in whole or in part with Federal assistance provided by FTA for transportation capital projects.

(d) Unless prohibited by state law, upon request by the Federal Government, the Purchaser and the Contractor agree to indemnify, save, and hold harmless the Federal Government, its officers, agents, and employees acting within the scope of their official duties against any liability, including costs and expenses, resulting

from any willful or intentional violation by the Purchaser or Contractor of proprietary rights, copyrights, or right of privacy, arising out of the publication, translation, reproduction, delivery, use, or disposition of any data furnished under that contract. Neither the Purchaser nor the Contractor shall be required to indemnify the Federal Government for any such liability arising out of the wrongful act of any employee, official, or agents of the Federal Government.

(e) Nothing contained in this clause on rights in data shall imply a license to the Federal Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Federal Government under any patent.

(f) Data developed by the Purchaser or Contractor and financed entirely without using Federal assistance provided by the Federal Government that has been incorporated into work required by the underlying contract to which this Attachment has been added is exempt from the requirements of subsections (b), (c), and (d) of this clause, provided that the Purchaser or Contractor identifies that data in writing at the time of delivery of the contract work.

(g) Unless FTA determines otherwise, the Contractor agrees to include these requirements in each subcontract for experimental, developmental, or research work financed in whole or in part with Federal assistance provided by FTA.

(3) Unless the Federal Government later makes a contrary determination in writing, irrespective of the Contractor's status (i.e., a large business, small business, state government or state instrumentality, local government, nonprofit organization, institution of higher education, individual, etc.), the Purchaser and the Contractor agree to take the necessary actions to provide, through FTA, those rights in that invention due the Federal Government as described in U.S. Department of Commerce regulations, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," 37 C.F.R. Part 401.

(4) The Contractor also agrees to include these requirements in each subcontract for experimental, developmental, or research work financed in whole or in part with Federal assistance provided by FTA.

B. Patent Rights - The following requirements apply to each contract involving experimental, developmental, or research work:

(1) **General** - If any invention, improvement, or discovery is conceived or first actually reduced to practice in the course of or under the contract to which this Attachment has been added, and that invention, improvement, or discovery is patentable under the laws of the United States of America or any foreign country, the Purchaser and Contractor agree to take actions necessary to provide immediate notice and a detailed report to the party at a higher tier until FTA is ultimately notified.

(2) Unless the Federal Government later makes a contrary determination in writing, irrespective of the Contractor's status (a large business, small business, state government or state instrumentality, local government, nonprofit organization, institution of higher education, individual), the Purchaser and the Contractor agree to take the necessary actions to provide, through FTA, those rights in that invention due the Federal Government as described in 35 U.S.C. § 200 et seq., and in U.S. Department of Commerce regulations, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," 37 C.F.R. Part 401.

(3) The Contractor also agrees to include the requirements of this clause in each subcontract for experimental, developmental, or research work financed in whole or in part with Federal assistance provided by FTA

27. PUBLIC TRANSPORTATION EMPLOYEE PROTECTIVE ARRANGEMENTS – Applicability – Contracts for transit operations except micro-purchases (\$3,000 or less, except for construction contracts over

\$2,000)

(1) Contractor shall comply with applicable transit employee protective requirements as follows:

(a) General Transit Employee Protective Requirements - To the extent that FTA determines that transit operations are involved, the Contractor agrees to carry out the transit operations work on the underlying contract in compliance with terms and conditions determined by the U.S. Secretary of Labor to be fair and equitable to protect the interests of employees employed under this contract and to meet the employee protective requirements of 49 U.S.C. § 5333(b), and U.S. DOL guidelines at 29 CFR Part 215, and any amendments thereto. These terms and conditions are identified in the letter of certification from the U.S. DOL to FTA applicable to the FTA Recipient's project from which Federal assistance is provided to support work on the underlying contract. The Contractor agrees to carry out that work in compliance with the conditions stated in that U.S. DOL letter.

(2) Contractor shall also include any applicable requirements in each subcontract involving transit operations financed in whole or in part with FTA assistance.

28. PRE-EMPTION OF STATE, TERRITORIAL, AND LOCAL LAW

If a Federal law pre-empts a State, territorial, or local law, regulation, or ordinance:

(a) The Subrecipient or Contractor must comply with Federal law and regulations.

(b) This Agreement, however, does not require the Subrecipient or Contractor to take any action that would violate State, territorial, or local law, regulations, or ordinances.

(c) If compliance with any provision of Federal law or regulations or this Agreement violates or would require the Subrecipient or Contractor to violate any State, territorial, or local law, regulation, or ordinance, the Subrecipient or Contractor agrees to:

(1) Notify New York City Department of Design and Construction (NYCDDC) immediately in writing, and

(2) Make appropriate arrangements with NYCDDC to:

a. Proceed with the Project or,

b. Terminate the Project expeditiously, if necessary.

29. DISADVANTAGED BUSINESS ENTERPRISE (DBE) (Section 1101(b) of MAP-21, 23 U.S.C. § 101 note; 49 CFR Part 26)

a. This contract is subject to the requirements of Title 49, Code of Federal Regulations, Part 26, *Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs*. The national goal for participation of Disadvantaged Business Enterprises (DBE) is 10%. The agency's overall goal for DBE participation is **11.4%**. The FTA DBE goal for architectural and engineering services is 11%, and a general construction contract is 13%. The DBE goal is 3% for marine contracts.

b. The contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of this DOT-assisted contract. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as **the City** deems appropriate. Each subcontract the contractor signs with a subcontractor must include the

assurance in this paragraph (see 49 CFR 26.13(b)).

Bidders/offerors are required to document sufficient DBE participation to meet these goals or, alternatively, document adequate good faith efforts to do so, as provided for in 49 CFR 26.53. Award of this contract is conditioned on submission of the following:

1. The names and addresses of DBE firms that will participate in this contract;
2. A description of the work each DBE will perform;
3. The dollar amount of the participation of each DBE firm participating;
4. Written documentation of the bidder/offeror's commitment to use a DBE subcontractor whose participation it submits to meet the contract goal;
5. Written confirmation from the DBE that it is participating in the contract as provided in the Contractor's commitment;
6. If the contract goal is not met, evidence of good faith efforts should be provided by the City. The successful bidder/offeror will be required to report its DBE participation obtained through race-neutral means throughout the period of performance;
7. The Contractor is required to pay its Subcontractors performing work related to this contract for satisfactory performance of that work no later than 30 days after the Contractor's receipt of payment for that work from the City. In addition, the Contractor may not hold retainage from its Subcontractors. The Contractor is required to return any retainage payments to those subcontractors within 30 days after the subcontractor's work related to this contract is satisfactorily completed. The Contractor is required to return any retainage payments to those Subcontractors within 30 days after incremental acceptance of the Subcontractor's work by the City and Contractor's receipt of the partial retainage payment related to the Subcontractor's work; and
8. The Contractor must promptly notify the City, whenever a DBE Subcontractor performing work related to this contract is terminated or fails to complete its work, and must make good faith efforts to engage another DBE Subcontractor to perform at least the same amount of work. The Contractor may not terminate any DBE Subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of the City.

30. INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION (FTA) TERMS (FTA CIRCULAR 4220.1F)

The preceding provisions include, in part, certain Standard Terms and Conditions required by USDOT, whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by USDOT, as set forth in FTA Circular 4220.1F are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Contract. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any of the City's requests which would cause the City to be in violation of the FTA terms and conditions.

31. DRUG AND ALCOHOL TESTING (49 U.S.C. 5331, 49 CFR Part 655)

FTA's drug and alcohol rules, 49 CFR 655, respectively, are unique among the regulations issued by FTA. First, they require that the City ensures that any entity performing a safety-sensitive function on the City's behalf (usually Contractor and/or Contractors) implement a complex drug and alcohol testing program that complies with Part 655. Second, the rules condition the receipt of certain kinds of FTA funding on the City's compliance

with the rules; thus, the City is not in compliance with the rules unless every entity that performs a safety-sensitive function on the City's behalf is in compliance with the rules. Third, the rules do not specify how the City ensures that its Contractors comply with them.

How the City does so depends on several factors, including whether the Contractor is covered independently by the drug and alcohol rules of another Department of Transportation operating administration, the nature of the relationship that the City has with the Contractor, and the financial resources available to the City to oversee the Contractor's drug and alcohol testing program. In short, there are a variety of ways that the City can ensure that its Contractor and/or contractors comply with the rules.

The Contractor agrees to establish and implement a drug and alcohol testing program that complies with 49 CFR Part 655, produce any documentation necessary to establish its compliance with Part 655, and permit any authorized representative of the United States Department of Transportation or its operating administrations, the State Oversight Agency of New York, or the City, to inspect the facilities and records associated with the implementation of the drug and alcohol testing program as required under 49 CFR Part 655 and review the testing process. The Contractor agrees further to certify annually its compliance with Part 655 before January 30th and to submit the Management Information System (MIS) reports before March 15th to the Commissioner of the City or his/her designee. To certify compliance, the Contractor shall use the "Substance Abuse Certifications" in the "Annual List of Certifications and Assurances for Federal Transit Administration Grants and Cooperative Agreements," which is published annually in the Federal Register.

The Contractor agrees further to [Select a, b, or c] (a) submit upon request a copy of the Policy Statement developed to implement its drug and alcohol testing program; OR (b) adopt the City's policy statement as required under 49 CFR 655; OR (c) submit for review and approval to the City, a copy of its Policy Statement developed to implement its drug and alcohol testing program. In addition, the Contractor agrees to: (to be determined by the City, but may address areas such as: the selection of the certified laboratory, substance abuse professional, or Medical Review Officer, or the use of a consortium).

32. INTELLIGENT TRANSPORTATION SYSTEM (ITS)

Intelligent transportation system property and services must comply with the National ITS Architecture and Standards to the extent required by 23 U.S.C. § 517(d), FTA Notice, "FTA National ITS Architecture Policy on Transit Projects," 66 FR 1455 *et seq.*, January 8, 2001, and later published policies or implementing directives FTA may issue.

33. AMERICANS WITH DISABILITIES ACT (ADA) FOR ROLLING STOCK

Rolling stock must comply with the accessibility requirements of USDOT regulations, "Transportation Services for Individuals with Disabilities (ADA)," 49 CFR Part 37, and Joint Architectural Transportation Barriers Compliance Board (ATBCB)/USDOT regulations, "Americans with Disabilities (ADA) Accessibility Specifications for Transportation Vehicles," 36 CFR Part 1192 and 49 CFR Part 38. Private entities must comply with the requirements of 49 CFR Part 37 applicable to public entities with which they contract to provide public transportation services. The City advises third party contractors operating public transportation services to review the requirements for public entities in this context.

Appendix A

BUY AMERICA CERTIFICATION

Certification requirement for procurement of steel, iron, or manufactured products.

Certificate of Compliance with 49 U.S.C. 5323(j)(1)

The bidder or offeror hereby certifies that it will meet the requirements of 49 U.S.C. 5323(j)(1) and the applicable regulations in 49 CFR Part 661.

Date _____

Signature _____

Company Name _____

Title _____

Certificate of Non-Compliance with 49 U.S.C. 5323(j)(1)

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j)(1), but it may qualify for an exception pursuant to 49 U.S.C. 5323(j)(2)(B) or (j)(2)(D) and the regulations in 49 CFR 661.7.

Date _____

Signature _____

Company Name _____

Title _____

Certification requirement for procurement of buses, other rolling stock and associated equipment.

Certificate of Compliance with 49 U.S.C. 5323(j)(2)(C).

The bidder or offeror hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j)(2)(C) and the regulations at 49 CFR Part 661.

