



**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](http://www1.nyc.gov/site/ddc/index.page)

**LAW**

**VOLUME 1 OF 3**

**BID BOOKLET**

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND  
REQUIRED FOR:

**PROJECT ID: HWKKP005**

**RECONSTRUCTION OF  
DUMBO D.M.A. / VINEGAR HILL AREA**

**MAIN STREET FROM FRONT STREET TO PLYMOUTH STREET  
ADAMS STREET FROM FRONT STREET TO JOHN STREET  
PEARL STREET FROM FRONT STREET TO JOHN STREET  
JAY STREET FROM WATER STREET TO JOHN STREET  
GOLD STREET FROM FRONT STREET TO WATER STREET  
FRONT STREET FROM MAIN STREET TO PEARL STREET  
WATER STREET FROM PEARL STREET TO HUDSON AVENUE  
PLYMOUTH STREET FROM MAIN STREET TO JAY STREET  
JOHN STREET FROM ADAMS STREET TO JAY STREET  
ANCHORAGE PLACE FROM FRONT STREET TO PLYMOUTH STREET**

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

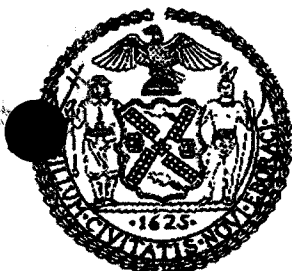
Together With All Work Incidental Thereto

**BOROUGH OF BROOKLYN  
CITY OF NEW YORK**

FOR THE DEPARTMENT OF TRANSPORTATION  
PREPARED BY

*AECOM*

**OCTOBER 10, 2017**



8-088



June 14, 2018

CERTIFIED MAIL - RETURN RECEIPT REQUEST

HALCYON CONSTRUCTION CORP.  
65 MARBLE AVENUE  
PLEASANTVILLE, NY 10570

RE: FMS ID: HWKKP005  
E-PIN: 85018B0108001  
DDC PIN: 8502016HW0063C  
RECONSTRUCTION OF DUMBO D.M.A. -  
VINEGAR HILL AREA-BROOKLYN  
**NOTICE OF AWARD**

Dear Contractor:

You are hereby awarded the above referenced contract based upon your bid in the amount of \$93,127,578.95 submitted at the bid opening on March 30, 2018. 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, 1<sup>st</sup> 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.



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 cursive script that reads "Lorraine Holley".

Lorraine Holley  
Deputy ACCO

# **NOTICE TO BIDDERS:**

# **NEW NOISE REQUIREMENTS**

The bidder is notified that conformance with NYC City Council Introduction 1653-2017 (<https://laws.council.nyc.gov/legislation/int-1653-2017/>) is required for all work to be performed under this contract.

No separate payment will be made for conformance with this requirement, and the costs thereof must be included in the prices bid for all items of work.

# Notices to Bidders

## Pre-Bid Questions (PBQs)

Please be advised that PBQs should be submitted to the Agency Contact Person (CSB\_projectinquiries@ddc.nyc.gov) 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.

All PBQs must reference the Project ID. If a Bidder has multiple PBQs for the same Project ID, the PBQs must be numbered sequentially, even if they are submitted separately.

## 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

## PASSPort Disclosure Filing

All vendors that intend to do business with the City of New York must complete a disclosure process in order to be considered for a contract. This disclosure process was formerly completed using Vendor Information Exchange System (VENDEX) paper-based forms. The City of New York has moved collection of vendor disclosure information online. In early August 2017, the New York City Mayor's Office of Contract Services (MOCS) launched the **Procurement and Sourcing Solutions Portal (PASSPort)**, a new online procurement system that replaced the paper-VENDEX process. In anticipation of awards, all bidders must create online accounts in the new PASSPort system, and file all disclosure information using PASSPort. **Paper submissions, including certifications of no changes to existing VENDEX packages will not be accepted in lieu of complete online filings.**

All vendors that intend to do business with the City, but specifically those that fall into any of the following categories, are required to enroll:

- Have a pending award with a City Agency; or
- Hold a current contract with a City Agency and have either an expiring VENDEX or expiring Certificate of No Change.

The Department of Design and Construction (DDC) and MOCS hereby notifies all proposers that the PASSPort system is available, and that disclosure filing completion is required prior to any award through this competitive bid.

To enroll in PASSPort and to access the PASSPort website (including online training), please visit [www.nyc.gov/passport](http://www.nyc.gov/passport). Contact MOCS at [passport@mocs.nyc.gov](mailto:passport@mocs.nyc.gov) for additional information and technical support.

# Notices to Bidders

## 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](http://www.nyc.gov/nycbusiness) to learn more about the loan or contact [constructionloan@sbs.nyc.gov](mailto: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.

**(NO TEXT THIS PAGE)**



**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: HWKKP005**

**RECONSTRUCTION OF  
DUMBO D.M.A. / VINEGAR HILL AREA**

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

**Together With All Work Incidental Thereto**

**BOROUGH OF BROOKLYN  
CITY OF NEW YORK**

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

BID BOOKLET

TABLE OF CONTENTS

SECTION	PAGE
PART A	
1. Table of Contents.....	1
2. Special Notice to Bidders.....	2
3. Attachment 1 – Bid Information.....	A-1
4. Bid Schedule.....	B-1
5. Bid Form.....	C-1
6. Affirmation.....	C-6
7. Bid Bond .....	C-7
8. Contingency Item List .....	D-1
9. M/WBE Program: M/WBE Utilization Plan.....	5
10. Apprenticeship Program Requirements .....	19
PART B	
10. Safety Questionnaire .....	22
11. Pre-award Process.....	25
12. Project Reference Form.....	27
13. Contract Certificate.....	30
14. Vendex Compliance.....	31
15. Iran Divestment Act Compliance Rider .....	32
16. Construction Employment Report.....	34

**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. Schedule B: M/WBE 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. Bidder's Certification of Compliance with Iran Divestment Act
9. Special Experience Requirements (if applicable)
10. Apprenticeship Program Questionnaire (if applicable)
11. Any addenda issued prior to the receipt of bids

**FAILURE TO SUBMIT ITEMS (4) THROUGH (11)  
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- 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](http://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:** 1. The entity that will provide the services to strip existing granite block pavement from roadways, sort, store, clean and reinstall the salvaged granite blocks in the roadways and sidewalks; and provide new granite slabs and pavers cut to specific sizes and of specific colors, installed in roadways, sidewalks and the new plaza 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 for each of the required work items stated above.

(over please)

(continued from previous page)

2. The entity that will abandon existing undersidewalk vaults shall have not less than seven (7) years' continuous experience in the various combined structural operations required to abandon undersidewalk vault spaces, including but not limited to: excavation in confined areas; temporary structural steel and timber support systems; construction of reinforced concrete retaining walls; placing flowable fill material; providing continuous access to impacted properties; and any other related structural operations that may be required.

- (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 at least six (6) months, or 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.

HALCYON CONSTRUCTION CORP.

Name of Contractor: 65 MARBLE AVENUE

Name of Project: PLEASANTVILLE, NEW YORK 10570 HED-553

Location of Project: SOUTHERN BLVD. BX

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

Name: MR. DICKENS CHARLES

Title: NYCDDC Phone Number: -

Brief description of the Project completed or the Project in progress: INSTALLATION OF TRUNK MAINS, SEWERS & ROADWAY RECONSTR.

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

Amount of Contract, Subcontract or Sub-subcontract: \$ 46 M

Start Date and Completion Date: 11/2015 - 6/2019

\*\*\*\*\*

HALCYON CONSTRUCTION CORP.

Name of Contractor: 65 MARBLE AVENUE

Name of Project: PLEASANTVILLE, NEW YORK 10570 MED-606RR

Location of Project: GRAND STREET, MANHATTAN

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

Name: MR. SAH JAROMI

Title: NYCDDC Phone Number: -

Brief description of the Project completed or the Project in progress: INSTALLATION OF TRUNK W.M., SEWERS & ROADWAY RECONSTR.

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

Amount of Contract, Subcontract or Sub-subcontract: \$ 62 M.

Start Date and Completion Date: 10/2012 - 10/2016

**ATTACHMENT 1 - BID INFORMATION**

**PROJECT ID: HWKKP005**

**PIN: 8502016HW0063C**

Description and Location of Work:

**RECONSTRUCTION OF  
DUMBO D.M.A. / VINEGAR HILL AREA**

**INCLUDING SEWER, WATER MAIN, TRUNK MAIN, STREET LIGHTING  
AND TRAFFIC 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 30, 2018**

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 30, 2018**

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 2% 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  
Email: CSB\_projectinquiries@ddc.nyc.gov



## TABLE OF CONTENTS

SHEET NO.	DWG NO.	DRAWING TITLE
1	CV1	TITLE
2	LG1	TABLE OF CONTENTS AND LIST OF STANDARD DRAWINGS
3	LG2	LEGEND AND ABBREVIATIONS
4	GN1	GENERAL NOTES (1 OF 3)
5	GN2	GENERAL NOTES (2 OF 3)
6	GN3	GENERAL NOTES (3 OF 3) - NYC TRANSIT
7	SC1	SURVEY CONTROL PLAN (1 OF 3)
8	SC2	SURVEY CONTROL PLAN (2 OF 3)
9	SC3	SURVEY CONTROL PLAN (3 OF 3)
10	TS1	TYPICAL SECTIONS WATER STREET, PLYMOUTH STREET, AND JOHN STREET
11	TS2	TYPICAL SECTIONS FRONT STREET AND MAIN STREET
12	TS3	TYPICAL SECTIONS ADAMS STREET
13	TS4	TYPICAL SECTIONS PEARL STREET, GOLD STREET, AND ANCHORAGE PLACE
14	TS5	TYPICAL SECTIONS JAY STREET
15	MD1	MISCELLANEOUS DETAILS - CURB, SIDEWALK, AND ROADWAY
16	MD2	MISCELLANEOUS DETAILS - CROSSWALKS
17	MD3	MISCELLANEOUS DETAILS - BICYCLE PATHS
18	MD4	MISCELLANEOUS DETAILS - RAIL REMOVAL AND RESTORATION
19	WD1	WAYFINDING DETAILS (1 OF 7)
20	WD2	WAYFINDING DETAILS (2 OF 7)
21	WD3	WAYFINDING DETAILS (3 OF 7)
22	WD4	WAYFINDING DETAILS (4 OF 7)
23	WD5	WAYFINDING DETAILS (5 OF 7)
24	WD6	WAYFINDING DETAILS (6 OF 7)
25	WD7	WAYFINDING STREET LAYOUT AND LAYOUT PLAN (7 OF 7)
26	C1	HIGHWAY CONSTRUCTION PLAN WATER STREET (1 OF 3)
27	C2	HIGHWAY CONSTRUCTION PLAN WATER STREET (2 OF 3)
28	C3	HIGHWAY CONSTRUCTION PLAN WATER STREET (3 OF 3)
29	C4	HIGHWAY CONSTRUCTION PLAN PLYMOUTH STREET (1 OF 2)
30	C5	HIGHWAY CONSTRUCTION PLAN PLYMOUTH STREET (2 OF 2)
31	C6	HIGHWAY CONSTRUCTION PLAN JOHN STREET (1 OF 2)
32	C7	HIGHWAY CONSTRUCTION PLAN JOHN STREET (2 OF 2)
33	C8	HIGHWAY CONSTRUCTION PLAN FRONT STREET
34	C9	HIGHWAY CONSTRUCTION PLAN MAIN STREET
35	C10	HIGHWAY CONSTRUCTION PLAN ADAMS STREET (1 OF 2)
36	C11	HIGHWAY CONSTRUCTION PLAN ADAMS STREET (2 OF 2)
37	C12	HIGHWAY CONSTRUCTION PLAN ANCHORAGE PLACE
38	C13	HIGHWAY CONSTRUCTION PLAN PEARL STREET (1 OF 2)
39	C14	HIGHWAY CONSTRUCTION PLAN PEARL STREET (2 OF 2)
40	C15	HIGHWAY CONSTRUCTION PLAN JAY STREET
41	C16	HIGHWAY CONSTRUCTION PLAN GOLD STREET
42	P1	HIGHWAY PROFILES WATER STREET (1 OF 3)
43	P2	HIGHWAY PROFILES WATER STREET (2 OF 3)
44	P3	HIGHWAY PROFILES WATER STREET (3 OF 3)
45	P4	HIGHWAY PROFILES PLYMOUTH STREET (1 OF 2)
46	P5	HIGHWAY PROFILES PLYMOUTH STREET (2 OF 2)
47	P6	HIGHWAY PROFILES JOHN STREET (1 OF 2)
48	P7	HIGHWAY PROFILES JOHN STREET (2 OF 2)
49	P8	HIGHWAY PROFILES FRONT STREET (1 OF 3)
50	P9	HIGHWAY PROFILES FRONT STREET (2 OF 3)
51	P10	HIGHWAY PROFILES FRONT STREET (3 OF 3)
52	P11	HIGHWAY PROFILES MAIN STREET
53	P12	HIGHWAY PROFILES ADAMS STREET (1 OF 2)
54	P13	HIGHWAY PROFILES ADAMS STREET (2 OF 2)
55	P14	HIGHWAY PROFILES ANCHORAGE PLACE

## TABLE OF CONTENTS

SHEET NO.	DWG NO.	DRAWING TITLE
56	P15	HIGHWAY PROFILES PEARL STREET (1 OF 2)
57	P16	HIGHWAY PROFILES PEARL STREET (2 OF 2)
58	P17	HIGHWAY PROFILES JAY STREET (1 OF 2)
59	P18	HIGHWAY PROFILES JAY STREET (2 OF 2)
60	P19	HIGHWAY PROFILES GOLD STREET (1 OF 2)
61	P20	HIGHWAY PROFILES GOLD STREET (2 OF 2)
62	U1	UTILITY PLAN AND PROFILE WATER STREET (1 OF 3)
63	U2	UTILITY PLAN AND PROFILE WATER STREET (2 OF 3)
64	U3	UTILITY PLAN AND PROFILE WATER STREET (3 OF 3)
65	U4	UTILITY PLAN AND PROFILE PLYMOUTH STREET (1 OF 2)
66	U5	UTILITY PLAN AND PROFILE PLYMOUTH STREET (2 OF 2)
67	U6	UTILITY PLAN AND PROFILE JOHN STREET (1 OF 2)
68	U7	UTILITY PLAN AND PROFILE JOHN STREET (2 OF 2)
69	U8	UTILITY PLAN AND PROFILE FRONT STREET
70	U9	UTILITY PLAN AND PROFILE MAIN STREET
71	U10	UTILITY PLAN AND PROFILE ADAMS STREET (1 OF 2)
72	U11	UTILITY PLAN AND PROFILE ADAMS STREET (2 OF 2)
73	U12	UTILITY PLAN AND PROFILE ANCHORAGE PLACE
74	U13	UTILITY PLAN AND PROFILE PEARL STREET (1 OF 2)
75	U14	UTILITY PLAN AND PROFILE PEARL STREET (2 OF 2)
76	U15	UTILITY PLAN AND PROFILE JAY STREET
77	U16	UTILITY PLAN AND PROFILE GOLD STREET
78	U17	UTILITY PLAN AND PROFILE BRIDGE STREET
79	U18	5'-0" X 2'-0" FTRC HLSS OUTFALL DETAILS
80	U19	OUTFALL SPLASH PAD DETAILS (1 OF 2)
81	U20	OUTFALL SPLASH PAD DETAILS (2 OF 2)
82	U21	CHAMBER NO. 1
83	U22	CHAMBER NO. 2
84	U23	CHAMBER NO. 3
85	U24	CHAMBER NO. 4
86	U25	CHAMBER NO. 5
87	U26	CHAMBER NO. 6
88	U27	MODIFIED PRECAST MANHOLES, ACCESS MANHOLES
89	U28	HIGH LEVEL STORM SEWER BOX SECTIONS DETAILS (1 OF 2)
90	U29	HIGH LEVEL STORM SEWER BOX SECTIONS DETAILS (2 OF 2)
91	U30	SHALLOW CATCH BASIN, INLET, CLEANOUT MANHOLE, BULKHEAD, SPUR CONNECTION DETAILS
92	U31	SEWER MANHOLE MODIFICATION - SPECIAL MANHOLE 1
93	U32	SEWER MANHOLE MODIFICATION - SPECIAL MANHOLE 2
94	U33	SEWER MANHOLE MODIFICATION - SPECIAL MANHOLE 3
95	U34	SEWER MANHOLE MODIFICATION - PIER AND PLATE SUPPORT
96	U35	PLAN AND CROSS SECTION JAY STREET BETWEEN WATER STREET AND JOHN STREET
97	U36	CATHODIC PROTECTION SYSTEM (1 OF 4)
98	U37	CATHODIC PROTECTION SYSTEM (2 OF 4)
99	U38	CATHODIC PROTECTION SYSTEM (3 OF 4)
100	U39	CATHODIC PROTECTION SYSTEM (4 OF 4)
101	U40	CATHODIC PROTECTION SYSTEM DETAILS (1 OF 3)
102	U41	CATHODIC PROTECTION SYSTEM DETAILS (2 OF 3)
103	U42	CATHODIC PROTECTION SYSTEM DETAILS (3 OF 3)
104	U43	CON EDISON VERTICAL OFFSETS (1 OF 5)
105	U44	CON EDISON VERTICAL OFFSETS (2 OF 5)
106	U45	CON EDISON VERTICAL OFFSETS (3 OF 5)
107	U46	CON EDISON VERTICAL OFFSETS (4 OF 5)
108	U47	CON EDISON VERTICAL OFFSETS (5 OF 5)
109	SP1	SIGNAGE PLAN (1 OF 5)

## TABLE OF CONTENTS

SHEET NO.	DWG NO.	DRAWING TITLE
110	SP2	SIGNAGE PLAN (2 OF 5)
111	SP3	SIGNAGE PLAN (3 OF 5)
112	SP4	SIGNAGE PLAN (4 OF 5)
113	SP5	SIGNAGE PLAN (5 OF 5)
114	SD1	SIGN TEXT DATA SHEET
115	SL1	STREET LIGHTING PLAN WATER STREET (1 OF 3)
116	SL2	STREET LIGHTING PLAN WATER STREET (2 OF 3)
117	SL3	STREET LIGHTING PLAN WATER STREET (3 OF 3)
118	SL4	STREET LIGHTING PLAN PLYMOUTH STREET AND JOHN STREET
119	SL5	STREET LIGHTING PLAN PLYMOUTH STREET
120	SL6	STREET LIGHTING PLAN JOHN STREET
121	SL7	STREET LIGHTING PLAN FRONT STREET
122	SL8	STREET LIGHTING PLAN MAIN STREET
123	SL9	STREET LIGHTING PLAN ADAMS STREET
124	SL10	STREET LIGHTING PLAN ANCHORAGE PLACE
125	SL11	STREET LIGHTING PLAN PEARL STREET
126	SL12	STREET LIGHTING PLAN JAY STREET
127	SL13	STREET LIGHTING PLAN GOLD STREET
128	TM1	TREE MITIGATION (1 OF 5)
129	TM2	TREE MITIGATION (2 OF 5)
130	TM3	TREE MITIGATION (3 OF 5)
131	TM4	TREE MITIGATION (4 OF 5)
132	TM5	TREE MITIGATION (5 OF 5)
133	TM6	TREE IMPACT MITIGATION TABLE
134	TM7	TREE IMPACT MITIGATION TECHNIQUES
135	LL1	STREET LAYOUT AND MATERIALS PLAN WATER STREET (1 OF 3)
136	LL2	STREET LAYOUT AND MATERIALS PLAN WATER STREET (2 OF 3)
137	LL3	STREET LAYOUT AND MATERIALS PLAN WATER STREET (3 OF 3)
138	LL4	STREET LAYOUT AND MATERIALS PLAN PLYMOUTH STREET (1 OF 2)
139	LL5	STREET LAYOUT AND MATERIALS PLAN PLYMOUTH STREET (2 OF 2)
140	LL6	STREET LAYOUT AND MATERIALS PLAN JOHN STREET (1 OF 2)
141	LL7	STREET LAYOUT AND MATERIALS PLAN JOHN STREET (2 OF 2)
142	LL8	STREET LAYOUT AND MATERIALS PLAN FRONT STREET
143	LL9	STREET LAYOUT AND MATERIALS PLAN MAIN STREET
144	LL10	STREET LAYOUT AND MATERIALS PLAN ADAMS STREET (1 OF 2)
145	LL11	STREET LAYOUT AND MATERIALS PLAN ADAMS STREET (2 OF 2)
146	LL12	STREET LAYOUT AND MATERIALS PLAN ANCHORAGE PLACE
147	LL13	STREET LAYOUT AND MATERIALS PLAN PEARL STREET (1 OF 2)
148	LL14	STREET LAYOUT AND MATERIALS PLAN PEARL STREET (2 OF 2)
149	LL15	STREET LAYOUT AND MATERIALS PLAN JAY STREET
150	LL16	STREET LAYOUT AND MATERIALS PLAN GOLD STREET
151	LL17	PLAZA LAYOUT PLAN (1 OF 2)
152	LL18	PLAZA LAYOUT PLAN (2 OF 2)
153	LL19	PLAZA MATERIAL PLAN (1 OF 2)
154	LL20	PLAZA MATERIAL PLAN (2 OF 2)
155	LL21	PLAZA FURNISHINGS PLAN (1 OF 2)
156	LL22	PLAZA FURNISHINGS PLAN (2 OF 2)
157	LL23	PLAZA GRADING AND FENCE HEADER LAYOUT PLAN
158	LL24	PLAZA FENCE LAYOUT PLAN
159	LL25	PLAZA PLANTING PLAN
160	LD1	LANDSCAPE DETAILS - PAVING
161	LD2	LANDSCAPE DETAILS - PLANTER (1 OF 2)
162	LD3	LANDSCAPE DETAILS - PLANTER (2 OF 2)
163	LD4	LANDSCAPE DETAILS - FENCE (1 OF 3)
164	LD5	LANDSCAPE DETAILS - FENCE (2 OF 3)

## TABLE OF CONTENTS

SHEET NO.	DWG NO.	DRAWING TITLE
165	LD6	LANDSCAPE DETAILS - FENCE (3 OF 3)
166	LD7	BLEACHER BENCH A
167	LD8	BLEACHER BENCH A - MODULE A1 PRIMARY FRAMING
168	LD9	BLEACHER BENCH A - MODULE A1 SECONDARY FRAMING
169	LD10	BLEACHER BENCH A - MODULE A1 CLADDING
170	LD11	BLEACHER BENCH A - MODULE A2 PRIMARY FRAMING
171	LD12	BLEACHER BENCH A - MODULE A2 SECONDARY FRAMING
172	LD13	BLEACHER BENCH A - MODULE A2 CLADDING
173	LD14	BLEACHER BENCH A - MODULE A3 PRIMARY FRAMING
174	LD15	BLEACHER BENCH A - MODULE A3 SECONDARY FRAMING
175	LD16	BLEACHER BENCH A - MODULE A3 CLADDING
176	LD17	BLEACHER BENCH B
177	LD18	BLEACHER BENCH B - MODULE B1 PRIMARY FRAMING
178	LD19	BLEACHER BENCH B - MODULE B1 SECONDARY FRAMING
179	LD20	BLEACHER BENCH B - MODULE B1 CLADDING
180	LD21	BLEACHER BENCH B - MODULE B2 PRIMARY FRAMING
181	LD22	BLEACHER BENCH B - MODULE B2 SECONDARY FRAMING
182	LD23	BLEACHER BENCH B - MODULE B2 CLADDING
183	LD24	BLEACHER BENCH B - MODULE B3 PRIMARY FRAMING
184	LD25	BLEACHER BENCH B - MODULE B3 SECONDARY FRAMING
185	LD26	BLEACHER BENCH B - MODULE B3 CLADDING
186	LD27	BLEACHER BENCH B - MODULE B4 PRIMARY FRAMING
187	LD28	BLEACHER BENCH B - MODULE B4 SECONDARY FRAMING
188	LD29	BLEACHER BENCH B - MODULE B4 CLADDING
189	LD30	BLEACHER BENCH MODULE ASSEMBLY STEPS (1 OF 2)
190	LD31	BLEACHER BENCH MODULE ASSEMBLY STEPS (2 OF 2)
191	LD32	BLEACHER BENCH MODULE TO MODULE CONNECTION LAYOUT
192	LD33	BLEACHER BENCH CONNECTION DETAILS
193	LD34	BLEACHER BENCH CLADDING DETAILS
194	LD35	SKATE STOP LAYOUT AND DIMENSIONS
195	LD36	PLANTING DETAILS
196	E1	PLAZA ELECTRICAL PLAN (1 OF 2)
197	E2	PLAZA ELECTRICAL PLAN (2 OF 2)
198	E3	ELECTRICAL AND TELECOMMUNICATION DETAILS (1 OF 5)
199	E4	ELECTRICAL AND TELECOMMUNICATION DETAILS (2 OF 5)
200	E5	ELECTRICAL AND TELECOMMUNICATION DETAILS (3 OF 5)
201	E6	ELECTRICAL AND TELECOMMUNICATION DETAILS (4 OF 5)
202	E7	ELECTRICAL AND TELECOMMUNICATION DETAILS (5 OF 5)
203	SLP1	SPECIALTY LIGHTING PLAN
204	SLP2	SPECIALTY LIGHTING DETAILS
205	SLP3	SPECIALTY LIGHTING FIXTURE DETAILS 1 OF 3
206	SLP4	SPECIALTY LIGHTING FIXTURE DETAILS 2 OF 3
207	SLP5	SPECIALTY LIGHTING FIXTURE DETAILS 3 OF 3
208	SLP6	SPECIALTY LIGHTING FIXTURE SCHEDULE
209	SLP7	SPECIALTY LIGHTING ARCHWAY ELEVATIONS
210	SLP8	SPECIALTY LIGHTING ARMATURE SUPPORT DETAILS
211	PL1	PLAZA MECHANICAL AND PLUMBING PLAN
212	PL2	MECHANICAL AND PLUMBING DETAILS
213	MPT1	MAINTENANCE AND PROTECTION OF TRAFFIC - GENERAL NOTES (1 OF 2)
214	MPT2	MAINTENANCE AND PROTECTION OF TRAFFIC - GENERAL NOTES (2 OF 2)
215	MPT3	MAINTENANCE AND PROTECTION OF TRAFFIC TYPICAL FULL ROADWAY CLOSURE DETAILS, LEGEND AND ABBREVIATIONS
216	MPT4	MAINTENANCE AND PROTECTION OF TRAFFIC TYPICAL DETOUR PLAN FOR FULL ROADWAY CLOSURE
217	MPT5	MAINTENANCE AND PROTECTION OF TRAFFIC - STAGE I
218	MPT6	MAINTENANCE AND PROTECTION OF TRAFFIC - STAGE II

## TABLE OF CONTENTS

SHEET NO.	DWG NO.	DRAWING TITLE
219	MPT7	MAINTENANCE AND PROTECTION OF TRAFFIC - STAGE III, IVA AND IVB MIDBLOCK
220	MPT8	MAINTENANCE AND PROTECTION OF TRAFFIC - STAGE IVA AND IVB CORNERS
221	MPT9	MAINTENANCE AND PROTECTION OF TRAFFIC - STAGE V
222	MPT10	MAINTENANCE AND PROTECTION OF TRAFFIC - STAGE VI
223	B1	RECORD OF BORINGS (1 OF 8)
224	B2	RECORD OF BORINGS (2 OF 8)
225	B3	RECORD OF BORINGS (3 OF 8)
226	B4	RECORD OF BORINGS (4 OF 8)
227	B5	RECORD OF BORINGS (5 OF 8)
228	B6	RECORD OF BORINGS (6 OF 8)
229	B7	RECORD OF BORINGS (7 OF 8)
230	B8	RECORD OF BORINGS (8 OF 8)
231	F1	FDNY BASE MAP (FOR REFERENCE ONLY)
232	F2	FIRE FACILITY RELOCATION PLAN (1 OF 2)
233	F3	FIRE FACILITY RELOCATION PLAN (2 OF 2)
234	V1	VAULT LOCATION PLAN (1 OF 4)
235	V2	VAULT LOCATION PLAN (2 OF 4)
236	V3	VAULT LOCATION PLAN (3 OF 4)
237	V4	VAULT LOCATION PLAN (4 OF 4)
238	V5	VAULT ABANDONMENT DETAIL
239	AA1	ASBESTOS ABATEMENT NOTES
240	AA2	ASBESTOS ABATEMENT PLAN (1 OF 6)
241	AA3	ASBESTOS ABATEMENT PLAN (2 OF 6)
242	AA4	ASBESTOS ABATEMENT PLAN (3 OF 6)
243	AA5	ASBESTOS ABATEMENT PLAN (4 OF 6)
244	AA6	ASBESTOS ABATEMENT PLAN (5 OF 6)
245	AA7	ASBESTOS ABATEMENT PLAN (6 OF 6)
246	JB1	GENERAL NOTES AND CONDITIONS FOR UTILITY WORK
247	JB2	CON EDISON - CAPITAL ELECTRIC PLAN
248	JB3	CON EDISON - CAPITAL ELECTRIC PLAN
249	JB4	CON EDISON - OIL-O-STATIC MAP & JB 803 PLAN
250	JB5	CON EDISON - OIL-O-STATIC MAP & JB 803 PLAN
251	JB6	CON EDISON - JB 700 PLAN
252	JB7	CON EDISON - JB 700 PLAN
253	JB8	CON EDISON - JB 700 PLAN
254	JB9	CON EDISON - JB 700 PLAN
255	JB10	CON EDISON - MASS EXCAVATION PLAN
256	JB11	CON EDISON - MASS EXCAVATION PLAN
257	JB12	CON EDISON - CONDUIT AND DUCT OCCUPANCY PLATE
258	JB13	CON EDISON - CONDUIT AND DUCT OCCUPANCY PLATE
259	JB14	CON EDISON - CONDUIT AND DUCT OCCUPANCY PLATE
260	JB15	CON EDISON - CONDUIT AND DUCT OCCUPANCY PLATE AND LOW TENSION MAINS AND SERVICE PLATE
261	JB16	CON EDISON - LOW TENSION MAINS AND SERVICE PLATE
262	JB17	CON EDISON - LOW TENSION MAINS AND SERVICE PLATE
263	JB18	VERIZON - SPECIAL CARE EXCAVATION PLAN - 1
264	JB19	VERIZON - SPECIAL CARE EXCAVATION PLAN - 2
265	JB20	VERIZON - SPECIAL CARE EXCAVATION PLAN - 3
266	JB21	VERIZON - SPECIAL CARE EXCAVATION PLAN - 4
267	JB22	VERIZON - CONDUIT UTILITY PLATE
268	JB23	VERIZON - CONDUIT UTILITY PLATE
269	JB24	VERIZON - CONDUIT UTILITY PLATE
270	JB25	VERIZON - CONDUIT UTILITY PLATE
271	JB26	VERIZON - CONDUIT UTILITY PLATE
272	JB27	VERIZON - CONDUIT UTILITY PLATE

## TABLE OF CONTENTS

SHEET NO.	DWG NO.	DRAWING TITLE
273	JB28	VERIZON - CONDUIT UTILITY PLATE
274	JB29	VERIZON - CONDUIT UTILITY PLATE
275	JB30	VERIZON - CONDUIT UTILITY PLATE
276	JB31	VERIZON - CONDUIT UTILITY PLATE
277	JB32	VERIZON - CONDUIT UTILITY PLATE
278	JB33	VERIZON - CONDUIT UTILITY PLATE
279	JB34	VERIZON - CONDUIT UTILITY PLATE
280	JB35	VERIZON - CONDUIT UTILITY PLATE
281	JB36	VERIZON - CONDUIT UTILITY PLATE
282	JB37	VERIZON - CONDUIT UTILITY PLATE
283	JB38	VERIZON - CONDUIT UTILITY PLATE

## LIST OF STANDARD DRAWINGS

DWG. NO.	DESCRIPTION	AGENCY
SE3	CIRCULAR PRECAST REINFORCED CONCRETE PIPE ON CONCRETE CRADLE ON EARTH OR ON ROCK	NYC DEP SEWER
SE31A, SE31B & SE31C	PRECAST MANHOLE DETAILS (3 DWGS)	NYC DEP SEWER
SE39	27" DIAMETER CAST IRON MANHOLE FRAME AND COVER (FOR ACCESS OR CLEANOUT)	NYC DEP SEWER
SE40	27" DIAMETER CAST IRON EXTENSION RING FOR 27" DIAMETER MANHOLE FRAME AND COVER	NYC DEP SEWER
SE43	CAST IRON MANHOLE STEP	NYC DEP SEWER
SE47	TYPE 1 CATCH BASIN (WITH CURB PIECE)	NYC DEP SEWER
SE49	TYPE 3 CATCH BASIN (WITHOUT CURB PIECE)	NYC DEP SEWER
SE59	CAST IRON GRATING, BACK PLATE, AND CURB PIECE FOR CATCH BASINS	NYC DEP SEWER
SE60	CAST IRON HOOD AND HOOKS FOR CATCH BASINS	NYC DEP SEWER
140	MANHOLE COVER & FRAME	FDNY
141	MANHOLE CONSTRUCTION POST SETTING & 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
10240-A-Z	VALVE BOX SKIRT, CAST IRON	NYC DEP WATER
10241-A-Z	HYDRANT VALVE BOX, CAST IRON	NYC DEP WATER
11576-A-Z	FOUNDATIONS FOR VALVE BOXES	NYC DEP WATER