Date _____

Signature _____

Company Name _____

Title _____

Certificate of Non-Compliance with 49 U.S.C. 5323(j)(2)(C)

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j)(2)(C), but may qualify for an exception pursuant to 49 U.S.C. 5323(j)(2)(B) or (j)(2)(D) and the regulations in 49 CFR 661.7.

Date _____

Signature _____

Company Name _____

Title _____

Appendix A1

DISCLOSURE OF LOBBYING ACTIVITIES

I _____ hereby certifies on behalf of _____
name and title of company representative name of company

that will file the certification required by 49 CFR Part 20, "New Restrictions on Lobbying." Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to that Federal contract, grant or award covered by 31 U.S.C. 1352. Such disclosures are forwarded from tier to tier up to the recipient.

The Contractor certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form--LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions [as amended by "Government wide Guidance for New Restrictions on Lobbying," 61 Fed. Reg. 1413 (1/19/96).

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Pursuant to 31 U.S.C. § 1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure.

The Contractor, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. A 3801, *et seq.*, apply to this certification and disclosure, if any.

_____ Signature of Contractor's Authorized Official

_____ Name and Title of Contractor's Authorized Official

_____ Date

Appendix A2

**CERTIFICATION OF A CONTRACTOR REGARDING DEBARMENT, SUSPENSION AND
OTHER RESPONSIBILITY MATTERS**

The Contractor _____, certifies to the best of its knowledge and belief, that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or Local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated in paragraph (2) of this certification; and
4. Have not within a three-year period preceding this proposal or bid had one or more public transactions (Federal, State or Local) terminated for cause or default.
5. The Contractor agrees to provide the City with immediate written notice if, at any time, it learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. Each Subcontractor or Vendor for the Contractor shall provide the same updated notice to the Contractor and the Contractor shall be solely responsible for collecting, updating and submitting updated information to the City.

NOTE: If for any reason the Contractor is unable to certify to any of the statements in this certification, the Contractor shall attach an explanation to this certification.

THE CONTRACTOR, _____ CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE STATEMENTS SUBMITTED ON OR WITH THIS CERTIFICATION AND UNDERSTANDS THAT THE PROVISIONS OF 31 U.S.C. SECTIONS 3801 ET SEQ. ARE APPLICABLE THERETO.

Signature and Title of Authorized Official

Date

Appendix A3

**CERTIFICATION OF A SUBCONTRACTOR/SUPPLIER REGARDING DEBARMENT,
SUSPENSION AND OTHER RESPONSIBILITY MATTERS**

The Subcontractor/Supplier _____, certifies to the best of its knowledge and belief, that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or Local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated in paragraph (2) of this certification; and
4. Have not within a three-year period preceding this proposal or bid had one or more public transactions (Federal, State or Local) terminated for cause or default.
5. The Subcontractor agrees to provide the Contractor with immediate written notice if, at any time, it learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. Each Subcontractor or Vendor for the Contractor shall provide the same updated notice to the Contractor and the Contractor shall be solely responsible for collecting, updating and submitting updated information to the City.

NOTE: If for any reason the Subcontractor/Supplier is unable to certify to any of the statements in this certification, the Contractor shall attach an explanation to this certification.

THE SUBCONTRACTOR/SUPPLIER, _____ CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE STATEMENTS SUBMITTED ON OR WITH THIS CERTIFICATION AND UNDERSTANDS THAT THE PROVISIONS OF 31 U.S.C. SECTIONS 3801 ET SEQ. ARE APPLICABLE THERETO.

Signature and Title of Authorized Official

Date

Contractor Note:

Contractor must require all Subcontractors/Suppliers to complete this certification and Contractor shall submit the certifications to the City as they are received.

Appendix B

REQUIRED CONTRACT PROVISIONS

DBE Program

FTA assisted contracts that the City lets will include, as appropriate, the model contract provisions that are included as Appendix B and incorporated herein. NYCDOT shall have discretion to modify the provisions for particular contracts as needed. These required contract provisions consist of:

1. Notice of DBE Contract Requirements in the Invitation for Bids and/or Request For Proposals
2. General Conditions
 - a. Assurances
 - b. DBE Policy
 - c. DBE Obligation
 - d. Prompt Payment to Subcontractors
 - e. Legal and Contract Remedies
 - f. Contractor Reporting Requirements
 - g. Retainage Policy

1. Notice of DBE Contract Requirements in the Invitation for Bids

This contract is subject to the Federal Transit Administration (FTA) requirements for implementing the U.S. Department of Transportation (USDOT) regulations for the following areas:

Disadvantaged Business Enterprise (DBE) Requirements

NYCDOT requires all DBE Utilization forms to be provided on new contracts by the prime contractor within seven (7) calendar days of the bid opening.

The successful Proposer/Bidder will be required to meet a NYCDOT Disadvantaged Business Enterprise (DBE) goal. The agency's goals are found in Section 29 of the Third Party Requirements. The DBE contract goal is based on the total value of the contract(s), which should be subcontracted to a DBE firm or firms. To be qualified as a DBE, a firm should be certified in the NYS Unified Certification Program (NYSUCP), in accordance with Federal Regulation 49 CFR Part 26.

Only firms certified by the NYSUCP as DBEs are eligible to be used by the contractor in order to meet the DBE participation goal set on a NYCDOT Federally funded contract.

The NYSUCP Directory can be found at: <http://www.nysucp.net>

2. General Conditions

All applicants and recipients shall agree to abide by the statements in paragraphs (a) through(e) listed below:

- a. Assurances – Section 26.13

Each **financial assistance agreement** signed with a NYCDOT operation administration (of a primary recipient) must include the following assurance:

The recipient shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any DOT- assisted contract or in the administration of its DBE program or the requirements of 49 CFR Part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of DOT- assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 et. seq.).

Each **prime contractor's contract signed with a subcontractor and/or each subcontractor's contract signed with a lower tier contractor** must include the following assurance:

The contractor, sub -recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT- assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

b. DBE Policy

It is the policy of USDOT that DBEs as defined in 49 CFR Part 26 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal funds under this agreement. Consequently, the DBE requirements of 49 CFR Part 26 apply to this agreement."

c. DBE Obligation

The recipient or its contractor agrees to ensure that DBEs as defined in 49 CFR Part 26 have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds provided under this agreement. In this regard, all contractors shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 to ensure that DBEs have the maximum opportunity to compete for and perform contracts. Recipients and their contractors shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of US DOT assisted contracts.

Because this is a federally funded project with its own DBE requirement no separate NYC M/WBE program condition will apply to this contract. Further information or questions can be directed to:

New York City Department of Transportation
ACCO Office of Contract and Compliance
55 Water Street
8th Floor
New York, New York 10041

Attn: Charles Bartolotta, DBE Contract Compliance Officer

d. Prompt Payment to Subcontractors

In accordance with NYCDOT's DBE Program, the Contractor shall pay all Subcontractors for work that has been satisfactorily performed no later than seven (7) days from the date of the Contractor's receipt of progress payments by the City unless a shorter duration is stated elsewhere in the contract. Within seven (7) days of satisfactory completion of all work payment is required to be paid to the Subcontractor.

e. Legal and Contract Remedies

The DBE Compliance Unit shall monitor and track the actual DBE participation through contractor and subcontractor reports of payments, and other appropriate monitoring, as further described in this Program Plan. The DBE Representative shall ensure that DBE participation is counted toward contract goals and the overall annual goal in accordance with the Regulations. In accordance with 49 CFR Part 26, prime contractors may not terminate sub-contractors for convenience. When DBE contractors are terminated, prime contractors will be required to substitute DBE sub-contractors in order to meet its DBE commitment.

The City will monitor compliance of its contractors on FTA assisted contracts within the requirements of the Regulations and the DBE Program. The City may impose such contract remedies as are available under federal, state and local law and regulations for non-compliance. Such remedies may include, but are not limited to, withholding of progress payments and contract retentions, imposition of liquidated damages, and termination of the contract in whole or in part.

f. Contractor Reporting Requirements

New York City Department of Design Construction (NYCDDC) is required to utilize the NYCDOT DBE Program Plan and comply with USDOT regulations 49 CFR Part 26.

NYCDDC, its contractors and subcontractors are subject to contract compliance reviews to ensure that DBE requirements are being met. They are expected to cooperate with the NYCDOT DBE Representative during desk audits and / or on-site reviews. NYCDOT has a Field Representative responsible for project oversight to ensure that contract work is being performed by designated DBE sub-contractors and that the NYCDDC Project Accountant tracks payments to ensure that project goals, when applicable, are followed. The Compliance Officer, and Field Representative also reports work and payment progress to the Project Accountant who then tracks DBE utilization with the DBE Representative. The DBE Compliance Officer and DBE Representative ensure that sub-contractor DBE participation is credited to overall goals after the DBE has received payments.

A sample of our DBE Commitment Letter specifying the Prime Contractors DBE Responsibilities is attached as Appendix D.

g. Retainage Policy

NYCDOT has made a determination that **NO RETAINAGE WILL BE HELD ON FTA FUNDED CONTRACTS.**

NYCDDC must ensure prompt and full payment from the Contractor to the subcontractor within 7 days after the subcontractor's work is satisfactorily completed.

For purposes of this section, a subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the recipient. When a recipient has made an incremental acceptance of a portion of a contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

Appendix C

DETERMINING GOOD FAITH EFFORTS PRIOR TO BID

In the event that the apparent low Bidder has not provided evidence of meeting the DBE goal as required by the contract along with its BID, the Department will review the apparent low Bidder's efforts to obtain DBE subcontractors/vendors in order to determine whether such Bidder has in fact made good faith efforts to meet the required DBE goal percentage. In order to make such determination, the Department will consider the quality and quantity of the efforts that the Bidder has made. The following is a list of the types of actions which the Department will consider as part of the Bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exhaustive or exclusive. Other factors or efforts may be relevant in appropriate cases.

1. Efforts to secure participation by certified DBE firms to perform contract work. Only DBEs certified by the NYSUCP shall be used to fulfill the established goal on Federal-Aid contracts.
2. Soliciting through all reasonable and available means (e.g., attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The Bidder shall solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The Bidder shall determine with certainty if the DBEs are interested by taking appropriate steps to follow up on initial responses to the Bidder's inquiries.
3.
 - a. The Bidder shall, at a minimum, seek certified DBEs in the same geographic region where the contract is located. This is defined as a one hundred (100) kilometer radius around the city, town or borough where the contract is located as identified in the contract books. For specialty work such as pavement markings, guide rail, etc., the Bidder shall, at a minimum, solicit on an upstate or downstate basis, depending upon the location of the contract.
 - b. Identification of upstate and downstate areas within a 100 kilometer radius is available through the NYSUCP website, which is accessible on the Internet at www.nysucp.net. For bidders who do not have internet capability, a hard copy solicitation report for a specific contract can be requested by contacting the Office of Contract and Compliance Unit at (212) 839-9411.
4. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goal(s) will be achieved. This includes, where appropriate, either breaking down operations within the contract or combining like or related operations in the contract into logistically and economically feasible units to facilitate DBE participation, even when the Contractor might otherwise prefer to perform these work items with its own forces.
5. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
6.
 - a. Negotiating in good faith with interested DBEs. It is the Bidder's responsibility to make a portion of the work available to DBE's Subcontractors and material suppliers and to select those portions of the work or material needs consistent with the available DBE's subcontractors and material suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications

for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

b. The fact that there may be some additional cost involved in finding and using DBEs is not itself sufficient reason for a Bidder's failure to meet contract DBE goal(s), as long as such costs are reasonable.