DWG. NO.	DESCRIPTION	AGENCY
13547-B-Z	WIDE FLANGE MANHOLE HEAD & COVER, CAST IRON	NYC DEP WATER
19840-A-X	STANDARD REGULATOR CHAMBERS	NYC DEP WATER
22809-Z	HYDRANT DRAIN BASE	NYC DEP WATER
31050-Z	STANDARD METHODS FOR HYDRANT DRAINAGE, 31050-Z SUPERSEDES 11522-Z	NYC DEP WATER
33317-Y	STANDARD CHAMBER FOR 20" CONNECTION VALVES ON STEEL MAINS	NYC DEP WATER
34006-Y	MASONRY FOR ACCESS MANHOLES ON 30" Ø TO 72" Ø STEEL MAINS	NYC DEP WATER
35310-C-Y	JOINTS FOR STEEL WATER MAINS	NYC DEP WATER
38226-Y-A	STANDARD FABRICATED CONNECTIONS FOR STEEL MAINS	NYC DEP WATER
40868-Z	SUPPORTS FOR WATER MAIN OVER PIPE CROSSINGS	NYC DEP WATER
44015-A-X	STANDARD CHAMBER FOR 36" BUTTERFLY LINE VALVE ON STEEL MAIN	NYC DEP WATER
44162-W	STANDARD CHAMBER FOR 30" & 36" BUTTERFLY CONNECTION VALVE ON STEEL MAIN	NYC DEP WATER
44292-B-Z	GRAVEL OR BROKEN STONE BEDDING AND FILTER FABRIC INSTALLATION FOR DUCTILE CAST IRON PIPES	NYC DEP WATER
45161-A-Z	STANDARD STEEL HYDRANT FENDER	NYC DEP WATER
46069 Y	STANDARD CHAMBER FOR 12" OUTLET VALVE	NYC DEP 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	NYC DEP WATER
WM0403	PAVEMENT EXCAVATION LIMITS FOR PERMANENT RESTORATION, WATER MAINS 24" AND LARGER IN DIAMETER	NYC DEP WATER
H-1004	TYPICAL TEMPORARY PEDESTRIAN PASSAGEWAY IN ROADWAY DURING CONSTRUCTION	NYC DOT HIGHWAY
H-1009	CHAIN LINK FENCE DETAILS TENSION WIRES TOP AND / OR BOTTOM	NYC DOT HIGHWAY
H-1011	SIDEWALK PEDESTRIAN RAMPS	NYC DOT HIGHWAY
H-1012	TIMBER CURB	NYC DOT HIGHWAY



DWG. NO.	DESCRIPTION	AGENCY
H-1014	TEMPORARY PEDESTRIAN STEEL BARRICADE	NYC DOT HIGHWAY
H-1021	CHAIN LINK FENCE - DETAILS (SHT. 1 TO 4)	NYC DOT HIGHWAY
H-1030	STANDARD RECESSION VAULT CONSTRUCTION TO PROVIDE FOR STREET WIDENING, RECEIVING BASINS, INLETS, AND 12'-0" CORNER RADIUS	NYC DOT HIGHWAY
H-1031	TYPICAL PAVEMENT KEY	NYC DOT HIGHWAY
H-1034	TYPICAL CONSTRUCTION JOINTS FOR CONCRETE BASE FOR PAVEMENT	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-1045	CONCRETE SIDEWALK	NYC DOT HIGHWAY
H-1046	STREET TREE PLANTING DETAIL TYPE 1	NYC DOT HIGHWAY
H-1046A	PROTECTIVE TREE BARRIER	NYC DOT HIGHWAY
H-1049	PLASTIC BARREL	NYC DOT HIGHWAY
H-1051	TEMPORARY WOODEN STEPS	NYC DOT HIGHWAY
H-1053	DETAILS FOR CONSTRUCTING AREAS OF ADJUSTMENT AND TRANSITION SECTIONS	NYC DOT HIGHWAY
H-1054	LIMITS OF MEASUREMENT FOR PAYMENT OF TEMPORARY ASPHALT PAVEMENT	NYC DOT HIGHWAY
H-1056A	NY HISTORICAL GRANITE CURB	NYC DOT HIGHWAY
H-1057	TEMPORARY STORAGE AREA	NYC DOT HIGHWAY
MS-1000	NEW YORK CITY, COMPARISON OF DATUM PLANES	NYC DOT HIGHWAY
MS-1001	SIDEWALK PAVEMENT LIMITS	NYC DOT HIGHWAY
MS-1004	CATCH BASIN ADJUSTMENT - TYPE 2	NYC DOT HIGHWAY

# 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 <i>(Except 8.01 XXX; see below)</i> 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;"><b>AND</b></p> NYC DOT Standard Details of Construction;  <p style="text-align: center;"><b>OR,</b></p> <i><b>if the item is not contained within the Standard Specifications, then see the applicable New Sections in the I-Pages, located in Volume 3 of 3 herein.</b></i>
1.XXX 50.XXX through 55.XXX 60.XXX through 66.XXX 70.XXX through 79.XXX <i>(Except 79.11XXX; see below)</i> 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;"><b>AND</b></p> NYC DOT Specifications for Trunk Main Work;  <p style="text-align: center;"><b>AND</b></p> NYC DOT Sewer Design Standards;  <p style="text-align: center;"><b>AND</b></p> NYC DOT Water Main Standard Drawings;  <p style="text-align: center;"><b>OR,</b></p> <i><b>if the item is not contained within the Standard Specifications, then see the Amendments to the Standard Sewer and Water Main Specifications in the SW-Pages, located in Volume 3 of 3 herein.</b></i>
GI-XXX PM-XXX ROW XXX	New Sections in the I-Pages, located in Volume 3 of 3 herein  <p style="text-align: center;"><b>AND</b></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>AND</b> NYC Division of Street Lighting Standard Drawings.
T-XXX	NYC DOT Specifications for Traffic Signals and Intelligent Transportation Systems <b>AND</b> 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)**

02/28/2018  
BID PAGES

Contract PIN: 8502016HW0063C  
Project ID: HWKKP005

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

BID SCHEDULE

- NOTE:
- (1) The Bid multiplier located on Page C-4 of the BID BOOKLET shall be applied to each of the fixed unit prices in the bid schedule, excluding items with "F.S." ("Fixed Sum") as the unit of measurement and that adjusted unit price shall represent the 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 fixed unit prices, in this Percentage Bid Contract, adjusted by the Bid multiplier are to be paid for the actual quantities of the several classes of work in the completed work or structure, and those adjusted unit prices 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 LIGIBLE BID MULTIPLIER IS ENTERED, IN INK, ON PAGE C-4 OF THE BID BOOKLET. Alterations must be initialed in ink by the Bidder.
  - (4) 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-25.

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
4.02 AG	500.0 S.Y.	ASPHALTIC CONCRETE WEARING COURSE, 3" THICK	\$ 31.00
4.02 CB	6,000.0 TONS	ASPHALTIC CONCRETE MIXTURE	\$ 128.00
4.04 HC	5,200.0 C.Y.	CONCRETE BASE FOR PAVEMENT, 8" THICK (HIGH-EARLY STRENGTH)	\$ 264.00
4.06	646.0 C.Y.	CONCRETE IN STRUCTURES, CLASS A-40	\$ 1,000.00
4.07 AB	300.0 L.F.	RESET BLUESTONE CURB	\$ 45.00
4.07 NYHA	10,480.0 L.F.	NEW NY HISTORICAL GRANITE CURB, STRAIGHT	\$ 110.00
4.07 NYHC	1,200.0 L.F.	NEW NY HISTORICAL GRANITE CURB, CORNER	\$ 140.00
4.07 NYHD	1,250.0 L.F.	NEW NY HISTORICAL STRAIGHT GRANITE CURB, DEPRESSED AND TRANSITIONAL	\$ 120.00
4.11 CA	630.0 C.Y.	FILL, PLACE MEASUREMENT	\$ 35.00
4.12 GR6	200.0 L.F.	REMOVE, STORE AND RESET EXISTING GRANITE HEADER, 6" WIDE	\$ 125.00
4.13 AAS	240.0 S.F.	4" CONCRETE SIDEWALK (UNPIGMENTED)	\$ 15.00
4.13 CABS	118,360.0 S.F.	4" CONCRETE SIDEWALK (PIGMENTED) (SAW CUT TYPE JOINTS)	\$ 11.00
4.13 CBBS	20,900.0 S.F.	7" CONCRETE SIDEWALK (PIGMENTED) (SAW CUT TYPE JOINTS)	\$ 13.00
4.13 DE	1,243.0 S.F.	EMBEDDED PREFORMED DETECTABLE WARNING UNITS	\$ 25.00
4.14	62,800.0 LBS.	STEEL REINFORCEMENT BARS	\$ 3.00
4.14 E	2,370.0 LBS.	EPOXY COATED STEEL REINFORCEMENT BARS	\$ 3.50
4.15	170.0 C.Y.	TOPSOIL	\$ 83.00
4.16 AA	9.0 EACH	TREES REMOVED (4" TO UNDER 12" CALIPER)	\$ 364.00
4.16 BA510	83.0 EACH	TREES PLANTED, 2-1/2" TO 3" CALIPER, ALL TYPES, IN 5' X 10' TREE PITS	\$ 916.00
4.16 STUMP	1.0 UNITS	STUMP REMOVAL	\$ 397.00
4.17 EG3G	128.0 EACH	SHRUBS PLANTED, EVERGREEN, 3 GALLON, ALL TYPES	\$ 60.00
4.17 FB	384.0 EACH	FLOWERING BULB, PLANTED, ALL TYPES	\$ 5.00
4.17 L	256.0 EACH	GROUND COVER PLANTED, LIRIOPE MUSCARI "BIG BLUE"	\$ 10.00
4.18 A	21.0 EACH	MAINTENANCE TREE PRUNING (UNDER 12" CAL.)	\$ 198.00
4.18 B	1.0 EACH	MAINTENANCE TREE PRUNING (12" TO UNDER 18" CAL.)	\$ 263.00
4.18 C	3.0 EACH	MAINTENANCE TREE PRUNING (18" TO UNDER 24" CAL.)	\$ 229.00
4.21	480.0 P/HR	TREE CONSULTANT	\$ 77.00
50.11MS030020	570.0 L.F.	3'-0"W X 2'-0"H SINGLE BARREL FLAT TOP REINFORCED CONCRETE STORM SEWER	\$ 1,300.00
50.11MS036020	260.0 L.F.	3'-6"W X 2'-0"H SINGLE BARREL FLAT TOP REINFORCED CONCRETE STORM SEWER	\$ 1,350.00
50.11MS046020	250.0 L.F.	4'-6"W X 2'-0"H SINGLE BARREL FLAT TOP REINFORCED CONCRETE STORM SEWER	\$ 1,475.00
50.11MS050020	290.0 L.F.	5'-0"W X 2'-0"H SINGLE BARREL FLAT TOP REINFORCED CONCRETE STORM SEWER	\$ 1,550.00
50.21C3C024D	220.0 L.F.	24" R.C.P. CLASS III COMBINED SEWER, ON CONCRETE CRADLE	\$ 700.00

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
50.21C3C036D	70.0 L.F.	36" R.C.P. CLASS III COMBINED SEWER, ON CONCRETE CRADLE	\$ 850.00
50.21M3E024D	1,250.0 L.F.	24" R.C.P. CLASS III STORM SEWER, ENCASED IN CONCRETE	\$ 600.00
50.21S3C024D	170.0 L.F.	24" R.C.P. CLASS III SANITARY SEWER, ON CONCRETE CRADLE	\$ 700.00
50.31CC15	1,790.0 L.F.	15" E.S.V.P. COMBINED SEWER, ON CONCRETE CRADLE	\$ 550.00
50.31CC18	210.0 L.F.	18" E.S.V.P. COMBINED SEWER, ON CONCRETE CRADLE	\$ 600.00
50.31ME12	420.0 L.F.	12" E.S.V.P. STORM SEWER, ENCASED IN CONCRETE	\$ 500.00
50.31ME15	70.0 L.F.	15" E.S.V.P. STORM SEWER, ENCASED IN CONCRETE	\$ 550.00
50.31ME18	290.0 L.F.	18" E.S.V.P. STORM SEWER, ENCASED IN CONCRETE	\$ 600.00
50.31SC15	190.0 L.F.	15" E.S.V.P. SANITARY SEWER, ON CONCRETE CRADLE	\$ 550.00
51.11C001	1.0 EACH	CHAMBER NO. 1	\$ 175,000.00
51.11C002	1.0 EACH	CHAMBER NO. 2	\$ 150,000.00
51.11C003	1.0 EACH	CHAMBER NO. 3	\$ 250,000.00
51.11C004	1.0 EACH	CHAMBER NO. 4	\$ 200,000.00
51.11C005	1.0 EACH	CHAMBER NO. 5	\$ 550,000.00
51.11C006	1.0 EACH	CHAMBER NO. 6	\$ 325,000.00
51.11P004	3.0 EACH	STANDARD 4'-0" DIAMETER PRECAST MANHOLE	\$ 7,000.00
51.11P005	2.0 EACH	STANDARD 5'-0" DIAMETER PRECAST MANHOLE	\$ 8,000.00
51.11P006	3.0 EACH	STANDARD 6'-0" DIAMETER PRECAST MANHOLE	\$ 9,500.00
51.11P007	1.0 EACH	STANDARD 7'-0" DIAMETER PRECAST MANHOLE	\$ 12,000.00
51.11P008	1.0 EACH	STANDARD 8'-0" DIAMETER PRECAST MANHOLE	\$ 15,000.00
51.21A000000C	3.0 EACH	ACCESS MANHOLE	\$ 8,000.00
51.21C000000C	7.0 EACH	CLEANOUT MANHOLE	\$ 7,000.00
51.21L001000V	1.0 EACH	SPECIAL MANHOLE NO. 1	\$ 8,000.00
51.21L002000V	1.0 EACH	SPECIAL MANHOLE NO. 2	\$ 8,000.00
51.21L003000V	1.0 EACH	SPECIAL MANHOLE NO. 3	\$ 8,000.00
51.21S0A1000V	15.0 EACH	STANDARD MANHOLE TYPE A-1	\$ 7,500.00
51.21S0A3000V	16.0 EACH	STANDARD SHALLOW MANHOLE TYPE A-3	\$ 6,500.00
51.23RF	185.0 EACH	REPLACEMENT OF EXISTING MANHOLE FRAME AND COVER	\$ 927.00
51.41P000	7.0 EACH	SPECIAL CATCH BASIN	\$ 6,000.00
51.41S001	77.0 EACH	STANDARD CATCH BASIN, TYPE 1	\$ 7,000.00
51.41S002	5.0 EACH	STANDARD CATCH BASIN, TYPE 2	\$ 8,000.00

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
51.42S1SX	25.0 EACH	INCREMENTAL COST OF STANDARD CATCH BASIN TYPE 3 WITHOUT CURB PIECE IN LIEU OF STANDARD CATCH BASIN TYPE 1	\$ 3,000.00
51.61F000	1.0 EACH	OUTFALL	\$ 1,500,000.00
52.11D06	80.0 L.F.	6" DUCTILE IRON PIPE BASIN CONNECTION	\$ 150.00
52.11D08	105.0 L.F.	8" DUCTILE IRON PIPE BASIN CONNECTION	\$ 175.00
52.11D12	1,605.0 L.F.	12" DUCTILE IRON PIPE BASIN CONNECTION	\$ 225.00
52.31V06C15	12.0 EACH	6" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 15" E.S.V.P. COMBINED SEWER	\$ 250.00
52.31V06C18	1.0 EACH	6" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 18" E.S.V.P. COMBINED SEWER	\$ 260.00
52.31V06S15	1.0 EACH	6" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 15" E.S.V.P. SANITARY SEWER	\$ 250.00
52.31V08C15	24.0 EACH	8" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 15" E.S.V.P. COMBINED SEWER	\$ 280.00
52.31V08C18	1.0 EACH	8" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 18" E.S.V.P. COMBINED SEWER	\$ 290.00
52.31V08S15	1.0 EACH	8" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 15" E.S.V.P. SANITARY SEWER	\$ 280.00
52.31V10C15	1.0 EACH	10" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 15" E.S.V.P. COMBINED SEWER	\$ 400.00
52.31V10C18	1.0 EACH	10" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 18" E.S.V.P. COMBINED SEWER	\$ 420.00
52.31V10S15	1.0 EACH	10" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 15" E.S.V.P. SANITARY SEWER	\$ 400.00
52.41V06R	72.0 L.F.	6" E.S.V.P. HOUSE CONNECTION DRAIN ON CONCRETE CRADLE (RECONNECTION)	\$ 95.00
52.41V08R	144.0 L.F.	8" E.S.V.P. HOUSE CONNECTION DRAIN ON CONCRETE CRADLE (RECONNECTION)	\$ 115.00
52.41V10R	12.0 L.F.	10" E.S.V.P. HOUSE CONNECTION DRAIN ON CONCRETE CRADLE (RECONNECTION)	\$ 125.00
53.11DR	6,050.0 L.F.	TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS	\$ 3.50
6.01 AC	760.0 S.Y.	CLEARING AND GRUBBING	\$ 25.00
6.02 AAN	10,204.0 C.Y.	UNCLASSIFIED EXCAVATION	\$ 76.00
6.02 XHEC	1,651.0 C.Y.	INCREMENTAL COST FOR MODIFYING WORK METHODS NEAR (WITHIN 3 FEET OF) TRANSIT FACILITIES AND BUILDING VAULTS	\$ 250.00
6.02 XSCW	1,910.0 C.Y.	INCREMENTAL COST FOR USING SPECIAL CARE WORK METHODS NEAR (FROM 3 FEET TO 50 FEET) TRANSIT FACILITIES	\$ 46.00
6.03 SEPS	26,240.0 S.Y.	STRIPPING EXISTING PAVEMENT SURFACES	\$ 30.00
6.04 DX	60.0 S.Y.	REINSTALL HISTORIC GRANITE SLAB PAVEMENT	\$ 210.00
6.04 GB	15,990.0 S.Y.	FURNISH AND INSTALL GRANITE BLOCK PAVEMENT	\$ 225.00
6.04 GH	3,191.0 L.F.	GRANITE BLOCK HEADER COURSE	\$ 160.00
6.04 NGP	3,060.0 S.Y.	NEW GRANITE PAVER WEARING COURSE FURNISHED AND INSTALLED	\$ 600.00
6.04 NGSB	2,200.0 S.Y.	NEW GRANITE SLAB PAVEMENT FURNISHED AND INSTALLED IN BIKE LANES	\$ 800.00
6.04 NGS1	1,370.0 S.Y.	NEW GRANITE SLAB PAVEMENT FURNISHED AND INSTALLED IN INTERSECTIONS	\$ 900.00

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
6.04 NGSS	270.0 S.Y.	NEW GRANITE SLAB PAVEMENT FURNISHED AND INSTALLED IN SIDEWALKS	\$ 800.00
6.04 NGSX	1,500.0 S.Y.	NEW GRANITE SLAB PAVEMENT FURNISHED AND INSTALLED IN CROSSWALKS	\$ 800.00
6.04 SHG	60.0 S.Y.	SALVAGE HISTORIC GRANITE SLAB PAVEMENT	\$ 150.00
6.04 UGB	3,100.0 S.Y.	FURNISH AND INSTALL USED GRANITE BLOCK PAVEMENT	\$ 250.00
6.05 DP	120.0 S.F.	RESTORATION OF DISTINCTIVE PAVEMENT	\$ 45.00
6.07 AA	4,400.0 S.F.	EXISTING BLUESTONE FLAGS RELAID	\$ 20.00
6.07 AB	1,300.0 S.F.	NEW BLUESTONE FLAGS, FURNISHED AND LAID	\$ 59.00
6.22 F	10,000.0 LBS.	ADDITIONAL HARDWARE	\$ 2.00
6.23 AB	2.0 EACH	REMOVE EXISTING FIRE ALARM POST	\$ 320.00
6.23 BA	3.0 EACH	FURNISH AND INSTALL FIRE ALARM POST AND SUBBASE IN ACCORDANCE WITH F.D. STD. DWG. #141	\$ 1,100.00
6.23 BD	415.0 L.F.	FURNISH AND INSTALL 4-PAIR FIRE ALARM CABLE	\$ 10.10
6.23 BES	2.0 EACH	FURNISH AND INSTALL FIRE DEPARTMENT SLOTTED MANHOLE TYPE "A" WITH FRAME AND COVER IN ACCORDANCE WITH F.D. STD. DWG. #140, #144S & #144E	\$ 5,000.00
6.23 BFB	1.0 EACH	FURNISH AND INSTALL FIRE DEPARTMENT 24 WIRE TERMINAL BOX AND TERMINATE FIRE ALARM CABLES	\$ 1,110.00
6.23 BFC	2.0 EACH	FURNISH AND INSTALL FIRE DEPARTMENT 12 WIRE TERMINAL BOX AND TERMINATE FIRE ALARM CABLES	\$ 616.00
6.23 BGSE	45.0 L.F.	FURNISH AND INSTALL 4" P.V.C. CONDUIT, SCHEDULE 40, U.L. 651 (WITH PAVEMENT EXCAVATION)	\$ 200.00
6.23 BGTE	260.0 L.F.	FURNISH AND INSTALL 2 - 4" P.V.C. CONDUIT, SCHEDULE 40, U.L. 651 IN ONE TRENCH (WITH PAVEMENT EXCAVATION, ONE ON TOP OF THE OTHER)	\$ 240.00
6.23 BHE	3.0 EACH	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	\$ 240.00
6.23 BP	3.0 SETS	FURNISH AND INSTALL FIRE ALARM PEDESTAL BUMPERS (2 REQUIRED PER SET) IN ACCORDANCE WITH F.D. STD. DWG. #168	\$ 1,500.00
6.23 RM	1.0 EACH	REMOVE EXISTING F.D.N.Y. MANHOLE	\$ 1,400.00
6.25 RS	600.0 S.F.	TEMPORARY SIGNS	\$ 15.00
6.26	20,700.0 L.F.	TIMBER CURB	\$ 5.00
6.28 AA	9,300.0 L.F.	LIGHTED TIMBER BARRICADES	\$ 10.00



COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
6.34 ADTP	1,480.0 L.F.	TEMPORARY CHAIN LINK FENCE, 8'-0" HIGH (WITH TOP AND BOTTOM RAILS AND POSTS MOUNTED ON STEEL PLATES)	\$ 80.00
6.34 DE	227.0 L.F.	DECORATIVE STEEL PICKET FENCE - EXTRUDED PANEL	\$ 890.00
6.34 DF	157.0 L.F.	DECORATIVE STEEL PICKET FENCE - FLUSH PANEL	\$ 619.00
6.34 DG	1.0 EACH	DECORATIVE STEEL DOUBLE SWING GATE	\$ 16,900.00
6.36 DR	10.0 C.Y.	STRUCTURAL REPAIR AND ADJUSTMENT OF UTILITY STRUCTURES	\$ 900.00
6.39 A	1.0 L.S.	MOBILIZATION	\$ 3,511,992.11
6.40 DU	66.0 MONTH	ENGINEER'S FIELD OFFICE (JOINT USE) (TYPE DU)	\$ 15,000.00
6.41	1.0 L.S.	LINE AND GRADE SURVEYS	\$ 70,000.00
6.43 D	6,000.0 SETS	DIGITAL PHOTOGRAPHS	\$ 20.00
6.50	86.0 EACH	CLEANING OF DRAINAGE STRUCTURES	\$ 491.00
6.52 CG	55,099.0 P/HR	CROSSING GUARD	\$ 40.00
6.55	700.0 L.F.	SAWCUTTING EXISTING PAVEMENT	\$ 4.00
6.67	1,490.0 C.Y.	SUBBASE COURSE, SELECT GRANULAR MATERIAL	\$ 91.00
6.68	3,000.0 S.Y.	PLASTIC FILTER FABRIC	\$ 2.00
6.74 PRA	930.0 L.F.	PAVER RESTRAINT ANCHORAGE	\$ 25.00
6.74 PRE	930.0 L.F.	PAVER RESTRAINT EDGE	\$ 17.00
6.74 SWPBA	8.0 EACH	STEEL AND WOOD PLANTER BENCH UNIT TYPE A	\$ 11,000.00
6.74 SWPBB	8.0 EACH	STEEL AND WOOD PLANTER BENCH UNIT TYPE B	\$ 13,200.00
6.77 SP-4	3.0 EACH	SOLAR POWERED TRASH COMPACTOR WITH INTEGRATED SINGLE STEAM RECYCLING UNIT	\$ 5,000.00
6.79 BD	140.0 L.F.	6" DUCTILE IRON PIPE CLASS 56 CONNECTION DRAIN	\$ 120.00
6.82 A	1,000.0 S.F.	REMOVING EXISTING TRAFFIC AND STREET NAME SIGNS	\$ 6.00
6.82 B	1,270.0 L.F.	REMOVING EXISTING TRAFFIC AND STREET NAME SIGN POSTS	\$ 6.00
6.83 AA	230.0 S.F.	FURNISHING NEW NON-REFLECTORIZED TRAFFIC SIGNS	\$ 18.00
6.83 AB	1,410.0 L.F.	FURNISHING NEW TRAFFIC SIGN POSTS	\$ 10.00
6.83 AR	900.0 S.F.	FURNISHING NEW REFLECTORIZED TRAFFIC SIGNS	\$ 25.00
6.83 BA	1,130.0 S.F.	INSTALLING TRAFFIC SIGNS	\$ 15.00
6.83 BB	1,410.0 L.F.	INSTALLING TRAFFIC SIGN POSTS	\$ 14.00
6.86 AA	190.0 S.F.	FURNISHING NEW STREET NAME SIGNS	\$ 30.00
6.86 AB	90.0 L.F.	FURNISHING NEW STREET NAME SIGN POSTS	\$ 9.00
6.86 BA	190.0 S.F.	INSTALLING STREET NAME SIGNS	\$ 15.00

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
6.86 BB	90.0 L.F.	INSTALLING STREET NAME SIGN POSTS	\$ 10.00
6.87	2,300.0 EACH	PLASTIC BARRELS	\$ 12.00
6.91	13,890.0 L.F.	REFLECTIVE CRACKING MEMBRANE (18" WIDE)	\$ 3.00
6.99	1.0 L.S.	AUDIO AND VIDEO DOCUMENTATION SURVEY	\$ 8,000.00
60.11R516	20.0 L.F.	FURNISHING AND DELIVERING 16-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	\$ 100.00
60.11R520	980.0 L.F.	FURNISHING AND DELIVERING 20-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	\$ 125.00
60.11R606	475.0 L.F.	FURNISHING AND DELIVERING 6-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	\$ 50.00
60.11R608	855.0 L.F.	FURNISHING AND DELIVERING 8-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	\$ 60.00
60.11R612	4,915.0 L.F.	FURNISHING AND DELIVERING 12-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	\$ 80.00
60.12D06	525.0 L.F.	LAYING 6-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 120.00
60.12D08	1,090.0 L.F.	LAYING 8-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 140.00
60.12D12	6,055.0 L.F.	LAYING 12-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 160.00
60.12D16	30.0 L.F.	LAYING 16-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 180.00
60.12D20	1,265.0 L.F.	LAYING 20-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 200.00
60.13M0A24	76.0 TONS	FURNISHING AND DELIVERING DUCTILE IRON MECHANICAL JOINT 24-INCH DIAMETER AND SMALLER FITTINGS, INCLUDING WEDGE TYPE RETAINER GLANDS	\$ 9,000.00
60.18BJC20EL	6.0 EACH	FURNISHING, DELIVERING AND INSTALLING BELL JOINT CLAMPS, COMPLETE FOR 20-INCH PIPE AND LESS	\$ 1,000.00
60.19TLS12E	4.0 EACH	FURNISHING, DELIVERING AND INSTALLING TEMPORARY LINE STOPS ON EXISTING 12-INCH WATER MAINS	\$ 15,000.00
60.19TLS20E	2.0 EACH	FURNISHING, DELIVERING AND INSTALLING TEMPORARY LINE STOPS ON EXISTING 20-INCH WATER MAINS	\$ 20,000.00
60.21SP3T36	2,285.0 L.F.	FURNISHING, DELIVERING AND LAYING 36-INCH STRAIGHT STEEL PIPE, 3/8-INCH WALL THICKNESS	\$ 1,800.00
60.22BR3T36	60.0 L.F.	FURNISHING, DELIVERING AND LAYING 36-INCH STEEL BENDS AND REDUCERS, 3/8-INCH WALL THICKNESS	\$ 1,800.00
60.24SB36	1.0 EACH	FURNISHING, DELIVERING AND INSTALLING 36-INCH DIAMETER STEEL BULKHEAD	\$ 0.10

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
60.25PSO	3,000.0 LBS.	FURNISHING, DELIVERING AND INSTALLING PLATE STEEL OUTLETS ON STEEL PIPE, ACCESS MANHOLE OUTLETS WITH COVERS, AND NUTS AND BOLTS COMPLETE	\$ 25.00
60.29CP	1.0 L.S.	FURNISHING, INSTALLING AND TESTING CORROSION CONTROL AND/OR CATHODIC PROTECTION SYSTEM	\$ 54,600.00
61.11DFM06	3.0 EACH	FURNISHING AND DELIVERING 6-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$ 2,200.00
61.11DFM12	1.0 EACH	FURNISHING AND DELIVERING 12-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$ 4,000.00
61.11DFM20	2.0 EACH	FURNISHING AND DELIVERING 20-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$ 20,000.00
61.11DMM06	33.0 EACH	FURNISHING AND DELIVERING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1,200.00
61.11DMM08	11.0 EACH	FURNISHING AND DELIVERING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1,800.00
61.11DMM12	16.0 EACH	FURNISHING AND DELIVERING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 3,000.00
61.11DMM20	3.0 EACH	FURNISHING AND DELIVERING 20-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 17,000.00
61.11TWC03	30.0 EACH	FURNISHING AND DELIVERING 3-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 600.00
61.11TWC04	20.0 EACH	FURNISHING AND DELIVERING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 650.00
61.11TWC06	10.0 EACH	FURNISHING AND DELIVERING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 750.00
61.11TWC08	5.0 EACH	FURNISHING AND DELIVERING 8-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 900.00
61.11TWC10	2.0 EACH	FURNISHING AND DELIVERING 10-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1,100.00
61.11TWC12	2.0 EACH	FURNISHING AND DELIVERING 12-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1,300.00
61.12DFM06	3.0 EACH	SETTING 6-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$ 1,000.00

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
61.12DFM12	1.0 EACH	SETTING 12-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$ 2,000.00
61.12DFM20	2.0 EACH	SETTING 20-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$ 5,000.00
61.12DMIM06	33.0 EACH	SETTING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 650.00
61.12DMIM08	11.0 EACH	SETTING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 900.00
61.12DMM12	16.0 EACH	SETTING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1,200.00
61.12DMM20	3.0 EACH	SETTING 20-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 3,500.00
61.12TWC03	30.0 EACH	SETTING 3-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 300.00
61.12TWC04	20.0 EACH	SETTING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 350.00
61.12TWC06	10.0 EACH	SETTING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 400.00
61.12TWC08	5.0 EACH	SETTING 8-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 450.00
61.12TWC10	2.0 EACH	SETTING 10-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 500.00
61.12TWC12	2.0 EACH	SETTING 12-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 550.00
62.11SS	35.0 EACH	FURNISHING AND DELIVERING HYDRANTS - SMITH TYPE (S-2-LP)	\$ 3,000.00
62.12SG	35.0 EACH	SETTING HYDRANTS COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1,500.00
62.13RH	27.0 EACH	REMOVING HYDRANTS	\$ 700.00
62.14FD	74.0 EACH	FURNISHING, DELIVERING AND INSTALLING HYDRANT FENDERS WITH DECORATIVE CAPS (BLACK)	\$ 300.00
63.11MH	2.0 TONS	FURNISHING, DELIVERING AND INSTALLING 36-INCH CAST IRON MANHOLE HEADS AND COVERS	\$ 1,500.00
63.11MS	40.0 EACH	FURNISHING, DELIVERING AND INSTALLING MANHOLE STEPS TYPE PS2-PF	\$ 20.00