7. Making efforts to assist interested DBEs in obtaining bonding, lines of credit or insurance as required by the City.
8. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance.
9. Effectively using the services of available disadvantaged business focused media, trade associations, and contractors' groups; local, state, and Federal disadvantaged business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.
10. All bidders shall keep records of efforts to solicit and negotiate with DBEs, using the Solicitation Log as a continuing record of pre- and post-letting solicitation activity. When submitting a DBE Schedule of Utilization to the City, the Apparent Low Bidder will attach the log, together with the supplemental information specified in the instructions for the Solicitation Log as evidence of good-faith efforts when the established DBE goal(s) for the contract have not been met utilizing certified DBEs. Such supplemental efforts shall include at least the following:
 - a. All envelopes of solicitation inquires that were returned as undeliverable; and
 - b. Any quotations submitted by DBEs that are not included in the DBE Schedule of Utilization with an explanation for the Bidder's action in case.
11. Promptly executing an agreement with DBE Subcontracts/vendors.

Appendix D

SAMPLE PRIME CONTRACTOR AWARD LETTER

Date

Prime Contractor Winner, Inc.
Attn: Mr. Buck Stops Here, President
1111 Bottom Line Street
Anywhere, New York 10000

Re: Contract Name and/or Description

Dear Mr. John Doe:

Your Company was awarded and recently executed the above listed contract with NYCDDC. Part of the consideration in awarding the contract was the Disadvantaged Business Enterprise (DBE) participation that you listed in the bid/proposal document.

Please be advised that you will be required to meet your Disadvantaged Business Enterprise Goals of 11%

You have listed the following DBE firm(s) and the dollar amounts of their subcontracts:

ABC Electrical Co.	Electrical Contracting	\$xx,xxx
DEF Plumbing	Plumbing Contracting	\$xx,xxx
GHI Roofing	Roofing Contracting	\$xx,xxx
JKL Printing Co.	Printing	\$xx,xxx

The DBE firm(s) listed above represent(s) your commitment to NYCDOT's DBE program and each respective DBE firm.

To ensure the integrity of the DBE program, NYCDOT has developed DBE compliance procedures that should be followed during this contract. NYCDOT's DBE Department and Contract Administrator should be notified in writing prior to any material changes from the above commitments. Also, any changes should be for real and substantial reasons. Frivolous and/or unsubstantiated changes are unacceptable.

Please provide to the DBE Department, within 3 calendar days of execution, a copy of your executed subcontract with each DBE firm. A letter of commitment signed by both an authorized representative of your firm and the DBE firm may be submitted instead of signed subcontracts. The letter should verify the subcontract dollar amount, the general work scope, **and affirm the absence of subcontract restrictions or requirements that are unfair, burdensome, outside of normal business practices, unjustly punitive, etc.** There should be a letter for each DBE firm.

Also, you **must** attach NYCDOT's **DBE Expenditure Report** (see contract compliance manual) with **each** invoice/payment request that you submit to NYCDDC's Contract Administrator. This report is designed to provide an accounting of monthly and year-to-date payments made to the DBE firm(s) that you have subcontracted with above.

The DBE Expenditure Report reflects the dollars that **will be paid** to each DBE firm from your **submitted invoice/payment request**. Evidence of payments (i.e. copy of canceled checks, copy of check register, etc.) may be periodically requested. NYCDDC **may not** authorize payment unless the DBE Expenditure Report accompanies your invoice/payment request.

Finally, please submit a DBE projected work schedule (i.e. a breakdown by month of expected DBE activity). Updates of the projected work schedule should be submitted as needed over the life of the contract.

Failure to comply may result in breach of contract and it may jeopardize future contracts with NYCDDC.

If you have any questions you may contact NYCDOT's Contract Compliance Unit at (212) 839-9411 or email us at accomail@dot.nyc.gov.

Thank you for your continued commitment and cooperation.

Cordially,

DBE Administrator

cc: Every DBE Firm Listed Above
Appropriate Project Manager, NYCDOT
Contracts Administrator, NYCDDC
Purchasing Administrator, NYCDOT
DBE File, NYCDOT
Others As Needed

Appendix E

MINORITY OWNED FINANCIAL INSTITUTIONS

All contractors are encouraged to use Minority Owned Financial Institutions. A list can be found at <http://www.federalreserve.gov/releases/mob/>.

Appendix F

PREVAILING WAGE RATES
CURRENT DAVIS-BACON PREVAILING WAGE RATES

Bidders and the selected Contractor, if any, shall be responsible for confirming and adhering to the actual Davis-Bacon Wage Rates in effect at any time after the issuance of this IFB including, without limitation, during the Contract Term. Federal Davis-Bacon Wage Rates may be accessed through the U.S. Department of Labor's Website at: <http://www.wdol.gov/wdol/scafiles/davisbacon/ny.html>.

STANDARD CLAUSES FOR ALL NEW YORK STATE CONTRACTS

The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract (the word "Contractor" herein refers to any party other than the State, whether a contractor, licensor, licensee, lessor, lessee or any other party):

1. **EXECUTORY CLAUSE.** In accordance with Section 41 of the State Finance Law, the State shall have no liability under this contract to the Contractor or to anyone else beyond funds appropriated and available for this contract.
2. **NON-ASSIGNMENT CLAUSE.** In accordance with Section 138 of the State Finance Law, this contract may not be assigned by the Contractor or its right, title or interest therein assigned, transferred, conveyed, sublet or otherwise disposed of without the previous consent, in writing, of the State and any attempts to assign the contract without the State's written consent are null and void. The Contractor may, however, assign its right to receive payment without the State's prior written consent unless this contract concerns Certificates of Participation pursuant to Article 5-A of the State Finance Law.
3. **COMPTROLLER'S APPROVAL.** In accordance with Section 112 of the State Finance Law (or, if this contract is with the State University or City University of New York, Section 355 or Section 6218 of the Education Law), if this contract exceeds \$15,000 (or the minimum thresholds agreed to by the Office of the State Comptroller for certain S.U.N.Y. and C.U.N.Y. contracts); or if this is an amendment for any amount to a contract which, as so amended, exceeds said statutory amount, or if, by this contract, the State agrees to give something other than money when the value or reasonably estimated value of such consideration exceeds \$10,000, it shall not be valid, effective or binding upon the State until it has been approved by the State Comptroller and filed in his office. Comptroller's approval of contracts let by the Office of General Services is required when such contracts exceed \$30,000 (State Finance Law Section 163.6.a).
4. **WORKERS' COMPENSATION BENEFITS.** In accordance with Section 142 of the State Finance Law, this contract shall be void and of no force and effect unless the Contractor shall provide and maintain coverage during the life of this contract for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.
5. **NON-DISCRIMINATION REQUIREMENTS.** To the extent required by Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, sexual orientation, age, disability, genetic predisposition or carrier status, or marital status. Furthermore, in accordance with Section 220-e of the Labor Law, if this is a contract for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this contract shall be performed within the State of New York, Contractor agrees that neither it nor its Subcontractors shall, by reason of race, creed, color, disability, sex or national origin: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. If this is a building service contract as defined in Section 230 of the Labor Law, then, in accordance with Section 239 thereof, Contractor agrees that neither it nor its Subcontractors shall, by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. Contractor is subject to fines of \$50.00 per person per day for any violation of Section 220-e or Section 239 as well as possible termination of this contract and forfeiture of all moneys due hereunder for a second or subsequent violation.

6. **WAGE AND HOURS PROVISIONS.** If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof, neither Contractor's employees nor the employees of its Subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, Contractor and its Subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law.

7. **NON-COLLUSIVE BIDDING REQUIREMENT.** In accordance with Section 139-d of the State Finance Law, if this contract was awarded based upon the submission of bids, Contractor warrants, under penalty of perjury, that its bid was arrived at independently and without collusion aimed at restricting competition. Contractor further warrants that at the time Contractor submitted its bid, an authorized and responsible person executed and delivered to the State a non-collusive bidding certification on Contractor's behalf.

8. **INTERNATIONAL BOYCOTT PROHIBITION.** In accordance with Section 220-f of the Labor Law and Section 139-h of the State Finance Law, if this contract exceeds \$5,000, the Contractor agrees, as a material condition of the contract, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the Federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations thereunder. If such Contractor, or any of the aforesaid affiliates of Contractor, is convicted or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contract's execution, such contract, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify the State Comptroller within five (5) business days of such conviction, determination or disposition of appeal (2 NYCRR 105.4).

9. **SET-OFF RIGHTS.** The State shall have all of its common law, equitable and statutory rights of setoff. These rights shall include, but not be limited to, the State's option to withhold for the purposes of setoff any moneys due to the Contractor under this contract up to any amounts due and owing to the State with regard to this contract, any other contract with any State department or agency, including any contract for a term commencing prior to the term of this contract, plus any amounts due and owing to the State for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The State shall exercise its set-off rights in accordance with normal State practices including, in cases of set-off pursuant to an audit, the finalization of such audit by the State agency, its representatives, or the State Comptroller.

10. **RECORDS.** The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this contract (hereinafter, collectively "the Records"). The Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter or three (3) years after final payment, whichever is later. The State Comptroller, the Attorney General and any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in this contract, shall have access to the Records during normal business hours at an office of the Contractor within the State of New York or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying. The State shall take reasonable steps to protect from public disclosure any of the Records which are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute") provided that: (i) the Contractor shall timely inform an appropriate State official, in writing, that said records should not be disclosed; and (ii) said records shall be sufficiently identified; and (iii) designation of said records as exempt under the Statute is reasonable. Nothing contained herein shall diminish, or in any way adversely affect, the State's right to discovery in any pending or future litigation.

11. IDENTIFYING INFORMATION AND PRIVACY NOTIFICATION:

(A) **Federal Employer Identification Number And/or Federal Social Security Number.** All invoices or New York State standard vouchers submitted for payment for the sale of goods or services or the lease of real or personal property to a New York State agency must include the payee's identification number, i.e., the seller's or lessor's identification number. The number is either the payee's Federal employer identification number or Federal social security number, or both such numbers when the payee has both such numbers. Failure to include this number or numbers may delay payment. Where the payee does not have such number or numbers, the payee, on his invoice or New York State standard voucher, must give the reason or reasons why the payee does not have such number or numbers.

(B) **Privacy Notification.** (1) The authority to request the above personal information from a seller of goods or services or a lessor of real or personal property, and the authority to maintain such information, is found in Section 5 of the State Tax Law. Disclosure of this information by the seller or lessor to the State is mandatory. The principal purpose for which the information is collected is to enable the State to identify individuals, businesses and others who have been delinquent in filing tax returns or may have understated their tax liabilities and to generally identify persons affected by the taxes administered by the Commissioner of Taxation and Finance. The information will be used for tax administration purposes and for any other purpose authorized by law. (2) The personal information is requested by the purchasing unit of the agency contracting to purchase the goods or services or lease the real or personal property covered by this contract or lease. The information is maintained in New York State's Central Accounting System by the Director of State Accounts, Office of the State Comptroller, 110 State Street, Albany, New York 12236.

12. EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITIES AND WOMEN. In accordance with Section 312 of the Executive Law, if this contract is: (i) a written Agreement or purchase order instrument, providing for a total expenditure in excess of \$25,000.00, whereby a contracting agency is committed to expend or does expend funds in return for labor, services, supplies, equipment, materials or any combination of the foregoing, to be performed for, or rendered or furnished to the contracting agency; or (ii) a written Agreement in excess of \$100,000.00 whereby a contracting agency is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon; or (iii) a written Agreement in excess of \$100,000.00 whereby the owner of a State assisted housing project is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon for such project, then:

(a) The Contractor will not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability or marital status, and will undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination. Affirmative action shall mean recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, or termination and rate of pay or other forms of compensation;

(b) At the request of the contracting agency, the Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other Agreement or understanding, to furnish a written statement that such employment agency, labor union or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein; and

(c) The Contractor shall state, in all solicitations or advertisements for employees, that, in the performance of the State contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

Contractor will include the provisions of "a", "b" and "c", above, in every subcontract over \$25,000.00 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor. Section 312 does not apply to: (i) work, goods or services unrelated to this contract; or (ii) employment outside New York State; or (iii) banking services, insurance policies or the sale of securities. The State shall consider compliance by a Contractor or Subcontractor with the requirements of any Federal law concerning equal employment opportunity which effectuates the purpose of this section. The contracting agency shall determine whether the imposition of the requirements of the provisions hereof duplicate or conflict with any such Federal law and if such duplication or conflict exists, the contracting agency shall waive the applicability of Section 312 to the extent of such duplication or conflict. Contractor will comply with all duly promulgated and lawful rules and regulations of the NYS Department of Economic Development's Division of Minority- and Women-Owned Business Development pertaining hereto.

13. CONFLICTING TERMS. In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this subsection, the terms of this subsection shall control.

14. GOVERNING LAW. This contract shall be governed by the laws of the State of New York except where the Federal supremacy clause requires otherwise.

15. LATE PAYMENT. Timeliness of payment and any interest to be paid to Contractor for late payment shall be governed by Article XI-A of the State Finance Law to the extent required by law.

16. NO ARBITRATION. Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration (except where statutorily authorized) but must, instead, be heard in a court of competent jurisdiction of the State of New York.

17. SERVICE OF PROCESS. In addition to the methods of service allowed by the State Civil Practice Law & Rules ("CPLR"), Contractor hereby consents to service of process upon it by registered or certified mail, return receipt requested. Service hereunder shall be complete upon Contractor's actual receipt of process or upon the State's receipt of the return thereof by the United State Postal Service as refused or undeliverable. Contractor must promptly notify the State, in writing, of each and every change of address to which service of process can be made. Service by the State to the last known address shall be sufficient. Contractor will have thirty (30) calendar days after service hereunder is complete in which to respond.

18. PROHIBITION ON PURCHASE OF TROPICAL HARDWOODS. The Contractor certifies and warrants that all wood products to be used under this contract award will be in accordance with, but not limited to, the specifications and provisions of State Finance Law Section 165. (Use of Tropical Hardwoods) which prohibits purchase and use of tropical hardwoods, unless specifically exempted, by the State or any governmental agency or political subdivision or public benefit corporation. Qualification for an exemption under this law will be the responsibility of the contractor to establish to meet with the approval of the State.

In addition, when any portion of this contract involving the use of woods, whether supply or installation, is to be performed by any Subcontractor, the prime Contractor will indicate and certify in the submitted bid proposal that the Subcontractor has been informed and is in compliance with specifications and provisions regarding use of tropical hardwoods as detailed in Section 165 State Finance Law. Any such use must meet with the approval of the State; otherwise, the bid may not be considered responsive. Under bidder certifications, proof of qualification for exemption will be the responsibility of the Contractor to meet with the approval of the State.

19. PURCHASES OF APPAREL. In accordance with State Finance Law §162 (4-a), the State shall not purchase any apparel from any vendor unable or unwilling to certify that: (i) such apparel was manufactured in compliance

with all applicable labor and occupational safety laws, including, but not limited to, child labor laws, wage and hours laws and workplace safety laws, and (ii) vendor will supply, with its bid (or, if not a bid situation, prior to or at the time of signing a contract with the State), if known, the names and addresses of each Subcontractor and a list of all manufacturing plants to be utilized by the bidder.

20. CONTRACT TERMINATION PROVISION. The State reserves the right to terminate this contract in the event it is found that the certification filed by the Contractor in accordance with the requirements contained in State Finance Laws §139j and §139k was intentionally false or intentionally incomplete. Upon such finding, the State may exercise its termination right by providing written notification to the Contractor in accordance with the written notification terms of the contract.

(NO TEXT ON THIS PAGE)

**DESIGNATION OF AFFIRMATIVE ACTION REPRESENTATIVES
BY CONTRACTORS/SUBCONTRACTORS**

In accordance with Equal Employment Opportunity (EEO) and Disadvantaged Business Enterprise (DBE) Utilization participation requirements of the New York City Department of Transportation contract identified below, the following information shall be furnished by the contractor and all subcontractors prior to approval to work.

1. **Contract No.** _____ 2. **County** _____

3. **Contractor:** or **Subcontractor:**

Name _____

Address _____

City/State/Zip _____

4. **Equal Employment Opportunity Officer:**

Name _____

Title _____

Address _____

City/State/Zip _____

Telephone () _____

5. **Contract Site Equal Employment Opportunity Representative:**

Name _____

Title _____

Address _____

City/State/Zip _____

Telephone () _____

6. **Disadvantaged/ Minority/Women's Business Enterprise (D/M/WBE) Officer:**

Name _____

Title _____

Address _____

City/State/Zip _____

Telephone () _____

7. **Designation Submission:** Initial Revised

This form shall accompany DBE pre-award submittals AAPHC 89 to the Contract Compliance Unit.

(NO TEXT ON THIS PAGE)

NYC Department of Transportation
DBE SOLICITATION LOG

NYC DOT
AAP10
(01/14)

Contract No. _____ County _____ Letting Date ____/____/____ Date Submitted ____/____/____ Page ____ of ____

Contractor Name & Address _____ Contract Name: _____

E-Mail: _____ Telephone No: () - _____

	Firm Name Contact	Program	Telephone No. E-Mail Address	NYSDOT Work Code(s)	Date of Contact	Method(s) of Contact	DBE Response Code(s)	Bidder Action Code(s)
1		Select One	() -		/ /	Select One		
					/ /	Select One		
					/ /	Select One		
2		Select One	() -		/ /	Select One		
					/ /	Select One		
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3		Select One	() -		/ /	Select One		
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4		Select One	() -		/ /	Select One		
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5		Select One	() -		/ /	Select One		
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6		Select One	() -		/ /	Select One		
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7		Select One	() -		/ /	Select One		
					/ /	Select One		
					/ /	Select One		
8		Select One	() -		/ /	Select One		
					/ /	Select One		
					/ /	Select One		
9		Select One	() -		/ /	Select One		
					/ /	Select One		
					/ /	Select One		
10		Select One	() -		/ /	Select One		
					/ /	Select One		
					/ /	Select One		

DBE Response Codes 11- Submitted Written Quote 12- Submitted Verbal Quote 13 - Negotiating with prime 14- Developing Quote 15- Schedule Unacceptable 26- Other
21- Not Certified for items(s) 22- Location Unacceptable 23- No Price Agreement 24- No Time for Bid 25- Unresponsive 36- Unreachable 37- Not Selected
Bidder Codes: 31- Selected 32- Unavailable 33- No Longer in Business 34- Undeliverable 35- Unreachable 36- Unresponsive 37- Not Selected

(NO TEXT ON THIS PAGE)

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**NEW YORK CITY
DEPARTMENT OF TRANSPORTATION
DBE UTILIZATION WORKSHEET**

CONTRACT No.	COUNTY	F. A. PROJECT No.	PAGE No. OF	DATE SUBMITTED
---------------------	---------------	--------------------------	------------------------	-----------------------

CONTRACTOR		SUBCONTRACTOR		
NAME	_____	NAME	_____	
ADDRESS	_____	ADDRESS	_____	
PHONE	_____	PHONE	_____	
FED. ID No.	_____	FED. ID No.	_____	

The Contractor shall inform the Engineer in Charge the dates when the Subcontractor starts and completes all work under the subcontract. When work performed by the Subcontractor is included in an estimate for payment, labor affidavits, copies of payrolls, etc. are to be submitted in the same manner and number as required of the Prime Contractor.

EST. BEGINNING DATE	EST. COMPLETION DATE
(Mo & Yr) ____/____	(Mo & Yr) ____/____

This approval may be rescinded at any time in the progress of the work if work of the Subcontractor is determined unsatisfactory.

No Work may be assigned by the Subcontractor to a second tier Subcontractor. No work may be performed by a Subcontractor other than that specifically approved by the Contract Compliance Director. The signators below agree that violations of the foregoing may result in no payment by the City for the related work.

No work shall be started by the Subcontractor prior to filing the required insurances. The contractor and Subcontractor hereby certify that the subcontract is in writing, and contains all the pertinent provisions of the prime contract in regard to Federal, State, and City Laws and Regulations.

Contractor's Signature **Date** **Subcontractor's Signature** **Date**

	ITEM No.	NAME	< 100 %	BID AMOUNT		AGREED AMOUNT \$	% to CNT
				\$ SPECIALTY	\$ NON-SPECIALTY		
1							
2							
3							
4							
5							
6							
7							
8							
9							
TOTALS: \$				\$	\$	\$	

The Subcontractor named above is approved for utilization under the DBE General Provisions. Approval of this worksheet conveys only the Department's concurrence in the use of the named subcontractor for the items specified, and application of the DBE Agreed Amount to the participation goals of the contract. CCU approval of an Approval to Subcontract form AAPHC 89 is required prior to subletting or otherwise assigning any part of the contract.

APPROVED FOR OFFICE OF EQUAL OPPORTUNITY DEVELOPMENT AND COMPLIANCE BY: _____ **DATE APPROVED** ____/____/____

NEW YORK CITY
DEPARTMENT OF TRANSPORTATION
DBE UTILIZATION WORKSHEET

New York City Department of Transportation DBE General Provisions requires that prior to contract award , Contractors must obtain written consent of the NYCDOT to a utilization plan that identifies certified disadvantaged owned business enterprises that have committed to perform work on a proposed contract. Authority for approval of utilization has been delegated to the Contract Compliance Unit (CCU). The DBE Utilization Worksheet is used to describe in item detail the utilization plan for each proposed subcontractor.

DBE Provisions require Prime Contractors to obtain written consent of the Department prior to subletting or otherwise assigning any part of the contract. Authority for approval to subcontract has been delegated to the Contract Compliance Unit.

The DBE Utilization Worksheet has been designated for use as form AAPHC 89. When submitting forms for firms included in the Contractor's Utilization Plan, prepare a signed copy as described below. All DBE Utilization Worksheets are to be submitted directly to CCU as attachments to a revised Utilization Plan, form AAP 19.

CONTRACT No.: Enter New York City contract number. (Example: BRC100)

COUNTY: Enter name of county or counties of this project. (Example: Bronx)

F.A. Project No.: Enter only for Federal Aid Projects. (Example: I-87-3(177))

PAGE No.: Enter 1 of 1, 1 of 2, or 2 of 2 etc. Use additional forms as needed.

DATE SUBMITTED: Enter date completed forms are submitted to OCC (MM/DD/YY)

CONTRACTOR AND SUBCONTRACTOR DATA: Enter names, and addresses (including ZIP code), telephone numbers (including area codes) and Federal Identification Numbers for both the Contractor and Subcontractor.

EST. BEGINNING DATE: Enter estimated month and year in which subcontractor work will begin.

EST. COMPLETION DATE: Enter estimated month and year in which subcontractor work will completed.

SIGNATURES: Authorized representatives of both the prime and subcontractor sign and date.

ITEM No. AND NAME: Enter each item or specification number and name. If only part of an item is to be subcontracted check the "less than 100%" box and attach a description of the specific work to be performed.