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
63.11VC	54.0 TONS	FURNISHING AND DELIVERING VARIOUS CASTINGS	\$ 1,500.00
64.11EL	10.0 EACH	WITHDRAWING AND REPLACING HOUSE SERVICES USING 1-1/2-INCH OR LARGER SCREW TAPS	\$ 300.00
64.11ST	10.0 EACH	WITHDRAWING AND REPLACING HOUSE SERVICES USING SMALLER THAN 1-1/2-INCH SCREW TAPS	\$ 250.00
64.12COEG	20.0 L.F.	CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	\$ 200.00
64.12COLT	40.0 L.F.	CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	\$ 100.00
64.12ESEG	200.0 L.F.	EXTENDING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	\$ 75.00
64.12ESLT	400.0 L.F.	EXTENDING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	\$ 50.00
64.13WC08	20.0 EACH	FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 8-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	\$ 1,200.00
64.13WC12	40.0 EACH	FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 12-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	\$ 1,500.00
64.13WC20	9.0 EACH	FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 20-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	\$ 2,500.00
65.11BR	1,900.0 LBS.	FURNISHING, DELIVERING AND INSTALLING BANDS, RODS, WASHERS, ETC., COMPLETE, FOR RESTRAINING JOINTS	\$ 3.00
65.21PS	6,853.0 L.F.	FURNISHING AND PLACING POLYETHYLENE SLEEVE	\$ 1.00
65.31FF	173,555.0 S.F.	FURNISHING, DELIVERING AND PLACING FILTER FABRIC	\$ 0.25
65.41PS06	3.0 EACH	FURNISHING, DELIVERING AND INSTALLING 6-INCH PIPE-TO-WALL PENETRATION SEAL, INCLUDING STEEL SLEEVE AND ANCHOR/WATER STOP PLATE	\$ 700.00
65.41PS12	1.0 EACH	FURNISHING, DELIVERING AND INSTALLING 12-INCH PIPE-TO-WALL PENETRATION SEAL, INCLUDING STEEL SLEEVE AND ANCHOR/WATER STOP PLATE	\$ 1,000.00
65.41PS20	1.0 EACH	FURNISHING, DELIVERING AND INSTALLING 20-INCH PIPE-TO-WALL PENETRATION SEAL, INCLUDING STEEL SLEEVE AND ANCHOR/WATER STOP PLATE	\$ 1,800.00
65.51PC	715.0 C.Y.	FURNISHING AND PLACING CAST-IN-PLACE CONCRETE CLASS 40 AND PRECAST CONCRETE CLASS 50	\$ 960.00
65.61SS	61,400.0 LBS.	FURNISHING, DELIVERING AND PLACING STRUCTURAL, REINFORCING AND MISCELLANEOUS STEEL	\$ 3.00

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
65.71SG	1,112.0 C.Y.	FURNISHING, DELIVERING AND PLACING SCREENED GRAVEL OR SCREENED BROKEN STONE BEDDING	\$ 40.00
7.07 RR	8.0 EACH	REMOVE AND RESET EXISTING METAL BOLLARDS	\$ 2,500.00
7.12 A	40.0 EACH	PROCTOR ANALYSIS	\$ 160.00
7.12 B	120.0 EACH	IN-PLACE SOIL DENSITY TEST	\$ 146.00
7.13 B	60.0 MONTH	MAINTENANCE OF SITE	\$ 10,000.00
7.18 CM	2,000.0 C.Y.	CONTROLLED LOW STRENGTH MATERIAL (CLSM)	\$ 163.00
7.20	600.0 L.F.	RESET BASEMENT ACCESS	\$ 45.00
7.30 NGRC	50.0 L.F.	FURNISH AND INSTALL NEW GIRDER RAIL - CURVED SECTION	\$ 250.00
7.30 NGRS	170.0 L.F.	FURNISH AND INSTALL NEW GIRDER RAIL - STRAIGHT SECTION	\$ 220.00
7.30 NTRC	630.0 L.F.	FURNISH AND INSTALL NEW TEE RAIL - CURVED SECTION	\$ 185.00
7.30 NTRS	360.0 L.F.	FURNISH AND INSTALL NEW TEE RAIL - STRAIGHT SECTION	\$ 170.00
7.30 NTRSW	700.0 L.F.	FURNISH AND INSTALL NEW TEE RAIL IN SIDEWALK	\$ 125.00
7.30 RRT	3,390.0 L.F.	REMOVE AND STORE GIRDER RAIL	\$ 125.00
7.30 SGR	2,690.0 L.F.	REINSTALL SALVAGED GIRDER RAIL	\$ 210.00
7.36	19,900.0 L.F.	PEDESTRIAN STEEL BARRICADES	\$ 15.00
7.50 SF-DO1	16.0 EACH	TABLES	\$ 1,090.00
7.50 SF-DO2	32.0 EACH	CHAIRS	\$ 320.00
7.50 SF-DO3	8.0 EACH	UMBRELLAS	\$ 1,800.00
7.50 SF-DO4	8.0 EACH	UMBRELLA ANCHORS	\$ 1,000.00
7.50 SF-DO5	20.0 EACH	LOUNGE CHAIR	\$ 1,250.00
7.50 SF-DO6	4.0 EACH	BENCH	\$ 1,714.00
7.50 SF-DO7	20.0 EACH	PICNIC TABLE	\$ 10,725.00
7.50 SF-DOT	12.0 EACH	TRASH RECEPTACLE	\$ 1,372.00
7.50 SWBSA	1.0 EACH	STEEL AND WOOD BLEACHER SEAT UNIT TYPE A	\$ 145,600.00
7.50 SWBSB	1.0 EACH	STEEL AND WOOD BLEACHER SEAT UNIT TYPE B	\$ 156,000.00
7.57 DGRA	240.0 L.F.	DRILL AND GROUT REINFORCEMENT BARS	\$ 47.00
7.88 AA	2.0 L.S.	RODENT INFESTATION SURVEY AND MONITORING	\$ 7,500.00
7.88 AB	2,000.0 EACH	RODENT BAIT STATIONS	\$ 60.00

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
7.88 AC	2,000.0 EACH	BAITING OF RODENT BAIT STATIONS	\$ 10.00
7.88 AD	600.0 BLOCK	WATERBUG BAIT APPLICATIONS	\$ 65.00
70.12AN	40,320.0 V.F.	CONTINUOUS FLIGHT AUGER (CFA) PILES	\$ 135.00
70.12AT	2.0 EACH	CONTINUOUS FLIGHT AUGER (CFA) PILES, LOAD TEST	\$ 40,000.00
70.21DK	2,200.0 S.Y.	DECKING	\$ 100.00
70.31FN	15,700.0 L.F.	FENCING	\$ 4.00
70.51EO	66.0 C.Y.	EXCAVATION OF BOULDERS IN OPEN CUT	\$ 150.00
70.61RE	46.0 C.Y.	ROCK EXCAVATION	\$ 500.00
70.71SB	238.0 C.Y.	STONE BALLAST	\$ 30.00
70.81CB	8,783.0 C.Y.	CLEAN BACKFILL	\$ 30.00
70.91SW12	49,830.0 S.F.	FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 12-INCH IN DIAMETER AND LESS	\$ 1.00
70.91SW20	10,000.0 S.F.	FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 20-INCH IN DIAMETER	\$ 1.00
72.11HF	370.0 C.Y.	HYDRAULIC FILL FOR ABANDONED SEWERS AND WATER MAINS	\$ 95.00
73.11AB	37.0 C.Y.	ADDITIONAL BRICK MASONRY	\$ 125.00
73.21AC	93.0 C.Y.	ADDITIONAL CONCRETE	\$ 125.00
73.31AE0	595.0 C.Y.	ADDITIONAL EARTH EXCAVATION INCLUDING TEST PITS (ALL DEPTHS)	\$ 80.00
73.41AG	68.0 C.Y.	ADDITIONAL SELECT GRANULAR BACKFILL	\$ 30.00
73.51AS	1,200.0 LBS.	ADDITIONAL STEEL REINFORCING BARS	\$ 2.00
73.61AT	20.0 C.Y.	ADDITIONAL STONE BALLAST	\$ 30.00
76.11CR	1.0 L.S.	CONSTRUCTION REPORT	\$ 50,000.00
76.21MR	1.0 L.S.	MONITORING AND POST-CONSTRUCTION REPORT	\$ 40,000.00
76.31CM	48.0 MONTH	CONTINUOUS REAL-TIME MONITORING FOR VIBRATIONS AND MOVEMENTS AND POST- CONSTRUCTION REPORT	\$ 9,000.00
8.01 C1	20,000.0 TONS	HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOIL	\$ 85.00
8.01 C2	30.0 SETS	SAMPLING AND TESTING OF CONTAMINATED/POTENTIALLY HAZARDOUS SOIL FOR DISPOSAL PURPOSES	\$ 2,000.00
8.01 H	1,000.0 TONS	HANDLING, TRANSPORTING AND DISPOSAL OF HAZARDOUS SOIL	\$ 400.00
8.01 S	1.0 L.S.	HEALTH AND SAFETY	\$ 25,000.00
8.01 W1	150.0 DAY	REMOVAL, TREATMENT, AND DISCHARGE/DISPOSAL OF CONTAMINATED WATER	\$ 1,700.00

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
8.01 W2	30.0 SETS	SAMPLING AND TESTING OF CONTAMINATED WATER	\$ 1,400.00
8.02 A	9,615.0 S.F.	SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	\$ 4.00
8.02 B	1,660.0 L.F.	SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	\$ 10.00
8.06	12,200.0 S.F.	SHEET MEMBRANE WATERPROOFING	\$ 17.00
8.15 DUMBO	1.0 EACH	BOTTLE FILLER WITH DRINKING FOUNTAIN	\$ 4,625.00
8.32	130.0 S.Y.	BARK CHIP MULCH	\$ 15.00
8.52 DUMBO	13,600.0 LBS.	STRUCTURAL STEEL	\$ 6.50
8.52 WSF-A	1.0 EACH	WAYFINDING SIGN FOOTING TYPE A	\$ 8,556.00
8.52 WSF-B	4.0 EACH	WAYFINDING SIGN FOOTING TYPE B	\$ 9,574.00
9.00 B	240.0 L.I.	DRILLING PILOT HOLES	\$ 15.00
9.00 C	600.0 C.F.	EXPLORATORY TEST PITS	\$ 35.00
9.04 HW	1.0 F.S.	ALLOWANCE FOR ANTI-FREEZE ADDITIVE IN CONCRETE	\$ 67,500.00
9.06 HW	1.0 F.S.	ALLOWANCE FOR DECORATIVE MESH FABRIC	\$ 40,000.00
9.10 WSS	5,500.0 S.F.	TEMPORARY WALL SUPPORT SYSTEM	\$ 65.00
9.13 HD4	50.0 L.F.	4" HIGH-DENSITY POLYETHYLENE DRAINAGE PIPE	\$ 30.00
9.30	1.0 L.S.	STORM WATER POLLUTION PREVENTION	\$ 90,000.00
BMP-7.09	2.0 DAY	LICENSED SURVEYOR	\$ 3,000.00
BMP-7.107-B	50.0 C.Y.	RIP-RAP AND ANGULAR NATURAL FIELD STONE	\$ 225.00
BMP-7.109	450.0 S.F.	GEOTEXTILE FABRIC	\$ 3.00
BMP-7.307-A	2,450.0 S.F.	GRADING	\$ 0.50
BMP-7.404-B	52.0 DAY	EROSION AND SEDIMENT CONTROL LICENSED/CERTIFIED PROFESSIONAL	\$ 637.00
BMP-7.418	140.0 C.Y.	CLEAN SAND FOR RESTORED AREA	\$ 34.00
BMP-7.502	85.0 L.F.	CONSTRUCTION LIMIT FENCE	\$ 25.00
BMP-7.510	1.0 EACH	PORTABLE SEDIMENT TANK	\$ 8,715.00
BMP-7.516	145.0 L.F.	TURBIDITY CURTAIN	\$ 30.00
DUMBO-STO	60.0 MONTH	STORAGE FACILITY - PAVERS	\$ 12,500.00
E.260519 AA	1,480.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 4/0 AWG WIRE)	\$ 10.00
E.260519 B	350.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 2 AWG WIRE)	\$ 5.00
E.260519 G	12,415.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 10 AWG WIRE)	\$ 3.00
E.260519 J	2,955.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (350 MCM WIRE)	\$ 12.00
E.260526	90.0 L.F.	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS	\$ 15.00
E.260526 C	765.0 L.F.	BARE #1/0 AWG COPPER GROUND WIRE	\$ 6.00



COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
E 260526 E	2,030.0 L.F.	BARE #8 AWG COPPER GROUND WIRE	\$ 2.00
E 260533 AF	700.0 L.F.	METAL CONDUIT AND TUBING (4" PVC COATED RIGID STEEL CONDUIT)	\$ 50.00
E 260533 BA	3.0 EACH	LOCKABLE STAINLESS STEEL ENCLOSURE FOR UTILITY SERVICE AND DISTRIBUTION PANEL	\$ 6,000.00
E 260533 BB	1.0 EACH	FREESTANDING LOCKABLE EVENT BOX OUTLETS ENCLOSURE	\$ 4,000.00
E 260533 CD	1.0 EACH	CON EDISON PROPERTY LINE SPLICE BOX	\$ 4,000.00
E 260943 A	1.0 L.S.	SPECIALTY LIGHTING CONTROLS SYSTEM	\$ 30,000.00
E 262713 B	3.0 EACH	ELECTRICITY METERING, 200 A UTILITY METER	\$ 6,000.00
E 262726 AB	4.0 EACH	ELECTRICAL RECEPTACLE MOUNTED ON SUPPORTS	\$ 300.00
E 262726 AC	5.0 EACH	ELECTRICAL RECEPTACLE MOUNTED ON FENCE	\$ 350.00
E 262726 F	1.0 EACH	ELECTRIC HEATER	\$ 2,500.00
E 262726 G	10.0 EACH	EVENT BOX RECEPTACLES (20A)	\$ 2,000.00
E 262726 RPB	2.0 EACH	RETRACTABLE POWER BOLLARD	\$ 6,000.00
E 262816 A	3.0 EACH	ENCLOSED SWITCH, FUSED, 200 A	\$ 5,000.00
E 265619 A1	48.0 EACH	SPECIALTY LIGHTING FIXTURES (TYPE 1)	\$ 2,900.00
E 265619 A2	88.0 EACH	SPECIALTY LIGHTING FIXTURES (TYPE 2)	\$ 1,300.00
E 265619 A2A	40.0 EACH	SPECIALTY LIGHTING FIXTURES (TYPE 2A)	\$ 1,035.00
E 265619 A3	16.0 EACH	SPECIALTY LIGHTING FIXTURES (TYPE 3)	\$ 3,300.00
E 265619 A4	50.0 EACH	SPECIALTY LIGHTING FIXTURES (TYPE 4)	\$ 3,300.00
E 265619 LED	215.0 L.F.	LED STRIP LIGHTING SYSTEM	\$ 85.00
E260526 B	370.0 L.F.	BARE #2 AWG COPPER GROUND WIRE	\$ 4.00
E260533 AA	890.0 L.F.	METAL CONDUIT AND TUBING (1" PVC COATED RIGID STEEL CONDUIT)	\$ 30.00
E260533 AC	870.0 L.F.	METAL CONDUIT AND TUBING (2" PVC COATED RIGID STEEL CONDUIT)	\$ 35.00
E260533 AE	345.0 L.F.	METAL CONDUIT AND TUBING (3" PVC COATED RIGID STEEL CONDUIT)	\$ 40.00
E260533 CA	26.0 EACH	HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING	\$ 6,500.00
E262416 A	1.0 EACH	PANELBOARDS, 225 A 24 POLE WITH (24) IP-20A CB	\$ 15,000.00
HW-900-AVVW	1.0 F.S.	ALLOWANCE FOR ADDITIONAL VAULT RELATED WORK	\$ 1,300,000.00
HW-908	2.0 F.S.	ALLOWANCE FOR EXTRA WORK DUE TO ARCHAEOLOGICAL DISCOVERIES	\$ 50,000.00
HW-914	1.0 F.S.	ALLOWANCE FOR WAYFINDING TOTEMS	\$ 100,000.00
HW-91X	1.0 F.S.	ALLOWANCE FOR RAMP TO BUILDING ENTRANCE	\$ 80,000.00

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
JB 100.1 (VERZ)	12.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE.1)	\$ 595.00
JB 100.1(CE)	8.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION AND/OR TEST PIT (TYPE .1)	\$ 360.00
JB 100.1(TW)	21.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION AND/OR TEST PIT (TYPE .1)	\$ 550.00
JB 100.2(CE)	12.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION AND/OR TEST PIT (TYPE .2)	\$ 674.00
JB 100.2(VERZ)	10.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION AND/OR TEST PIT (TYPE .2)	\$ 808.00
JB 100.3 (VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION AND/OR TEST PIT (TYPE .3)	\$ 998.00
JB 100.3(CE)	16.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION AND/OR TEST PIT (TYPE .3)	\$ 1,000.00
JB 100.4(CE)	2.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION AND/OR TEST PIT (TYPE .4)	\$ 1,300.00
JB 100.4(VERZ)	2.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION AND/OR TEST PIT (TYPE .4)	\$ 1,413.00
JB 101.1 (VERZ)	4.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE. 1)	\$ 2,364.00
JB 101.1(CE)	16.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .1)	\$ 3,062.00
JB 101.1(TW)	8.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .1)	\$ 2,000.00
JB 101.2(CE)	3.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .2)	\$ 3,800.00
JB 101.2(VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .2)	\$ 2,394.00
JB 101.3(CE)	10.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .3)	\$ 5,000.00
JB 101.3(VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .3)	\$ 3,309.00
JB 101.4 (VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .4)	\$ 3,630.00
JB 102.1 (TW)	3.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER	\$ 3,000.00
JB 102.1(VERZ)	9.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .1)	\$ 2,905.00
JB 102.2(CE)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .2)	\$ 3,850.00
JB 102.2(VERZ)	6.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .2)	\$ 2,905.00
JB 103.1(TW)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE 1)	\$ 3,500.00
JB 103.1(VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .1)	\$ 3,971.00

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
JB 103.2(CE)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .2)	\$ 4,280.00
JB 103.2(VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .2)	\$ 3,971.00
JB 103.3(VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .3)	\$ 4,900.00
JB 104.2(CE)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 48" TO 54" DIAMETER (TYPE.2)	\$ 4,680.00
JB 105.1(CE)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER (TYPE .1)	\$ 4,275.00
JB 105.2(CE)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER (TYPE .2)	\$ 5,050.00
JB 108.1(CE)	26.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .1)	\$ 490.00
JB 108.1(TW)	20.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .1)	\$ 600.00
JB 108.1(VERZ)	20.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .1)	\$ 886.00
JB 108.2(CE)	26.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .2)	\$ 1,540.00
JB 108.2(VERZ)	12.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .2)	\$ 1,097.00
JB 108.3(CE)	16.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .3)	\$ 2,500.00
JB 108.3(VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .3)	\$ 1,322.00
JB 109.1(CE)	2.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .1)	\$ 1,260.00
JB 109.1(TW)	7.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .1)	\$ 1,000.00
JB 109.1(VERZ)	8.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .1)	\$ 1,003.00
JB 109.2(CE)	5.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .2)	\$ 1,900.00
JB 109.2(VERZ)	2.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .2)	\$ 1,345.00
JB 109.3(CE)	2.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .3)	\$ 3,040.00

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
JB 109.3(VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE. 3)	\$ 1,666.00
JB 109.4(VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE. 4)	\$ 2,007.00
JB 110.1(CE)	12.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE. 1)	\$ 1,750.00
JB 110.1(TW)	6.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" TO 36" DIAMETER	\$ 1,400.00
JB 110.1(VERZ)	3.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE. 1)	\$ 1,345.00
JB 110.2(CE)	4.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE. 2)	\$ 2,380.00
JB 110.2(VERZ)	4.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE. 2)	\$ 1,505.00
JB 110.3(CE)	2.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE. 3)	\$ 3,400.00
JB 200 (VERZ)	62.0 L.F.	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTION PIPES	\$ 170.00
JB 200(CE)	157.0 L.F.	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTION PIPES	\$ 120.00
JB 225(CE)	13.0 EACH	INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	\$ 5,168.00
JB 225(TW)	7.0 EACH	INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	\$ 2,800.00
JB 225(VERZ)	5.0 EACH	INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	\$ 2,925.00
JB 226 (VERZ)	16.0 EACH	INSTALLATION OF CATCH BASINS WITH INTERFERENCES	\$ 1,463.00
JB 226(CE)	23.0 EACH	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES	\$ 3,743.00
JB 227(CE)	8.0 EACH	REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	\$ 1,946.00
JB 227(VERZ)	6.0 EACH	REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	\$ 1,463.00
JB 300(CE)	184.0 C.Y.	SPECIAL CARE EXCAVATION AND BACKFILLING	\$ 234.00
JB 300(NG)	200.0 C.Y.	SPECIAL CARE EXCAVATION AND BACKFILLING	\$ 150.00
JB 300(TW)	19.0 C.Y.	SPECIAL CARE EXCAVATION AND BACKFILLING	\$ 150.00
JB 300(VERZ)	20.0 C.Y.	SPECIAL CARE EXCAVATION AND BACKFILLING	\$ 167.00
JB 301(CE)	177.0 C.Y.	SPECIAL CARE EXCAVATION AND BACKFILLING FOR OIL-O-STATIC PIPE	\$ 285.00
JB 303T(CE)	357.0 C.Y.	FURNISH, DELIVER AND INSTALL THERMAL SAND BACKFILL	\$ 38.00
JB 330E.1(CE)	80.0 L.F.	SUPPORT AND PROTECTION OF ELECTRIC AND GAS FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE WITHIN TRENCH LIMITS (TYPE. 1)	\$ 25.00

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
JB 330E.2(CE)	485.0 L.F.	SUPPORT AND PROTECTION OF ELECTRIC AND GAS FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE WITHIN TRENCH LIMITS (TYPE .2)	\$ 30.00
JB 330E.3(CE)	445.0 L.F.	SUPPORT AND PROTECTION OF ELECTRIC AND GAS FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE WITHIN TRENCH LIMITS (TYPE .3)	\$ 34.00
JB 330T1(TW)	995.0 L.F.	SUPPORT AND PROTECTION OF COMMUNICATION UTILITY FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN PARALLELING COMMUNICATION FACILITIES LIE COMPLETELY IN THE PROPOSED TRENCH	\$ 100.00
JB 330T1(VERZ)	1,530.0 L.F.	SUPPORT AND PROTECTION OF COMMUNICATION UTILITY FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE IN OR IN CLOSE PROXIMITY TO TRENCH LIMITS	\$ 115.00
JB 350T(VERZ)	1.0 L.S.	OVERHEAD ACCOMMODATION, PROTECTION OF OH FACILITIES & APPURTENANCES	\$ 6,370.00
JB 400(CE)	230.0 C.Y.	TEST PITS FOR UTILITY FACILITIES	\$ 200.00
JB 400(VERZ)	50.0 C.Y.	TEST PITS FOR UTILITY FACILITIES	\$ 218.00
JB 401(CE)	525.0 C.Y.	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES	\$ 240.00
JB 401(TW)	57.0 C.Y.	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES	\$ 200.00
JB 401(VERZ)	107.0 C.Y.	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES	\$ 228.00
JB 401AT (VERZ)	175.0 C.Y.	SPECIAL CARE PAVEMENT EXCAVATION FOR ADJUSTMENT OF TELECOMMUNICATION FACILITIES CONNECTED TO OR NEAR THE BASE PAVEMENT	\$ 76.00
JB 402.1(CE)	4,765.0 L.F.	EXISTING CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	\$ 71.00
JB 402.2(CE)	3,165.0 L.F.	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	\$ 44.00
JB 402.2A(TW)	176.0 L.F.	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	\$ 35.00
JB 402T.2A(VERZ)	1,468.0 L.F.	EXISTING OCCUPIED NON-CONCRETE ENCASED TELECOMMUNICATION CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	\$ 44.00
JB 402T.V2A(VERZ)	367.0 L.F.	EXISTING VACANT NON-CONCRETE ENCASED TELECOMMUNICATION CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	\$ 26.00
JB 403(CE)	384.0 S.F.	PLACING STEEL PROTECTION PLATES FOR UTILITY FACILITIES	\$ 2.20
JB 403T (CE)	300.0 S.F.	PLACING 1" THICK PROTECTION PLATES FOR UTILITY FACILITIES	\$ 3.00
JB 403T.2(VERZ)	1,500.0 S.F.	Placing steel protection plates for utilities facilities	\$ 14.85

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
JB 405.1(CE)	772.0 C.Y.	TRENCH EXCAVATION FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS LESS THAN FIVE FEET	\$ 205.00
JB 405.2(CE)	1,866.0 C.Y.	TRENCH EXCAVATION FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS EQUAL TO OR GREATER THAN FIVE FEET, REQUIRING SHEETING	\$ 295.00
JB 406(CE)	540.0 C.Y.	EXCAVATION FOR UTILITY STRUCTURE	\$ 230.00
JB 410.1(CE)	46.0 C.Y.	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES UP TO AND INCLUDING 20% (TYPE .1)	\$ 284.00
JB 410.2(CE)	641.0 C.Y.	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES OVER 20% AND UP TO AND INCLUDING 40% (TYPE .2)	\$ 355.00
JB 410.3(CE)	228.0 C.Y.	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES OVER 40% AND UP TO AND INCLUDING 60% (TYPE .3)	\$ 430.00
JB 410.5(CE)	742.0 C.Y.	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES UP TO AND INCLUDING 20% WITH TRENCH DEPTH EQUAL TO OR GREATER THAN FIVE FEET (TYPE .5)	\$ 290.00
JB 410.6(CE)	449.0 C.Y.	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES OVER 20% AND UP TO AND INCLUDING 40% WITH TRENCH DEPTH EQUAL TO OR GREATER THAN FIVE FEET (TYPE .6)	\$ 367.00
JB 410.7(CE)	201.0 C.Y.	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES OVER 40% AND UP TO AND INCLUDING 60% WITH TRENCH DEPTH EQUAL TO OR GREATER THAN FIVE FEET (TYPE .7)	\$ 442.00
JB 450.1(CE)	231.0 CREW/HR	CONSTRUCTION FIELD SUPPORT - SURVEY CREW (TYPE .1)	\$ 278.00
JB 450.2(CE)	1,314.0 CREW/HR	CONSTRUCTION FIELD SUPPORT - SMALL SIZE CREW (TYPE .2)	\$ 270.00
JB 450.3(CE)	1,346.0 CREW/HR	CONSTRUCTION FIELD SUPPORT - MEDIUM SIZE CREW (TYPE .3)	\$ 780.00
JB 500(CE)	4,800.0 L.F.	REMOVAL OF ABANDONED UTILITY CONDUITS (NON-CONCRETE ENCASED)	\$ 3.00
JB 501(CE)	741.0 C.Y.	REMOVAL OF ABANDONED MASONRY FOR UTILITY FACILITIES	\$ 300.00
JB 603E.1(CE)	32,125.0 L.F.	INSTALL UTILITY CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	\$ 4.50
JB 636 EA(NG)	50.0 EACH	ADJUSTMENT OF UTILITY HARDWARE (UNDER 7" WIDTH)	\$ 179.99
JB 636 EB(NG)	10.0 EACH	ADJUSTMENT OF UTILITY HARDWARE (7" TO UNDER 14" WIDTH)	\$ 185.55
JB 636 EC(NG)	6.0 EACH	ADJUSTMENT OF UTILITY HARDWARE (14" TO UNDER 30" WIDTH)	\$ 270.52
JB 636 ED(CE)	73.0 EACH	ADJUSTMENT OF UTILITY HARDWARE (30" TO UNDER 34" WIDTH)	\$ 785.00
JB 636 EE(CE)	23.0 EACH	ADJUSTMENT OF UTILITY HARDWARE (34" TO UNDER 41" WIDTH)	\$ 900.00
JB 636 EE(VERZ)	17.0 EACH	ADJUSTMENT OF UTILITY HARDWARE (34" TO UNDER 41" WIDTH)	\$ 490.00

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
JB 636 EG(TW)	14.0 EACH	ADJUSTMENT OF UTILITY HARDWARE (41" TO UNDER 75" WIDTH)	\$ 500.00
JB 636 EH(CE)	12.0 EACH	ADJUSTMENT OF UTILITY HARDWARE (75" TO UNDER 125" WIDTH)	\$ 1,180.00
JB 636 R(CE)	25.0 C.Y.	REPAIR TO UTILITY STRUCTURES	\$ 211.00
JB 638 N(CE)	236.0 C.Y.	INSTALLATION OF FIELD CONSTRUCTED UTILITY STRUCTURE	\$ 990.00
JB 638 N(VERZ)	10.0 C.Y.	INSTALLATION OF FIELD CONSTRUCTED UTILITIES STRUCTURES.	\$ 2,576.00
JB 638 R(CE)	90.0 C.Y.	BREAK OUT AND REMOVE UTILITY STRUCTURE	\$ 790.00
JB 638 R(VERZ)	10.0 C.Y.	BREAK OUT AND REMOVE UTILITY STRUCTURE	\$ 353.00
JB 700(CE)	1,839.0 C.Y.	SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER	\$ 47.00
JB 700(NG)	500.0 C.Y.	SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER	\$ 140.26
JB 700(TW)	638.0 C.Y.	SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER	\$ 75.00
JB 700(VERZ)	882.0 C.Y.	SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER	\$ 95.00
JB 710.1(CE)	1,500.0 L.F.	REMOVAL OF ABANDONED UTILITY STEEL/CAST IRON/ PLASTIC PIPES, UP TO AND INCLUDING 12" DIAMETER PIPE	\$ 12.00
JB 710.1(NG)	450.0 L.F.	REMOVAL OF ABANDONED UTILITY STEEL/CAST IRON/ PLASTIC PIPES, UP TO AND INCLUDING 12" DIAMETER PIPE	\$ 15.23
JB 781(CE)	4.0 EACH	REMOVABLE CURB SIDEWALK PANEL FOR ACCESS TO UTILITY STRUCTURE OPENINGS	\$ 209.00
JB 798(VERZ)	135.0 L.F.	MODIFICATION OF NON-CONCRETE YOKE TROLLEY STRUCTURES REMOVAL WHEN CROSSING UTILITY FACILITIES	\$ 150.00
JB 799(VERZ)	325.0 L.F.	MODIFICATION OF NON-CONCRETE TROLLEY STRUCTURES REMOVAL PARALLEL TO UTILITY FACILITIES	\$ 32.00
JB 800(CE)	200.0 L.F.	MODIFICATION OF TROLLEY STRUCTURE REMOVAL WHEN CROSSING UTILITY FACILITIES	\$ 160.00
JB 801(CE)	220.0 L.F.	MODIFICATION OF TROLLEY STRUCTURE REMOVAL PARALLEL TO UTILITY FACILITIES	\$ 148.00
JB 802A(CE)	4,750.0 S.F.	SPECIAL CARE EXCAVATION AND RESOTRATION FOR SIDEWALK WORK	\$ 3.00
JB 802A(NG)	7,400.0 S.F.	SPECIAL CARE EXCAVATION AND RESOTRATION FOR SIDEWALK WORK	\$ 7.88
JB 802A(TW)	877.0 S.F.	SPECIAL CARE EXCAVATION AND RESOTRATION FOR SIDEWALK WORK	\$ 7.88
JB 802A(VERZ)	8,980.0 S.F.	SPECIAL CARE EXCAVATION AND RESOTRATION FOR SIDEWALK WORK	\$ 4.00

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
JB 802B(CE)	2,000.0 L.F.	SPECIAL CARE EXCAVATION AND RESOTRATION FOR CURB WORK	\$ 10.00
JB 802B(NG)	1,000.0 L.F.	SPECIAL CARE EXCAVATION AND RESOTRATION FOR CURB WORK	\$ 13.35
JB 802B(TW)	76.0 L.F.	SPECIAL CARE EXCAVATION AND RESOTRATION FOR CURB WORK	\$ 13.35
JB 802B(VERZ)	765.0 L.F.	SPECIAL CARE EXCAVATION AND RESOTRATION FOR CURB WORK	\$ 10.00
JB 803.2(CE)	3,684.0 L.F.	LINE CUT BY PNEUMATIC TOOLS IN LIEU OF SAW CUT ASSOCIATED WITH ROADWAY REMOVAL OPERATIONS (LINE CUT ANY COMBINATION OF ASPHALT AND CONCRETE ROADWAY)	\$ 8.00
JB 850(CE)	450.0 S.F.	PLACING RUBBER SHEETS FOR UTILITY FACILITIES	\$ 3.00
JB 900(CE)	1.0 F.S.	EXTRA UTILITY WORK COSTS ALLOWANCE	\$ 1,353,700.00
JB 900(NG)	1.0 F.S.	EXTRA UTILITY WORK COSTS ALLOWANCE	\$ 38,655.52
JB 900(TW)	1.0 F.S.	EXTRA UTILITY WORK COSTS ALLOWANCE	\$ 39,271.50
JB 900(VERZ)	1.0 F.S.	EXTRA UTILITY WORK COSTS ALLOWANCE	\$ 150,000.00
NYC-665.16000011	9.0 EACH	FURNISH AND INSTALL BOLLARDS	\$ 2,050.00
PK-12D	1.0 EACH	WATER TAP, 2" DIAMETER	\$ 5,000.00
PK-13A	12.0 L.F.	TYPE K COPPER TUBING, 1/2" DIAMETER	\$ 24.00
PK-13D	460.0 L.F.	TYPE K COPPER TUBING, 1" DIAMETER	\$ 45.00
PK-13E	82.0 L.F.	TYPE K COPPER TUBING, 1-1/2" DIAMETER	\$ 63.00
PK-13F	286.0 L.F.	TYPE K COPPER TUBING, 2" DIAMETER	\$ 80.00
PK-143	1.0 EACH	RPZ & WATER METER WITH REMOTE & STRUCTURE - 2" DIA.	\$ 25,000.00
PK-14B	1.0 EACH	CURB GATE VALVE - 1/2" DIA.	\$ 600.00
PK-14C1	7.0 EACH	CURB VALVE- 1" DIAMETER	\$ 750.00
PK-14D	1.0 EACH	CURB GATE VALVE, 2" DIAMETER	\$ 800.00
PK-17	9.0 EACH	CAST IRON VALVE BOX, 5-1/4" DIAMETER	\$ 750.00
PK-184-GH1	3.0 EACH	GROUND HYDRANT - 1" DIAMETER	\$ 750.00
SL-20.02.02	71.0 EACH	FURNISH AND INSTALL STANDARD TYPE ANCHOR BOLT FOUNDATION, AS PER DRAWING E 3788	\$ 2,500.00
SL-20.08.01	53.0 EACH	REMOVE STANDARD TYPE ANCHOR BOLT CONCRETE FOUNDATION	\$ 1,457.00
SL-21.04.69	71.0 EACH	FURNISH AND INSTALL TYPE "CITY LIGHT" LAMPPOST WITH TRANSFORMER BASE	\$ 521.00
SL-21.09.05	53.0 EACH	REMOVE STANDARD FABRICATED STEEL, SPUN ALUMINUM NO. 10, ETC. WITH ARM(S), LUMINAIRE(S), CONTROL(S) WITH ALL ATTACHMENTS, IF ANY.	\$ 4,000.00
SL-22.16.01	71.0 EACH	INSTALL CITY LIGHT LED FIXTURE	\$ 750.00
SL-22.16.02	71.0 EACH	FURNISH SINGLE-ARM CITY LIGHT LED FIXTURE	\$ 500.00
			\$ 1,500.00



COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
SL-26.01.04	71.0 EACH	FURNISH AND INSTALL LONG LIFE PHOTO ELECTRIC CONTROL WITH SURGE PROTECTION FOR LED LIGHT	\$ 105.00
SL-26.06.02	1.0 EACH	FURNISH AND INSTALL LED FIRE ALARM LUMINAIRES.	\$ 260.00
SL-33.01.02	65.0 L.F.	FURNISH AND INSTALL NO. 6 AWG XLP COPPER CABLE OR EQUAL IN CONDUIT	\$ 6.00
SL-35.03.04	30.0 L.F.	FURNISH AND INSTALL 2" HOT DIPPED GALVANIZED STEEL CONDUIT IN UNPAVED AREA	\$ 75.00
SL-37.05.07	2.0 EACH	FURNISH AND INSTALL TYPE 4824 SIDEWALK CONCRETE BOX WITH CAST IRON FRAME AND COVER WITH TAMPER PROOF BOLTS AS PER DWG J-3179A.	\$ 1,200.00
UTL-6.01.1	36.0 EACH	GAS MAIN CROSSING SEWER UP TO 24" IN DIAMETER (S6.01)	\$ 1,040.00
UTL-6.01.11	6.0 EACH	GAS MAIN CROSSING WATER MAIN 36" THRU 42" IN DIAMETER (S6.01)	\$ 685.00
UTL-6.01.3	1.0 EACH	GAS MAIN CROSSING SEWER 36" THRU 42" IN DIAMETER (S6.01)	\$ 2,040.00
UTL-6.01.3D	2.0 EACH	GAS MAIN CROSSING 3'-6"W X 2'-0"H FLAT TOP REINFORCED CONCRETE STORM SEWER (S6.01)	\$ 2,040.00
UTL-6.01.3E	2.0 EACH	GAS MAIN CROSSING 3'-0"W X 2'-0"H FLAT TOP REINFORCED CONCRETE STORM SEWER (S6.01)	\$ 2,040.00
UTL-6.01.40	3.0 EACH	GAS MAIN CROSSING 4'-6"W X 2'-0"H FLAT TOP REINFORCED CONCRETE STORM SEWER (S6.01)	\$ 2,080.00
UTL-6.01.5M	1.0 EACH	GAS MAIN CROSSING 5'-0"W X 2'-0"H FLAT TOP REINFORCED CONCRETE STORM SEWER (S6.01)	\$ 2,320.00
UTL-6.01.8	20.0 EACH	GAS SERVICES CROSSING TRENCHES AND/OR EXCAVATIONS (S6.01)	\$ 465.00
UTL-6.01.9	20.0 EACH	GAS MAIN CROSSING WATER MAIN UP TO 20" IN DIAMETER (S6.01)	\$ 485.00
UTL-6.02	6.0 EACH	EXTRA EXCAVATION FOR THE INSTALLATION OF CATCH BASIN SEWER DRAIN PIPES WITH GAS INTERFERENCES (S6.02)	\$ 715.00
UTL-6.03	4,000.0 L.F.	REMOVAL OF ABANDONED GAS FACILITIES. ALL SIZES. (S6.03)	\$ 15.00
UTL-6.03.1	400.0 L.F.	REMOVAL OF ABANDONED GAS FACILITIES WITH POSSIBLE COAL TAR WRAP. ALL SIZES. (FOR NATIONAL GRID WORK ONLY) (S6.03)	\$ 25.00
UTL-6.04	45.0 EACH	ADJUST HARDWARE TO GRADE USING SPACER RINGS/ADAPTORS. (STREET REPAVING.) (S6.04)	\$ 35.00
UTL-6.05	65.0 EACH	ADJUST HARDWARE TO GRADE BY RESETTING. (ROAD RECONSTRUCTION.) (S6.05)	\$ 65.00
UTL-6.06	8,500.0 C.Y.	SPECIAL CARE EXCAVATION AND BACKFILLING (S6.06)	\$ 180.00
UTL-6.07	50.0 C.Y.	TEST PITS FOR GAS FACILITIES (S6.07)	\$ 100.00

COL 1 ITEM NUMBER	COL 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL 3 CLASSIFICATION	COL 4 UNIT PRICES (IN FIGURES)
UTL-6.09	50.0 C.Y.	TRENCH EXCAVATION AND BACKFILL FOR GAS MAINS AND SERVICES. GAS INSTALLED BY OTHERS (FOR NATIONAL GRID WORK ONLY). (\$6.09)	\$ 190.00
UTL-GCS-2WS	1.0 F.S.	GAS INTERFERENCES AND ACCOMMODATIONS	\$ 150,000.00
		THE BIDDER SHALL INSERT THE BID MULTIPLIER IN THE BID FORM ON PAGE C-4 OF THIS BID BOOKLET.	

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: HWKKP005

RECONSTRUCTION OF  
DUMBO D.M.A. / VINEGAR HILL AREA

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

Together With All Work Incidental Thereto

BOROUGH OF BROOKLYN  
CITY OF NEW YORK

Name of Bidder: HALCYON CONST. CORP.

Date of Bid Opening: MARCH 30, 2018

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

Place of Business of Bidder: 65 MARBLE AVE, PLEASANTVILLE, NY 10570

Bidder's Telephone Number: 914-741-1112 Fax Number: 914-741-2014

Bidder's E-Mail Address: SLEOPOLDO63@GMAIL.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 NY

Name and Home Address of President: CHARLES CASTRELLA

POUND RIDGE, NY

Name and Home Address of Secretary: CHARLES CASTRELLA

POUND RIDGE, NY

Name and Home Address of Treasurer: JOSEPH ZUZZOLO

BRIARCLIFF, NY

## 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).

BID FORM

PROJECT ID. HWKKP005

**BID PROPOSAL:** In the spaces provided below, the Bidder shall furnish his cost adjustment Multipliers, to be applied to every unit price items contained in the Bid Schedule and Contingency Item List, excluding items with a Fixed Sum unit of measurement, to cover the cost of furnishing all labor and materials required and complete all work in full compliance with the Contract for the single multiplier of:

TOTAL BID MULTIPLIER:  
(a/k/a BID PROPOSAL)

1.2650 Multiplier  
(Please specify to four (4) decimal places)  
of the foregoing Engineer's Estimate of  
Total Cost.

MS 3/30/18

**BIDDER'S SIGNATURE AND AFFIDAVIT  
HALCYON CONSTRUCTION CORP.  
65 MARBLE AVENUE  
PLEASANTVILLE, NEW YORK 10570**

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

NOTARY PUBLIC  
Qualified in Westchester County  
Commission Expires Jan 18, 2019

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 Westchester ss:

being duly sworn says:

I am the President of the above named corporation whose name is subscribed to and which executed the foregoing bid. I reside at Round Ridge N.Y.  
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  
28th day of March 2018

Maria Dioguardi  
Notary Public

**MARIA DIOGUARDI**  
Notary Public, State of New York  
No. 01-D16234276  
Qualified in Westchester County  
Commission Expires Jan 16, 2019

AFFIRMATION

PROJECT ID. HWKKP005

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.)

HALCYON CONSTRUCTION CORP.  
65 MARBLE AVENUE

Full Name of Bidder: PLEASANTVILLE, NEW YORK 10570

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

13-2995431

By: \_\_\_\_\_  
Signature

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, HALCYON CONSTRUCTION CORPORATION

65 MARBLE AVENUE, PLEASANTVILLE, NY 10570

hereinafter referred to as the "Principal", and Travelers Casualty and Surety Company of America  
One Tower Square  
Hartford, CT 06183

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 Amount Bid

(\$ 10%), 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: HWKKP005 - RECONSTRUCTION OF DUMBO/VINEGAR HILL

AREA/BROOKLYN

**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 30th day of March, 2018.

(Seal)

HALCYON CONSTRUCTION CORPORATION (L.S.)  
Principal

By: [Signature]

(Seal)



Travelers Casualty and Surety Company of America  
Surety

By: [Signature]  
William D. Haas, Attorney-in-Fact

ACKNOWLEDGMENT OF PRINCIPAL - IF A CORPORATION

STATE OF New York ss  
COUNTY OF Westchester

On this 30th day of March, 2018 before me personally appeared  
Charles Casanella to be known, who, being by me duly sworn, did depose and  
say; that he/she resides at Pound Ridge NY, that he/she is the President  
of Halcyon Construction Corp. the corporation described in and which  
executed the within insurance instrument; that he/she knows the seal of said corporation; that the seal affixed  
to said instrument is such corporate seal; that it was so affixed by the Board of Directors of said corporation;  
and that he/she signed his/her name thereto by like order.

MARIA DIOGUARDI  
Notary Public, State of New York  
No. 01-D16234276  
Qualified in Westchester County  
Commission Expires Jan 18, 2019

*[Signature]*

2019 ACKNOWLEDGMENT OF PRINCIPAL - IF INDIVIDUAL OR FIRM

STATE OF }  
COUNTY OF } ss

On this ..... day of ..... before me personally appeared  
..... to me know to be (the individual) (one of the firm  
of.....), described in and who executed the within instrument and he/she  
thereupon acknowledged to me that he/she executed the same (as the act and deed of said firm).

ACKNOWLEDGMENT OF SURETY COMPANY

STATE OF NEW YORK }  
COUNTY OF WESTCHESTER } ss

On this March 30, 2018, before me personally came WILLIAM D. HAAS  
to me known, who, being by me duly sworn, did depose and say; that he/she resides in  
RYE, NEW YORK; that he/she is the Attorney-in-Fact of the  
TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA the corporation described in which  
executed the above instrument; that he/she knows the seal of said corporation; that the seal affixed to said  
instrument is such corporate seal; that it was so affixed by the Board of Directors of said corporation; and that  
he/she signed his/her name thereto by like order; and the affiant did further depose and say that the  
Superintendent of Insurance of the State of New York, has, pursuant to Section 1111 of the Insurance Law of  
the State of New York, issued to WILLIAM D. HAAS his/her  
certificate of qualification evidencing the qualification of said Company and its sufficiency under any law of the  
State of New York as surety and guarantor, and the propriety of accepting and approving it as such; and that  
such certificate has not been revoked.

ALICE MCCARTHY  
NOTARY PUBLIC, State of New York  
No. 01MC5079342  
Qualified in Dutchess County  
Commission Expires June 02, 2019

*[Signature]*  
Notary Public

TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA

HARTFORD, CONNECTICUT 06183

FINANCIAL STATEMENT AS OF DECEMBER 31, 2016

CAPITAL STOCK \$ 6,480,000

ASSETS		LIABILITIES & SURPLUS	
CASH AND INVESTED CASH	\$ 23,923,843	UNEARNED PREMIUMS	\$ 879,381,216
BONDS	3,472,067,233	LOSSES	758,091,002
STOCKS	321,318,705	LOSS ADJUSTMENT EXPENSES	224,272,289
INVESTMENT INCOME DUE AND ACCRUED	42,069,894	COMMISSIONS	39,769,777
OTHER INVESTED ASSETS	3,108,073	TAXES, LICENSES AND FEES	13,875,052
PREMIUM BALANCES	217,181,397	OTHER EXPENSES	42,557,946
NET DEFERRED TAX ASSET	69,571,968	CURRENT FEDERAL AND FOREIGN INCOME TAXES	11,351,548
REINSURANCE RECOVERABLE	23,137,819	REMITTANCES AND ITEMS NOT ALLOCATED	9,443,140
SECURITIES LENDING REINVESTED COLLATERAL ASSETS	6,917,816	AMOUNTS WITHHELD / RETAINED BY COMPANY FOR OTHERS	73,697,600
RECEIVABLES FROM PARENT, SUBSIDIARIES AND AFFILIATES	9,661,930	RETROACTIVE REINSURANCE RESERVE ASSUMED	977,978
ASSUMED REINSURANCE RECEIVABLE AND PAYABLE	593,147	POLICYHOLDER DIVIDENDS	9,082,602
OTHER ASSETS	6,199,678	PROVISION FOR REINSURANCE	3,555,060
		ADVANCE PREMIUM	1,766,267
		PAYABLE FOR SECURITIES	3,948,166
		PAYABLE FOR SECURITIES LENDING	6,917,816
		CEDED REINSURANCE NET PREMIUMS PAYABLE	26,818,735
		REINSURANCE PAYABLE ON PAID LOSSES & LOSS ADJ. EXPENSES	686,744
		OTHER ACCRUED EXPENSES AND LIABILITIES	1,349,281
		TOTAL LIABILITIES	\$ 2,107,562,219
		CAPITAL STOCK	\$ 6,480,000
		PAID IN SURPLUS	433,803,760
		OTHER SURPLUS	1,647,905,524
		TOTAL SURPLUS TO POLICYHOLDERS	\$ 2,088,189,284
TOTAL ASSETS	\$ 4,195,751,503	TOTAL LIABILITIES & SURPLUS	\$ 4,195,751,503

STATE OF CONNECTICUT )  
 COUNTY OF HARTFORD ) SS.  
 CITY OF HARTFORD )

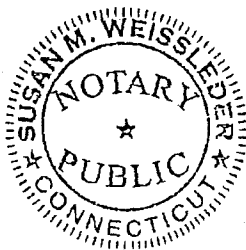
MICHAEL J. DOODY, BEING DULY SWORN, SAYS THAT HE IS SECOND VICE PRESIDENT, OF TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA, AND THAT TO THE BEST OF HIS KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT STATEMENT OF THE FINANCIAL CONDITION OF SAID COMPANY AS OF THE 31ST DAY OF DECEMBER, 2016.

*Michael J. Doody*  
 SECOND VICE PRESIDENT

*Susan M. Weissleder*  
 NOTARY PUBLIC

SUSAN M. WEISSLEDER  
 Notary Public  
 My Commission Expires November 30, 2017

SUBSCRIBED AND SWORN TO BEFORE ME THIS  
 17TH DAY OF MARCH, 2017



# TRAVELERS

## POWER OF ATTORNEY

Farmington Casualty Company  
Fidelity and Guaranty Insurance Company  
Fidelity and Guaranty Insurance Underwriters, Inc.  
St. Paul Fire and Marine Insurance Company  
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company  
Travelers Casualty and Surety Company  
Travelers Casualty and Surety Company of America  
United States Fidelity and Guaranty Company

Surety Bond No. Bid Bond

Principal: HALCYON CONSTRUCTION CORPORATION

OR

Project Description: PROJECT ID: HWKPP005 - RECONSTRUCTION  
OF DUMBO/VINEGAR HILL AREA/BROOKLYN

Obligee: The City of New York

**KNOW ALL MEN BY THESE PRESENTS:** That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc. is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **William D. Haas** of the City of **White Plains**, State of **NY**, their true and lawful Attorney-in-Fact, to sign, execute, seal and acknowledge the surety bond(s) referenced above.

**IN WITNESS WHEREOF**, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this **24<sup>th</sup>** day of **June, 2016**.

Farmington Casualty Company  
Fidelity and Guaranty Insurance Company  
Fidelity and Guaranty Insurance Underwriters, Inc.  
St. Paul Fire and Marine Insurance Company  
St. Paul Guardian Insurance Company

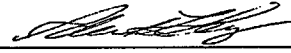
St. Paul Mercury Insurance Company  
Travelers Casualty and Surety Company  
Travelers Casualty and Surety Company of America  
United States Fidelity and Guaranty Company



State of Connecticut

City of Hartford ss.