BID AMOUNT: Enter the prime contractor total bid price for items of work being subcontracted, item by item, under appropriate heading of "Specialty" or Non-Specialty" and enter totals for each "Specialty" items, if any, are designated in the contract proposal. If only part of an item is to be subcontracted enter the amount of the prime contractor bid amount that represents the portion of the item that is being subcontracted: For other than subcontract work, i.e. material supplier and off-site trucking or other services no entry is required under "Specialty" or "Non-Specialty" headings.

DBE ONLY AGREED AMOUNT: In addition to completing the appropriate bid amount columns as described above on the utilization worksheet enter the agreed amount for each item of work to be performed by a certified DBE. Indicate if the contractor's Utilization Plan whether subcontractor, material supplier, trucker or provider of other services

TOTALS: Enter the sum of all Bid Amounts and DBE Agreed Amounts, if any.

Subcontractor Approvals and Approval Amendments will be sequentially numbered for each prime contract in the order that may be approved. An approved copy will be provided to the prime contractor and the Engineer-in-Charge of the contract in each instance.

**NEW YORK CITY
DEPARTMENT OF TRANSPORTATION
DBE UTILIZATION WORKSHEET AMENDMENT**

CONTRACT No.	COUNTY	F. A. PROJECT No.	PAGE No. OF	DATE SUBMITTED
---------------------	---------------	--------------------------	------------------------	-----------------------

<p align="center">CONTRACTOR</p> <p>NAME _____</p> <p>ADDRESS _____</p> <p>PHONE _____</p> <p>FED. ID No. _____</p>	<p align="center">SUBCONTRACTOR</p> <p>NAME _____</p> <p>ADDRESS _____</p> <p>PHONE _____</p> <p>FED. ID No. _____</p>
--	---

<p>The Contractor shall inform the Engineer in Charge the dates when the Subcontractor starts and completes all work under the subcontract. When work performed by the Subcontractor is included in an estimate for payment, labor affidavits, copies of payrolls, etc. are to be submitted in the same manner and number as required of the Prime Contractor.</p>	<p align="center">EST. BEGINNING DATE</p> <p>(Mo & Yr) ____ / ____</p>	<p align="center">EST. COMPLETION DATE</p> <p>(Mo & Yr) ____ / ____</p>
--	---	--

This approval may be rescinded at any time in the progress of the work if work of the Subcontractor is determined unsatisfactory.

No work may be assigned by the Subcontractor to a second tier Subcontractor. No work may be performed by a Subcontractor other than that specifically approved by the Contract Compliance Director. The signatories below agree that violations of the foregoing may result in no payment by the City for the related work.

No work shall be started by the Subcontractor prior to filing the required insurances. The contractor and Subcontractor hereby certify that the subcontract is in writing, and contains all the pertinent provisions of the prime contract in regard to Federal, State, and City Laws and Regulations.

Contractor' Signature	Date	Subcontractor's Signature	Date
------------------------------	-------------	----------------------------------	-------------

ONLY LIST ITEMS TO BE ADDED, DELETED, INCREASED OR DECREASED: See Instructions.

ITEM No.	NAME	Previous or New Entry	< 100%	BID AMOUNT		AGREED AMOUNT \$	% to CNT
				\$ SPECIALTY	\$ NON-SPECIALTY		
1		PREV					
		NEW					
2		PREV					
		NEW					
3		PREV					
		NEW					
4		PREV					
		NEW					
5		PREV					
		NEW					
Total all PREV Bid Amounts & D/M/WBE Agreed Amounts:							
Total all NEW Bid Amounts & D/M/WBE Agreed Amounts:							
NET TOTAL AMENDMENTS:				\$	\$	\$	

The Subcontractor named above is approved for utilization under the DBE General Provisions. Approval of this worksheet conveys only the Department's concurrence in the use of the named subcontractor for the items specified, and application of the DBE Agreed Amount to the participation goals of the contract. CCU approval of an Approval to Subcontract (Amended) form AAPHC 89-1 is required prior to subletting or otherwise assigning any new work shown on this worksheet.

APPROVED FOR OFFICE OF EQUAL OPPORTUNITY DEVELOPMENT AND COMPLIANCE BY:	DATE APPROVED
	/ /

**INSTRUCTIONS FOR COMPLETING FORM AAPHC 89-1
DBE UTILIZATION WORKSHEET AMENDMENT**

New York City Department of Transportation DBE Provisions requires that prior to contract award; Prime Contractors must obtain written consent of the Department to a utilization plan that identifies certified disadvantaged owned business enterprises that have committed to perform work on a proposed contract. Authority for approval of utilization has been delegated to the Contract Compliance Unit (CCU). The DBE Utilization Worksheet is used to describe in item detail the utilization plan for each proposed subcontractor. The DBE Utilization Worksheet Amendment is used to describe in item detail any change (addition, subtraction, increase and/or decrease) to a previously approved worksheet.

DBE Provisions require Prime Contractors to obtain written consent of the Department prior to subletting or otherwise assigning any part of the contract. Authority for approval to subcontract has been delegated to the Contract Compliance Unit.

The DBE Utilization Worksheet Amendment has been designed for use as form AAPHC 89-1, when submitting forms for firms included in the Contractor's Utilization Plan, prepare a signed copy as described below. All DBE Utilization Worksheet Amendments are to be submitted directly to OCC as attachments to a revised Utilization Plan, form AAP 19.

Approval of the Utilization Worksheet Amendment conveys only the Department's concurrence in the use of the named subcontractor for the items specified, and application of the DBE Agreed Amount to the participation goals of the contract.

Only one DBE Utilization Worksheet is to be submitted for each subcontractor on this prime contract. DO NOT submit amendments to the item(s) or amount(s) of work proposed for a subcontractor on another form AAPHC 89. After initial forms have been filed for a given subcontractor, any amendments to the item(s) or amount(s) of work to be performed by this subcontractor will be submitted on form AAPHC 89-1.

Examples: (1) To add or delete items of work and/or increase or decrease the value of an item of work on a previously approved Utilization Worksheet: complete form AAPHC 89-1.

(2) To transfer part of a previously approved Utilization Worksheet from one subcontractor to another previously approved subcontractor: complete two sets of forms AAPHC 89-1. On the first request approval to decrease previously approved value(s) and on the second request approval to increase previously approved value(s).

(3) To transfer part of a previously approved Utilization Worksheet from one subcontractor to a new, not previously approved subcontractor: complete form AAPHC 89-1 and one form AAPHC 89. On the form AAPHC 89-1, request approval to decrease the value of a previously approved subcontract; on the form AAPHC 89, request approval to execute an entirely new subcontract with a new subcontractor.

AN AMENDMENT THAT REDUCES THE UTILIZATION OF AN APPROVED DBE MUST BE ACCOMPANIED BY SUPPORTING DOCUMENTATION (i.e., a letter of unavailability from the DBE).

CONTRACT NO.: Enter NYC contract number. Example: BRC100

COUNTY: Enter name of county or counties. Example: Manhattan & Brooklyn

F.A. PROJECT No.: Enter only for Federal-Aid projects. Example: I-87-3(177)

**NYC Department of Transportation
Contractor Report of Contract Payments**

Final Report <input type="checkbox"/> Yes <input type="checkbox"/> No	PIN & Contract # <input style="width:100%;" type="text"/> <input style="width:100%;" type="text"/>	County <input style="width:100%;" type="text"/>	Report Date <input style="width:100%;" type="text"/>
Contractor Name and Address <input style="width:100%; height: 40px;" type="text"/>		Subcontractor/Vendor Name and Address <input style="width:100%; height: 40px;" type="text"/> <input type="checkbox"/> Check if firm is CERTIFIED D/M/WBE	
Contractor Federal Identification Number <input style="width:100%;" type="text"/>		Subcontractor/Vendor Federal Identification Number <input style="width:100%;" type="text"/>	

Total Payments Due to Date:	<input style="width:95%;" type="text"/>
- Withholding to Date:	<input style="width:95%;" type="text"/>
= Total Payments to Date:	<input style="width:95%;" type="text"/>

Comments:

Certification

Section 139-f of the State Finance Law requires the contractor to pay each of its subcontractors and/or material supplier the proceeds from the payment representing the value of work performed and/or materials furnished by the subcontractor and/or material supplier within 7 calendar days of the receipt of any payment from the public owner.

As an officer or the Contractor identified above, and based on my personal knowledge, I certify that payment has been made by the Contractor to the Subcontractor/Vendor in the amount herein, and that said work/services/product was performed/supplied by said Subcontractor/Vendor and that there were no rebates, refunds, or offsets applied to any payments except as noted under "Comments" above and a copy of this form has been sent to the Subcontractor/Vendor.

Signed: _____

Title: _____
(For Contractor)

PAYMENT CERTIFICATION

As an officer of the Subcontractor/Vendor identified above, and based on my personal knowledge, I certify that payment has been received in the amount stated herein, and that said work/services/product was performed/supplied and supervised solely by the Subcontractor/Vendor and that there were no rebates, refunds, or offsets applied to any payments except as noted under "Comments" above.

Signed: _____

Title: _____
(For Subcontractor/Vendor)

Notarization

Sworn before me this _____

Day of _____, _____

Notary Public

Sworn before me this _____

Day of _____, _____

Notary Public

Any person who makes a false or fraudulent statement in connection with participation of a DBE on any assisted program or otherwise violates applicable State and/or Federal statutes may be referred for prosecution under applicable State and/or Federal law.

Note to Subcontractor: If the Contractor has not paid your firm for the work completed and accepted by the Project Sponsor in accordance with the terms specified on this form, please contact the Engineer in Charge for the contract.

NYCDOT AAP 21LL (FTA) Form Instructions:

Final Report: Check YES or NO, as appropriate, to indicate whether this will be the Final Report submitted for this vendor.

Contract No: Enter NYC DOT PIN (Project Identification Number) and Local Project contract number.

County: Enter the name of the county or counties this project is located in.

Report Date: Enter date (Month/Day/Year) through which payments due and made are reflective of.

Contractor and Vendor Data: Enter names, and addresses (including zip code), Telephone numbers (including area codes) and Federal Identification Numbers for both the Contractor and Vendor.

Total Payments Due to Date: Enter total of payments due to the vendor to date.

Withholding to Date: Enter amount due vendor that has not been paid. Any withholding must be explained in the Comments section.

Total Payment to Date: Value of payments due to date less withholding.

Comments: Amounts recorded as withholding must be accompanied by a brief description of the circumstances necessitating the withholding along with item numbers involved (if any). If there is not enough space, then attach a letter of explanation to this form.

Signatures: Authorized representatives of both the Prime Contractor and Subcontractor/Vendor sign and date.

Notarization: The signatures must be notarized by a duly registered Notary Public.

The AAP 21LL is a cumulative to-date report of the total payments due a vendor, total withholdings, and total payments made to the vendor. The AAP 21LL is to be submitted and notarized by the 15th day of the following month to the Regional Local Project Liaison (RLPL) for each vendor due payment during the previous month or when requested by the Project Sponsor or the NYC Department of Transportation. The dollar values on this report should be accurate through the last day of the previous month. The Final AAP 21LL should be submitted as soon as possible after the vendor has completed/supplied all of the work/service/products for which it was utilized, but not later than 30 days after the vendor/subcontractor has completed its commitment.

The Prime Contractor shall submit a copy of the AAP 21LL signed by an authorized representative of their firm, to the Sponsor and to each vendor due payment on the project.

The Prime Contractor shall inform the Vendor of its responsibility to review the form for accuracy, to sign and return the form to the Sponsor, and to have the Vendor's signature on the AAP 21LL.

This report is a written instrument within the meaning of Section 175.00 of the Penal law. I am fully aware that it will be filed with the New York City Department of Transportation and become a part of the records thereof and that entering any false information hereon constitutes the crime of offering a false instrument for filing in the first degree, which is a Class E Felony. (Penal Law, Section 175.35)

PRE-AWARD D/M/WBE MATERIAL SUPPLIER COMMITMENT INFORMATION

A Low Bidder that submits a D/M/WBE Utilization Pre-Award Package that includes amount(s) for Material Supply must complete this form to show how the commitment amount was determined.

Contract D _____ County

Material Supplier: _____

Address: _____

Material Work Code / Type of Material: _____ / _____

Associated Contract Pay Item (3 digit core as a minimum): _____

Commitment Amount: _____

Are these Item(s) Stockpiled or Special Ordered?

If Special Order, does the Manufacturer also sell these items on a retail basis? Yes No

Will the Materials be delivered to the Contract site? Yes No

If Yes, who will deliver the Materials?

Material Supplier Manufacturer Delivery / Mail Service

Who will pay for Materials / Supplies? Contractor _____

Who negotiated the cost of the Supplies? Contractor _____

Notes / Comments:

(NO TEXT ON THIS PAGE)

PRE-AWARD DBE TRUCKING COMMITMENT INFORMATION

Contract No.	PIN

Project Sponsor	County

Supervisor of the day-to-day DBE trucking operation is:

--

DBE Trucking Firm:			
	Owned	Leased	Total
No. of Trucks			0

Number of Trucks Performing Work	Rate (\$)	Per	Duration/No.	Commitment (\$)
On-Site				\$0.00
Off-Site				\$0.00
TOTAL				\$0.00

DBE Trucking Firm:			
	Owned	Leased	Total
No. of Trucks			0

Number of Trucks Performing Work	Rate (\$)	Per	Duration/No.	Commitment (\$)
On-Site				\$0.00
Off-Site				\$0.00
TOTAL				\$0.00

DBE Trucking Firm:			
	Owned	Leased	Total
No. of Trucks			0

Number of Trucks Performing Work	Rate (\$)	Per	Duration/No.	Commitment (\$)
On-Site				\$0.00
Off-Site				\$0.00
TOTAL				\$0.00

NOTE: A Low Bidder that submits a DBE Utilization Pre-Award Package that includes amount(s) for trucking, must complete this form to show how the commitment amount was estimated. For any long-term leased truck, submit a copy of the lease agreement. Rate should be stated as \$/day, \$/hour, \$/load, etc. and estimated duration/number of loads. (i.e., 1 truck @ \$400/day for 3 weeks = \$6,000)

(NO TEXT ON THIS PAGE)



**New York City Department of Transportation
SUBCONTRACTOR/ CONSULTANT PROFILE FORM**

Initial Revised Final

DOT Project Manager: _____

CONTRACT INFO

Type: Construction Professional Services Standard Services
 Funding: FHWA FTA STATE CITY
 Unit/ Division: _____
 Contract No.: _____
 Contract Reg. No.: _____
 Procurement Id No. (PIN): _____
 Contract Value: _____
 Over All Minority Goal: _____ % MWBE _____ % DBE

PRIME INFO

Name: _____
 Address: _____
 Phone: _____
 Fax: _____
 EIN: _____
 E-Mail: _____
 _____ % MBE (NYS) _____ % WBE (NYS)

Contract Description:

SUBCONTRACTOR INFO

Subcontractor Subconsultant Material Supplier Trucking Services Fabricator Standard Services
 Yes No Has a Registered Apprenticeship Program. If Yes, Please attached supporting documentation.
 Yes No Has Required Licenses. If Yes, Please attached supporting documentation.

Subcontract Value: _____ **Start Date:** _____ **End Date:** _____

Name: _____
 Address: _____
 Phone: _____
 Fax: _____
 EIN: _____
 E-Mail: _____

CERTIFIED AS

MBE (NYC) WBE (NYC) MBE (NYS) WBE (NYS)
 DBE LBE Non-Profit

CHECK APPROPRIATE BOX (*Only if one of the above has been selected)

Black* Hispanic* Asian/Pacific Islander*
 Asian/Pacific American* Native American Indian*
 Subcont. Asian American* Alaskan Native*
 Non-Minority Other* (Explain) _____

Subcontract Description:

Prime Contractor Certification

I hereby affirm that the information supplied is true and correct.

 Print Name: _____ Title: _____ Signature: _____ Date: _____

*Submit Completed Form To: NYC-DOT/ Contract Compliance Unit/ 55 Water Street - Rm: 825, New York, NY 10041-0004
 Attn: Charles Bartolotta/ cbartolotta@dot.nyc.gov*

Agency - CCU Director Preliminary Review

Completed By: _____ Date: _____
 1. Apprenticeship 2. Licenses

Agency - VRU Director Preliminary Review

Completed By: _____ Date: _____
 3. Vendex 4. Employment 5. References

Final Agency Approval

Signature: _____ Date: _____ APPROVED NOT APPROVED

* VRU DO NOT FORWARD SUPPLIERS/ TRUCKING PROFILE FORMS TO CMU.

FMS - Contract Management Unit

FMS Entered By: _____ _____ _____
 Print Name Signature Date

INSTRUCTIONS

- Prime Contractor must complete this form.
- A Subcontractor Profile Form must be completed for EACH Subcontractor that will perform work or supply material on the contract. Make additional copies of this form as needed.
- Please indicate if the form is the Initial, Revised or Final submission.
- Please indicate the name of the DOT Project Manager for this contract.

Contract Info:

Type: Indicate industry type as one of the following: Construction, Professional Services or Standard Services.

Funding: Indicate contract funding: FHWA, FTA, State, or City (MWBE and Non-MWBE).

Unit/ Division: Specify unit or division letting this contract. i.e. Bridges/ Traffic/ Ferries, etc.

Contract No.: Enter New York City Contract No. as appropriate. (Example: BRC100)

Contract Registration No.: If known, enter the Registration No. assigned to this contract.

Procurement Id No. (PIN): Enter New York City PIN No. as appropriate. (Example: 84109MBSA000)

Contract Value: Enter the Total Agreed Amount of the Proposed Contract Agreement between the Prime Contractor and the Agency for this project.

Over All Minority Goal: Enter minority percentage goal required for this contract.

MWBE / DBE: Enter minority requirement on this contract.

Contract Description: Enter project description.

Prime Info:

CONTRACTOR: "Contractor" means a person, including a vendor, who is a party or a proposed party to a contract with a contracting agency, first-level subcontractors of supply and service contractors, and all levels of subcontractors of construction.

Name: Enter the legal name of the Prime's firm.

Address: Enter current business address.

Phone: Enter current business phone number or a number where business representatives can be located.

Fax: Enter business fax number.

EIN: Enter legal Employer Identification Number (EIN).

E-mail: Enter e-mail address, if any.

Subcontractor Info:

Describe utilization as one of the following: **Subcontractor, Sub consultant, Material Supplier, Trucking Services, Fabricator or Standard Services.**

Registered Apprenticeship Program: Prime Contractor must indicate if Subcontractor has a Registered Apprenticeship Program. A Subcontractor in the construction field with a contract exceeding 1M must have a Registered Apprenticeship Program in place. Subcontractors must get a letter from the Union indicating that they are signatory contractors to their unions for the trades that they intend to use on this project and that they have a Registered Apprenticeship Program with NYS DOL.

Licenses: Prime Contractor must indicate whether or not a License is required for work of Subcontractor. If so, document that the Subcontractor has all required Licenses. **Please attached License Certificate.**

Subcontract Value: Enter the Total Agreed Amount of the Proposed Contract Agreement between the Prime Contractor and the Subcontractor for this project.

Start Date: Enter estimated date on which subcontractor work will begin.

End Date: Enter estimated date on which subcontractor work will be completed.

Name: Enter the legal name of the Subcontractor's firm.

Address: Enter current business address.

Phone: Enter current business phone number or a number where business representatives can be located.

Fax: Enter business fax number.

EIN: Enter legal Employer Identification Number (EIN) number.

E-mail: enter e-mail address, if any.

Certified As: Indicate what type of Minority Certification and Ethnic Group Designation the Subcontractor has, if any.

Check Appropriate Box: Ethnicity requirements apply only to minority subcontractors, subconsultants, material suppliers and trucking firms for reporting purposes to the NYC Small Business Services, Mayors Office of Contract Services and the Federal-Aid Construction Programs Contract Compliance Monitoring and Reporting.

Subcontract Description: Describe work to be perform by Subcontractor/ Subconsultant.

i.e. (Fencing, Painting, Construction or Construction Management Services, Trucking, Towing Services, Tree Pruning/Planting)

Prime Contractor Certification:

Enter Name, Title, Signature, and Date of completion of this form by the Company Official.

Submit Completed Form To:

NYC-DOT/ Contract Compliance Unit

55 Water Street - 8th Floor

New York, NY 10041-0004

Attn: Charles Bartolotta

cbartolotta@dot.nyc.gov

**CITY OF NEW YORK
INITIAL LIST OF SUBCONTRACTORS ("INITIAL LOS")**

Page 1 of ___

Directions: For all contracts for which a utilization plan has been submitted pursuant to Local Law 129 of 2005, the contractor must use this form to indicate a list of persons to which it intends to award subcontracts to within the first 12 months following receipt of the Notice to Proceed ("NTP"). The contractor is required to submit this form within 30 days of the contracting agency's issuance of the NTP. Each page should be signed and certified. Attach additional pages (copies of this page), as needed.

PRIME CONTRACT INFORMATION

Agency:	Unit/Division:
FMS Contract No.:	PIN:
Contract Value: \$	Registration Date:
Contract Description:	

PRIME CONTRACTOR IDENTIFICATION

Name:		
Phone:	Fax:	
Address:	City:	State/Zip:
EIN/SSN:	E-Mail:	

SUBCONTRACTOR #1 INFORMATION

Name:		
Phone:	Fax:	
Address:	City:	State/Zip:
EIN/SSN:	E-Mail:	
Subcontract Description:		
Approximate Subcontract Value: \$	Approx. Start Date:	Approx. End Date:
Contractor is DSBS-certified as: M/WBE <input type="checkbox"/> EBE <input type="checkbox"/> LBE <input type="checkbox"/> DBE <input type="checkbox"/> (check all that apply and note status) N/A <input type="checkbox"/>		

SUBCONTRACTOR #2 INFORMATION

Name:		
Phone:	Fax:	
Address:	City:	State/Zip:
EIN/SSN:	E-Mail:	
Subcontract Description:		
Approximate Subcontract Value: \$	Approx. Start Date:	Approx. End Date:
Contractor is DSBS-certified as: M/WBE <input type="checkbox"/> EBE <input type="checkbox"/> LBE <input type="checkbox"/> DBE <input type="checkbox"/> (check all that apply and note status) N/A <input type="checkbox"/>		

SUBCONTRACTOR #3 INFORMATION

Name:		
Phone:	Fax:	
Address:	City:	State/ZIP:
EIN/SSN:	E-Mail:	
Subcontract Description:		
Approximate Subcontract Value: \$	Approx. Start Date:	Approx. End Date:
Contractor is DSBS-certified as: M/WBE <input type="checkbox"/> EBE <input type="checkbox"/> LBE <input type="checkbox"/> DBE <input type="checkbox"/> (check all that apply and note status) N/A <input type="checkbox"/>		

Prime Contractor Certification: I hereby affirm that the information supplied is true and correct.

Signature:	Title:
Print Name:	Date:

**CITY OF NEW YORK
INITIAL LIST OF SUBCONTRACTORS ("INITIAL LOS")**

Page 2 of _____

Directions: For all contracts for which a utilization plan has been submitted pursuant to Local Law 129 of 2005, the contractor must use this form to indicate a list of persons to which it intends to award subcontracts to within the first 12 months following receipt of the Notice to Proceed ("NTP"). The contractor is required to submit this form within 30 days of the contracting agency's issuance of the NTP. Each page should be signed and certified.