By:

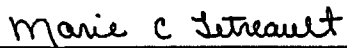
  
Robert L. Raney, Senior Vice President

On this the **24<sup>th</sup>** day of **June**, **2016**, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed 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 hereunto set my hand and official seal.

My Commission expires the **30th** day of **June, 2021**.



  
Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, which resolutions are now in full force and effect, reading as follows:

**RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

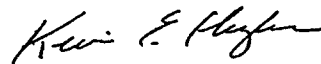
**FURTHER RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

**FURTHER RESOLVED**, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

**FURTHER RESOLVED**, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, Kevin E. Hughes, the undersigned, Assistant Secretary, of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which 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 30th day of March, 2018



Kevin E. Hughes, Assistant Secretary



To verify the authenticity of this Power of Attorney, call 1-800-421-3880 or contact us at [www.travelersbond.com](http://www.travelersbond.com). Please refer to the Attorney-In-Fact number, the above-named individuals and the details of the bond to which the power is attached.

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

CONTINGENCY ITEM LIST

- NOTE:
- (1) The Bid multiplier located on Page C-4 of the BID BOOKLET shall be applied to each of the fixed unit prices in the contingency item list, excluding items with "F.S." ("Fixed Sum") as the unit of measurement and that adjusted unit price shall represent the 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 fixed unit prices, in this Percentage Bid Contract, adjusted by the Bid multiplier are to be paid for the actual quantities of the several classes of work in the completed work or structure, and those adjusted unit prices 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) Prospective bidders must examine the Contingency Item List 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 Contingency Item List are numbered consecutively, as follows: D-1 through D-6.

COL. 1 ITEM NUMBER	COL. 2 CLASSIFICATION	COL. 3 UNIT	COL. 4 UNIT PRICE
For work to be done under the following items beginning with the prefix "JB-", see applicable sections in the JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR LOWER MANHATTAN booklet issued August 1, 2005			
<b>CHARTER SPECTRUM (TIME WARNER) CONTINGENCY ITEMS</b>			
JB 104.1 (TW)	UTILITIES CROSSING TRENCH FOR SEWERS OVER 48" TO 54" DIAMETER	EA	\$4,000.00
JB 105.1 (TW)	UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER	EA	\$4,200.00
JB 106.1 (TW)	UTILITIES CROSSING TRENCH FOR SEWERS OVER 60" TO 72" DIAMETER	EA	\$4,400.00
JB 107.1 (TW)	UTILITIES CROSSING TRENCH FOR SEWERS OVER 72" TO 84" DIAMETER	EA	\$4,500.00
JB 111.1 (TW)	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 36" TO 48" DIAMETER	EA	\$1,500.00
JB 112.1 (TW)	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 48" TO 54" DIAMETER	EA	\$1,600.00
JB 113.1 (TW)	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 54" TO 60" DIAMETER	EA	\$1,800.00
JB 114.1 (TW)	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 60" TO 72" DIAMETER	EA	\$2,000.00
JB 115.1 (TW)	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 72" TO 84" DIAMETER	EA	\$2,200.00
JB200 (TW)	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTION PIPES	LF	\$150.00
JB226 (TW)	INSTALLATION OF CATCH BASIN WITH UTILITY INTERFERENCES	EA	\$1,400.00
JB 227 (TW)	REMOVAL OF CATCH BASIN WITH UTILITY INTERFERENCES	EA	\$1,400.00
JB400 (TW)	TEST PITS FOR UTILITY FACILITIES	CY	\$175.00
JB 401AC (TW)	SPECIAL CARE PAVEMENT EXCAVATION FOR ADJUSTMENT OF CABLE TV FACILITIES CONNECTED TO THE BASE PAVEMENT	CY	\$75.00

COL. 1 ITEM NUMBER	COL. 2 CLASSIFICATION	COL. 3 UNIT	COL. 4 UNIT PRICE
JB 402.1 (TW)	EXISTING CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION W/O CONC. ENCASEMENT	LF	\$35.00
JB 402.1A (TW)	EXISTING CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONC. ENCASEMENT	LF	\$45.00
JB 402.2 (TW)	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION W/O CONC. ENCASEMENT	LF	\$25.00
JB403 (TW)	PLACING STEEL PROTECTION PLATES FOR UTILITY FACILITIES	SF	\$4.00
JB 405.1 (TW)	TRENCH EXCAVATIONS FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS LESS THAN FIVE FEET	CY	\$150.00
JB 405.2 (TW)	TRENCH EXCAVATIONS FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS EQUAL TO OR GREATER THAN FIVE FEET. REQUIRING SHEETING	CY	\$200.00
JB406 (TW)	EXCAVATION FOR UTILITY STRUCTURE	CY	\$150.00
JB 500 (TW)	REMOVAL OF ABANDONED UTILITY CONDUITS	LF	\$4.00
JB 501 (TW)	REMOVAL OF ABANDONED MASONRY FOR UTILITY FACILITIES	CY	\$200.00
JB 501.1 (TW)	REMOVAL OF ABANDONED CABLE TELEVISION SIDEWALK PULLBOX	EA	\$500.00
JB 603T.1 (TW)	INSTALL 1 ea. 2", 4" or 1 1/4" QUAD (PVC or STEEL) IN ANY COMBINATION	LF	\$5.00
JB 603T.2 (TW)	INSTALL 2 ea. 2", 4" or 1 1/4" QUAD (PVC or STEEL) IN ANY COMBINATION	LF	\$8.00
JB 603T.3 (TW)	INSTALL 4 ea. 2", 4" or 1 1/4" QUAD (PVC or STEEL) IN ANY COMBINATION	LF	\$12.00
JB 638N (TW)	INSTALLATION OF FIELD CONSTRUCTED UTILITY STRUCTURE	CY	\$1,054.00
JB 638R (TW)	BREAKOUT & REMOVE UTILITY STRUCTURE	CY	\$350.00
JB 800 (TW)	MODIFICAT10N OF TROLLEY STRUCTURE REMOVAL WHEN CROSSING UTILITY FACILITIES	LF	\$190.00
JB 801 (TW)	MODIFICATION OF TROLLEY STRUCTURE REMOVAL PARALLEL TO UTILITY FACILITIES	LF	\$80.00



COL. 1 ITEM NUMBER	COL. 2 CLASSIFICATION	COL. 3 UNIT	COL. 4 UNIT PRICE
For work to be done under the following items beginning with the prefix "JB-", see applicable sections in the JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR LOWER MANHATTAN booklet issued August 1, 2005			
<b>VERIZON CONTINGENCY ITEMS</b>			
JB 100.5 (VERZ)	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTIONS AND/OR TEST PITS (TYPE .5)	EACH	\$1,697.00
JB 100.6 (VERZ)	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTIONS AND/OR TEST PITS (TYPE .6)	EACH	\$1,707.00
JB 101.5 (VERZ)	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .5)	EACH	\$4,302.00
JB 101.6 (VERZ)	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .6)	EACH	\$4,784.00
JB 102.3 (VERZ)	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .3)	EACH	\$3,261.00
JB 102.4 (VERZ)	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .4)	EACH	\$3,617.00
JB 102.5 (VERZ)	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .5)	EACH	\$3,973.00
JB 102.6 (VERZ)	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .6)	EACH	\$3,973.00
JB 103.4 (VERZ)	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .4)	EACH	\$5,857.00
JB 103.5 (VERZ)	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .5)	EACH	\$7,743.00
JB 103.6 (VERZ)	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .6)	EACH	\$7,743.00
JB 108.4 (VERZ)	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .4)	EACH	\$1,622.00

COL. 1 ITEM NUMBER	COL. 2 CLASSIFICATION	COL. 3 UNIT	COL. 4 UNIT PRICE
JB 108.5 (VERZ)	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .5)	EACH	\$1,983.00
JB 108.6 (VERZ)	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 12" DIAMETER (TYPE .6)	EACH	\$2,313.00
JB 109.5 (VERZ)	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .5)	EACH	\$2,508.00
JB 109.6 (VERZ)	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .6)	EACH	\$3,010.00
JB 110.3 (VERZ)	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .3)	EACH	\$1,666.00
JB 110.4 (VERZ)	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .4)	EACH	\$2,007.00
JB 110.5 (VERZ)	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .5)	EACH	\$2,508.00
JB 110.6 (VERZ)	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .6)	EACH	\$3,010.00
JB 402T.1 (VERZ)	EXISTING CONCRETE ENCASED NON-STEEL/IRON CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	LF	\$47.00
JB 402T.1A (VERZ)	EXISTING CONCRETE ENCASED NON-STEEL/IRON CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	LF	\$53.00
JB 402T.2 (VERZ)	EXISTING NON-CONCRETE ENCASED NON-STEEL/IRON CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	LF	\$39.00
JB 402T.R1A (VERZ)	EXISTING CONCRETE ENCASED STEEL/IRON CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	LF	\$43.50
JB 402T.R2A (VERZ)	EXISTING NON-CONCRETE ENCASED STEEL/IRON CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	LF	\$42.80
JB 402T.V1 (VERZ)	EXISTING VACANT CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	LF	\$35.00
JB 402T.V1A (VERZ)	EXISTING VACANT CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	LF	\$41.00
JB 402T.V2 (VERZ)	EXISTING VACANT NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	LF	\$21.00
JB 402T.J1 (VERZ)	EXISTING CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT IN WHICH ONLY CONDUIT JOINTS ARE BROKEN OUT AND CONDUITS REMAIN INTACT	LF	\$47.00
JB 402T.J1A (VERZ)	EXISTING CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT IN WHICH ONLY CONDUIT JOINTS ARE BROKEN OUT AND CONDUITS REMAIN INTACT	LF	\$53.00
JB 402T.J2 (VERZ)	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT IN WHICH ONLY CONDUIT JOINTS ARE BROKEN OUT AND CONDUITS REMAIN INTACT	LF	\$39.00
JB 402T.J2A (VERZ)	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT IN WHICH ONLY CONDUIT JOINTS ARE BROKEN OUT AND CONDUITS REMAIN INTACT	LF	\$44.00
JB 405.1 (VERZ)	TRENCH EXCAVATIONS FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS LESS THAN FIVE FEET	LF	\$346.00

COL. 1 ITEM NUMBER	COL. 2 CLASSIFICATION	COL. 3 UNIT	COL. 4 UNIT PRICE
JB 500 (VERZ)	REMOVAL OF ABANDONED UTILITY CONDUITS (NON-CONCRETE ENCASED)	LF	\$4.00
JB 603T.2 (VERZ)	FURNISH AND INSTALL 2 EA. 2", 4" OR 1.25" QUAD CONDUITS IN ANY COMBINATION	LF	\$11.00
JB 603T.4 (VERZ)	FURNISH AND INSTALL 6 EA. 4" OR 1.25" QUAD CONDUITS IN ANY COMBINATION	LF	\$33.00
JB 603T.6 (VERZ)	FURNISH AND INSTALL 12 EA. 4" OR 1.25" QUAD CONDUITS IN ANY COMBINATION	LF	\$66.00
JB 636R (VERZ)	REPAIR OF UTILITY STRUCTURE	CY	\$211.00
JB 800 (VERZ)	MODIFICATION OF CONCRETE YOKE TROLLEY STRUCTURES REMOVAL WHEN CROSSING UTILITY FACILITIES	LF	\$241.00
JB 801 (VERZ)	MODIFICATION OF CONCRETE YOKE TROLLEY STRUCTURES REMOVAL PARALLEL TO UTILITY FACILITIES	LF	\$76.00
JB 803 (VERZ)	LINE CUT BY PNEUMATIC TOOLS IN LIEU OF SAW CUT ASSOCIATED WITH ROADWAY REMOVAL OPERATIONS	LF	\$15.80

## 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](http://www.nyc.gov/buycertified), by emailing DSBS at [buyer@sbs.nyc.gov](mailto: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](http://www.nyc.gov/getcertified), emailing [MWBE@sbs.nyc.gov](mailto: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](mailto: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  $\hat{e}$  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 #: B-2995431

APT E- PIN #: 85018B0108

**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 # 85018B0108 FMS Project ID#: HWKKP005  
 Project Title/ Agency PIN # RECONSTRUCTION OF DUMBO D.M.A./ VINEGAR HILL AREAS / 8502016HW0063C  
 Bid/Proposal Response Date MARCH 30, 2018  
 Contracting Agency Department of Design and Construction  
 Agency Address 30-30 Thomson Ave. City Long Island City State NY Zip Code 11101  
 Contact Person Edward Espinoza Title M/WBE Liaison & Compliance Analyst  
 Telephone # (718) 391-1904 Email EspinozEd@ddc.nyc.gov

**Project Description** (attach additional pages if necessary)

RECONSTRUCTION OF  
 DUMBO D.M.A. / VINEGAR HILL AREA  
 INCLUDING SEWER, WATER MAIN, TRUNK MAIN, STREET LIGHTING  
 AND TRAFFIC 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
Unspecified*	10%
or	
Black American	UNSPECIFIED*
Hispanic American	UNSPECIFIED*
Asian American	UNSPECIFIED*
Women	UNSPECIFIED*
<b>Total Participation Goals</b>	<b>10%</b> <b>Line 1</b>

*\*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 #: 13-2995431

APT E- 85018B0092  
PIN #: \_\_\_\_\_

**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 # 13-2995431 FMS Vendor ID # 0000806638  
 Business Name HALCYON CONSTRUCTION CORP. Contact Person SAL LEOPOLD  
 Address 65 MARBLE AVENUE  
PLEASANTVILLE, NEW YORK 10570  
 Telephone # 914-411-1112 Email LEOPOLD063@GMAIL.COM

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

**PRIME CONTRACTOR ADOPTING AGENCY M/WBE PARTICIPATION GOALS**

<input checked="" type="checkbox"/> For Prime Contractors (including Qualified Joint Ventures and M/WBE firms) adopting Agency M/WBE Participation Goals.	Total Bid/Proposal Value	Agency Total Participation Goals (Line 1, Page 13)	Calculated M/WBE Participation Amount
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.	93,124,231 - \$	10% X	9,312,423 = \$ Line 2

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

<input type="checkbox"/> For Prime Contractors (including Qualified Joint Ventures and M/WBE firms) adopting Modified M/WBE Participation Goals.	Total Bid/Proposal Value	Adjusted Participation Goal (From Partial Waiver)	Calculated M/WBE Participation Amount
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.	\$	X	= \$ Line 3

Tax ID #: 13-2995431

APTE-  
PIN #: 85018P0097

**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? % 15.2

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.

	1	TREE WORK	\$ 200,000
	2	ELECTRICAL WORK	\$ 2,000,000
	3	CROSSING GUARD	\$ 1,500,000
	4	FENCING - PICKET	\$ 300,000
	5	DIGITAL PHOTOS	\$ 50,000
	6	CONTAMINATED FILL REMOVAL	\$ 1,500,000
	7	TRUCKING	\$ 2,000,000
	8	RODENT CONTROL	\$ 50,000
✓	9	FLIGHT AUGER PILES	\$ 2,800,000
	10	COMPACTION / CONC. TESTING	\$ 100,000
	11	SURVEY	\$ 100,000
	12	CONS. REPORT	\$ 300,000
	13	GRANITE PAVEMENT WORK (SOME)	\$ 3,100,000
	14	STEEL PIPE WELDING	\$ 150,000
	15		
	16		
	17	* NON M/WBE	

ABOVE WORK TO BE COMPLETED  
BETWEEN 1/2019 - 1/2024

Tax ID #: 13-2995431

APT E-  
PIN #: 85018B 0092

**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

[Handwritten Signature]

Date

3/29/2018

Print Name

SAL LEOPOLDO

Title

V.P.

## 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: Harvey Const Corp

Project ID Number: HWKRP005

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.

APPRENTICESHIP PROGRAM QUESTIONNAIRE ("APQ")

Project ID Number: HWKK P005

- Where the bidder participates in any such Apprenticeship Programs through collective bargaining agreements, the bidder shall provide the following:
  - The contact information for such collective bargaining entity(ies) and the apprenticeable trade(s) covered pursuant to the bidder's affiliation therewith;
  - A letter(s) from such collective bargaining entity(ies), on letterhead of such entity(ies), executed by an officer, delegate or official thereof, which verifies/verify the bidder's status as a signatory/participant in good standing to such collective bargaining entity(ies) Apprenticeship Program Agreements.

"SEE ATTACHED UNION LETTERS"

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

HALCYON CONSTRUCTION CORP.  
65 MARBLE AVENUE  
PLEASANTVILLE, NEW YORK 10570

Bidder: \_\_\_\_\_

By: [Signature] Title: V.P.  
(Signature of Partner or Corporate Officer)

Date: 3/29/2018



**HIGHWAY, ROAD & STREET CONSTRUCTION  
LABORERS' LOCAL UNION 1010**

17-20 