PRIME CONTRACT INFORMATION

Agency:	Unit/Division:
FMS Contract No.:	PIN:
Contract Value: \$	Registration Date:
Contract Description:	

PRIME CONTRACTOR IDENTIFICATION

Name:		
Phone:	Fax:	
Address:	City	State/Zip:
EIN/SSN:	E-Mail:	

SUBCONTRACTOR #4 INFORMATION

Name:		
Phone:	Fax:	
Address:	City	State/Zip:
EIN/SSN:	E-Mail:	
Subcontract Description:		
Approximate Subcontract Value: \$	Approx. Start Date:	Approx. End Date:
Contractor is DSBS-certified as: M/WBE <input type="checkbox"/> EBE <input type="checkbox"/> LBE <input type="checkbox"/> DBE <input type="checkbox"/> (check all that apply and note status) N/A <input type="checkbox"/>		

SUBCONTRACTOR #5 INFORMATION

Name:		
Phone:	Fax:	
Address:	City	State/Zip:
EIN/SSN:	E-Mail:	
Subcontract Description:		
Approximate Subcontract Value: \$	Approx. Start Date:	Approx. End Date:
Contractor is DSBS-certified as: M/WBE <input type="checkbox"/> EBE <input type="checkbox"/> LBE <input type="checkbox"/> DBE <input type="checkbox"/> (check all that apply and note status) N/A <input type="checkbox"/>		

SUBCONTRACTOR #6 INFORMATION

Name:		
Phone:	Fax:	
Address:	City	State/ZIP:
EIN/SSN:	E-Mail:	
Subcontract Description:		
Approximate Subcontract Value: \$	Approx. Start Date:	Approx. End Date:
Contractor is DSBS-certified as: M/WBE <input type="checkbox"/> EBE <input type="checkbox"/> LBE <input type="checkbox"/> DBE <input type="checkbox"/> (check all that apply and note status) N/A <input type="checkbox"/>		

Prime Contractor Certification: I hereby affirm that the information supplied is true and correct.

Signature:	Title:
Print Name:	Date:



**New York City Department of Transportation
SUBCONTRACTOR / SUBCONSULTANT
MONTHLY PAYMENT REPORT**

CONTRACT No./ PIN No.: _____

Page No.: _____ of _____

REGISTRATION No.: _____

MONTH: _____

PRIME CONTRACTOR: _____

Work Completed To Date: _____ %

SUBCONTRACTOR'S NAME / SUBCONSULTANT'S NAME	Certification (DBE, MBE, WBE, LBE, None)	Contract Value	Total Payments This Month	Total Payments To Date
TOTAL:				

REMARKS:

FALSIFICATION OF THIS STATEMENT IS A PUNISHABLE OFFENSE

I certify that the total payments above reflect the value of the work done by the subcontractors/subconsultants that payments have been made by the Contractor and received by the Subcontractor /Subconsultant as specified above; that there were no Rebates, Refunds or Offsets applied to any payments unless the same is noted above; and that it is known to me to be true of my knowledge.

PRIME CONTRACTOR'S / CONSULTANT'S NAME

DATE

PRINT NAME

TITLE

**INSTRUCTIONS FOR PREPARING AND SUBMITTAL OF
SUBCONTRACTOR / SUBCONSULTANT PAYMENT REPORTS**

*New York City Department of Transportation requires Prime Contractors / Consultants to report payments made to ALL SUBCONTRACTORS / SUBCONSULTANT that are utilized on city contracts. Prime Contractor/ Consultant report of payments to ALL SUBCONTRACTORS / SUBCONSULTANTS is required on a **monthly basis** or when requested by the Department. Failure by the Prime Contractor / Consultant to submit this report to the Department's Project Engineer-In-Charge or directly to Contract Compliance Office as directed and in accordance with the above may result in the withholding of payments.*

Prepare one report per contract and list ALL subcontractors / subconsultants employed on this project regardless of payments.

PAGE No.: Enter 1 of 1; 1 of 2; 2 of 2; etc. Use additional forms as needed.

CONTRACT No.: Enter New York City Contract No. or PIN No. as appropriate.
(Example: BRC100 or 84109MBSA000)

REGISTRATION No.: Enter the Registration No. assigned to this contract. This may be obtained from the "Notice of Award" and/ or the "Order to Commence Work" letters.

MONTH: Enter month to which payment amounts refer.

PRIME CONTRACTOR / CONSULTANT: Enter the legal name of the Prime's firm.

WORK COMPLETED TO DATE: Enter the percentage of work **completed to date** in relation to the life of the contract.

SUBCONTRACTOR: Enter names of ALL Subcontractors employed by your firm that utilized on this project.

SUBCONSULTANT: Enter names of ALL Sub consultants employed by your firm that utilized on this project.

CERTIFICATION: Indicate what type of minority certification the Subcontractor/ Subconsultant has if any. Otherwise indicate "None". Do not leave it blank.

CONTRACT VALUE: For each Subcontractor / Subconsultant enter the Total Agreed Amount of the Proposed Contract Agreement between the Prime Contractor and the Subcontractor for this project.

TOTAL PAYMENTS THIS MONTH: Enter total Payments made to Subcontractor / Subconsultant for the indicated month.

TOTAL PAYMENTS TO DATE: Total Value of **Actual** Payments to Date, amount shown will be Total Payments Due less Retainage or Other Withholding, if any.

REMARKS: Prime Contractor / Consultant must indicate any monies under dispute or the subject of exceptions or withholdings; and a brief description of the circumstances leading to the dispute or exception.

SIGNATURE: Authorized representative of the Prime Contractor / Consultant must sign and date form.



AGENCY CHIEF CONTRACTING OFFICE
CIVIL RIGHTS COMPLAINT FORM

Today's Date: 2/28/2012

COMPLAINANT

Name	Telephone # - Home <input type="checkbox"/> Office <input type="checkbox"/> Mobile <input type="checkbox"/>
Address	Email
City/State/Zip	Complaint received through <input type="checkbox"/> Telephone <input type="checkbox"/> Email <input type="checkbox"/> letter <input type="checkbox"/> In-Person

COMPLAINT AGAINST

Name	Telephone # - Home <input type="checkbox"/> Office <input type="checkbox"/> Mobile <input type="checkbox"/>
Address	PIN
City/State/Zip	Registration #
Relationship to Complainant	

DESCRIPTION OF COMPLAINT

(Over)

NATURE OF COMPLAINT (check all that apply)

- Harassment Intimidation Threats Coercion Other _____ (explain)

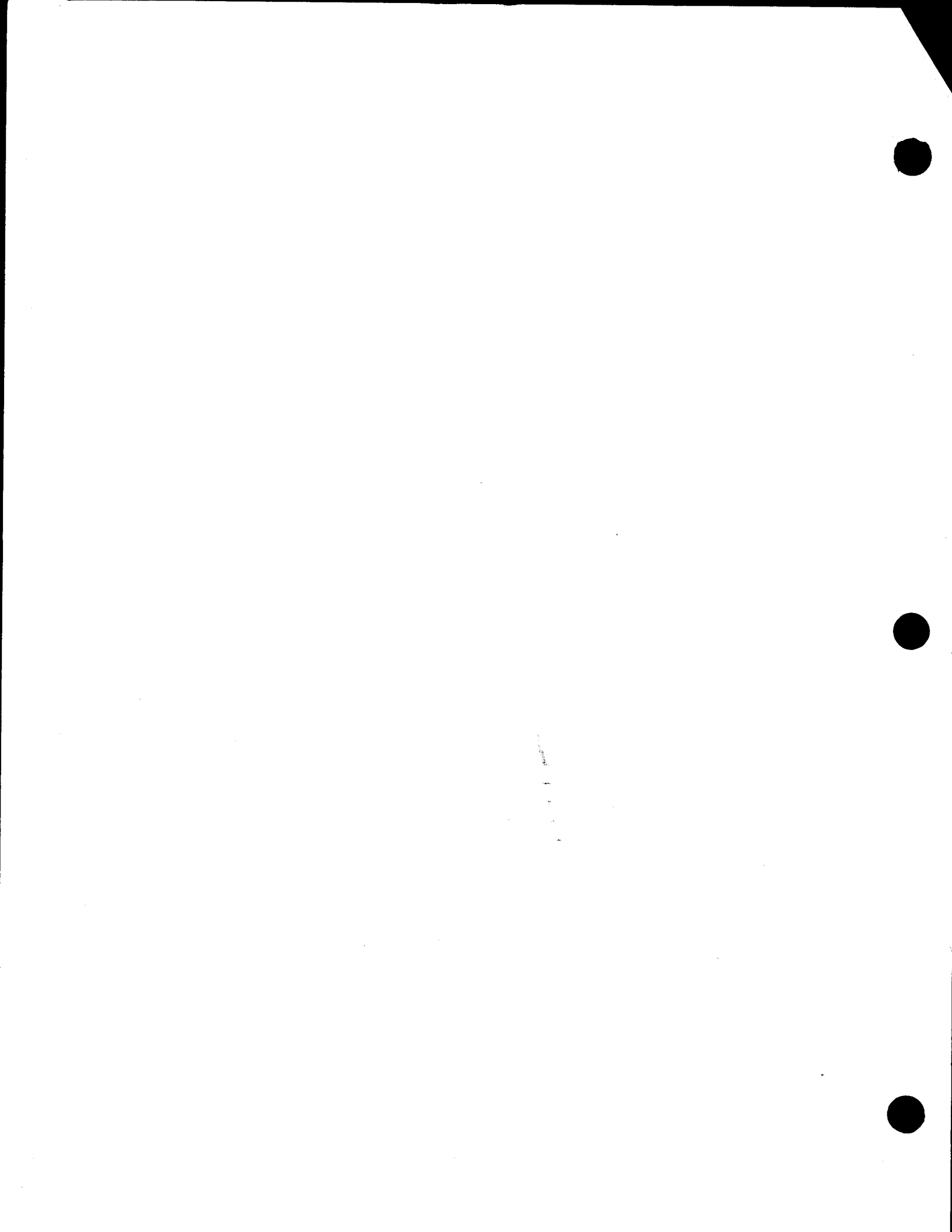
If you have checked any of the above, please indicate the basis of the civil rights violation below.

- Race Disability Age Ethnicity Sexual Orientation Retaliation for Filing a Complaint
 Gender National Origin Religion Title VI - Refer to Title VI Officer
 Other: _____ (explain)

INTAKE	
Name	Title
Signature	Date

RESOLUTION

ATTACHMENTS



**CITY OF NEW YORK
ANNUAL LIST OF SUBCONTRACTORS ("ANNUAL LOS")**

Page 1 of _____

Directions: For all multi-year contracts for which a utilization plan has been submitted pursuant to Local Law 129 of 2005, the contractor must use this form annually to indicate a list of persons to which it intends to award subcontracts to during each twelve month period following the initial year of the contract term. Each page should be signed and certified. Attach additional pages (copies of this page), as needed.

PRIME CONTRACT INFORMATION

Agency:	Unit/Division:
FMS Contract No.:	PIN:
Contract Value: \$	Registration Date:
Contract Description:	

PRIME CONTRACTOR IDENTIFICATION

Name:		
Phone:	Fax:	
Address:	City	State/Zip:
EIN/SSN:	E-Mail:	

SUBCONTRACTOR #1 INFORMATION

Name:		
Phone:	Fax:	
Address:	City	State/Zip:
EIN/SSN:	E-Mail:	
Subcontract Description:		
Approximate Subcontract Value: \$	Approx. Start Date:	Approx. End Date:
Contractor is DSBS-certified as: M/WBE <input type="checkbox"/> EBE <input type="checkbox"/> LBE <input type="checkbox"/> (check all that apply and note status) N/A <input type="checkbox"/>		

SUBCONTRACTOR #2 INFORMATION

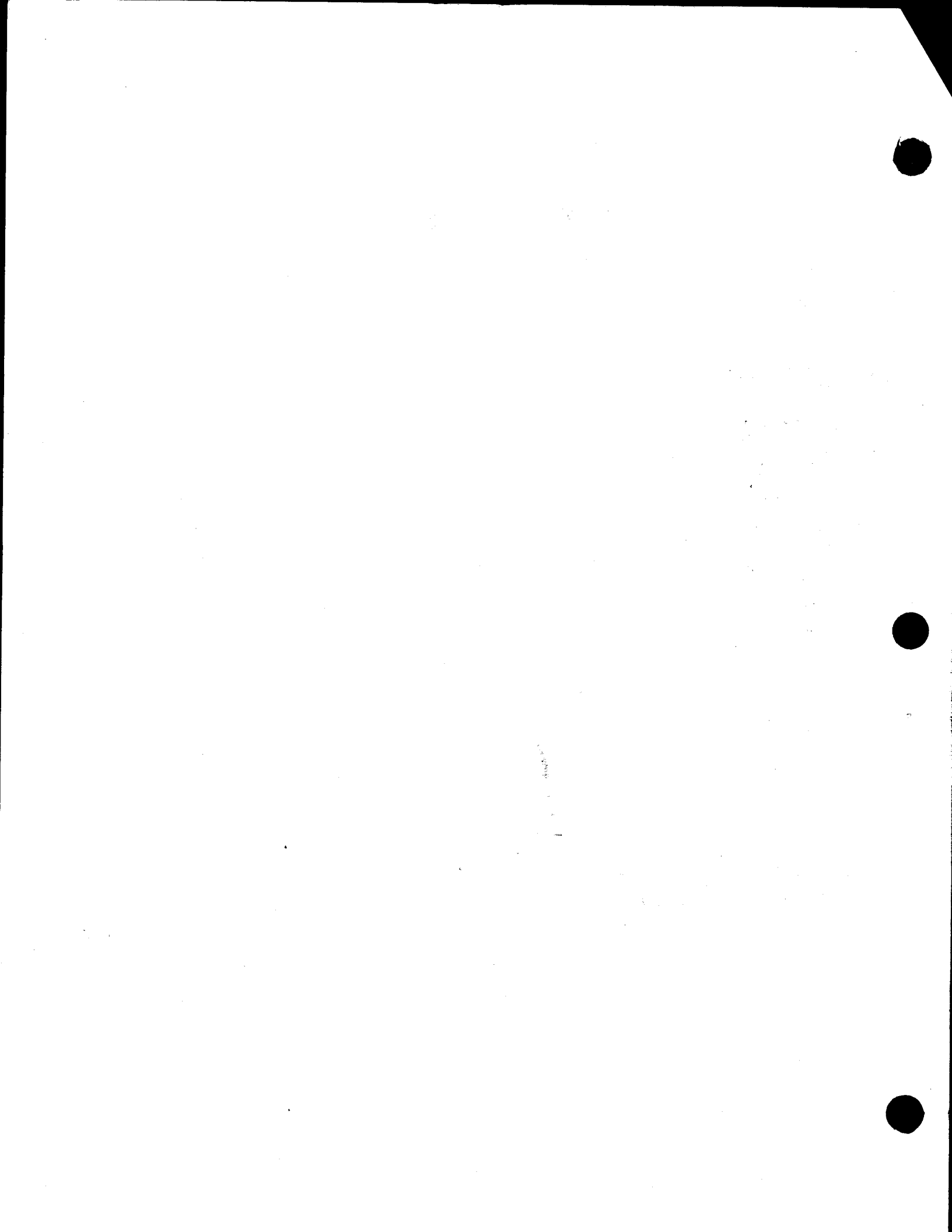
Name:		
Phone:	Fax:	
Address:	City	State/Zip:
EIN/SSN:	E-Mail:	
Subcontract Description:		
Approximate Subcontract Value: \$	Approx. Start Date:	Approx. End Date:
Contractor is DSBS-certified as: M/WBE <input type="checkbox"/> EBE <input type="checkbox"/> LBE <input type="checkbox"/> (check all that apply and note status) N/A <input type="checkbox"/>		

SUBCONTRACTOR #3 INFORMATION

Name:		
Phone:	Fax:	
Address:	City	State/ZIP:
EIN/SSN:	E-Mail:	
Subcontract Description:		
Approximate Subcontract Value: \$	Approx. Start Date:	Approx. End Date:
Contractor is DSBS-certified as: M/WBE <input type="checkbox"/> EBE <input type="checkbox"/> LBE <input type="checkbox"/> (check all that apply and note status) N/A <input type="checkbox"/>		

Prime Contractor Certification: I hereby affirm that the information supplied is true and correct.

Signature:	Title:
Print Name:	Date:



**CITY OF NEW YORK
ANNUAL LIST OF SUBCONTRACTORS ("ANNUAL LOS")**

Page 2 of _____

Directions: For all multi-year contracts for which a utilization plan has been submitted pursuant to Local Law 129 of 2005, the contractor must use this form annually to indicate a list of persons to which it intends to award subcontracts to during each twelve month period following the initial year of the contract term. Each page should be signed and certified. Attach additional pages (copies of this page), as needed.

PRIME CONTRACT INFORMATION

Agency:	Unit/Division:
FMS Contract No.:	PIN:
Contract Value: \$	Registration Date:
Contract Description:	

PRIME CONTRACTOR IDENTIFICATION

Name:		
Phone:	Fax:	
Address:	City	State/Zip:
EIN/SSN:	E-Mail:	

SUBCONTRACTOR #4 INFORMATION

Name:		
Phone:	Fax:	
Address:	City	State/Zip:
EIN/SSN:	E-Mail:	
Subcontract Description:		
Approximate Subcontract Value: \$	Approx. Start Date:	Approx. End Date:
Contractor is DSBS-certified as: M/WBE <input type="checkbox"/> EBE <input type="checkbox"/> LBE <input type="checkbox"/> (check all that apply and note status) N/A <input type="checkbox"/>		

SUBCONTRACTOR #5 INFORMATION

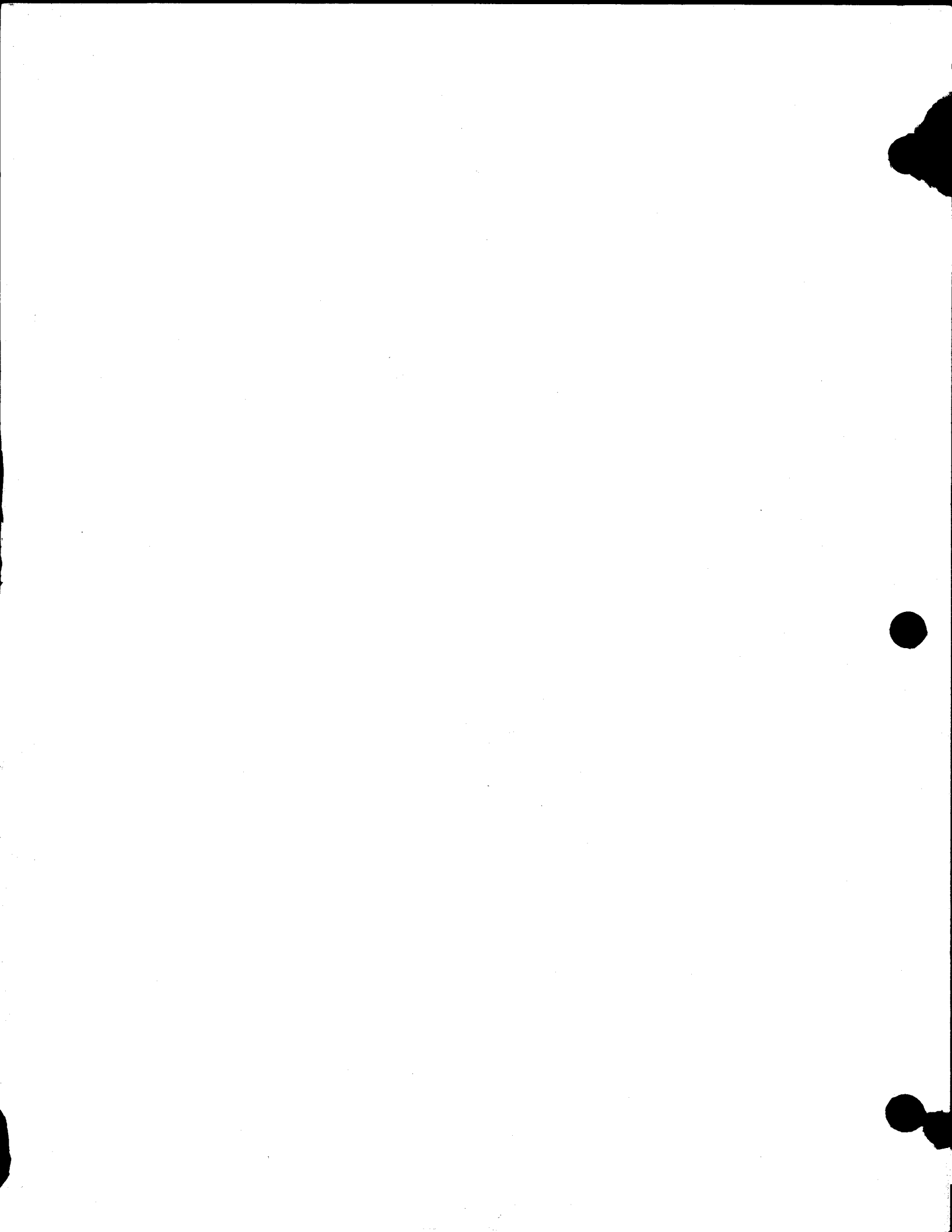
Name:		
Phone:	Fax:	
Address:	City	State/Zip:
EIN/SSN:	E-Mail:	
Subcontract Description:		
Approximate Subcontract Value: \$	Approx. Start Date:	Approx. End Date:
Contractor is DSBS-certified as: M/WBE <input type="checkbox"/> EBE <input type="checkbox"/> LBE <input type="checkbox"/> (check all that apply and note status) N/A <input type="checkbox"/>		

SUBCONTRACTOR #6 INFORMATION

Name:		
Phone:	Fax:	
Address:	City	State/ZIP:
EIN/SSN:	E-Mail	
Subcontract Description:		
Approximate Subcontract Value: \$	Approx. Start Date:	Approx. End Date:
Contractor is DSBS-certified as: M/WBE <input type="checkbox"/> EBE <input type="checkbox"/> LBE <input type="checkbox"/> (check all that apply and note status) N/A <input type="checkbox"/>		

Prime Contractor Certification: I hereby affirm that the information supplied is true and correct.

Signature:	Title:
Print Name:	Date:





**Department of
Design and
Construction**

**INFRASTRUCTURE DIVISION
BUREAU OF DESIGN**

VOLUME 3 OF 3

PROJECT ID: HWD10105

ATLANTIC AVENUE SAFETY IMPROVEMENTS

FROM GEORGIA AVENUE TO LOGAN STREET

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING AND
TRAFFIC SIGNAL WORK
Together With All Work Incidental Thereto**

**BOROUGH OF BROOKLYN
CITY OF NEW YORK**

Contractor.

Dated _____, 20____
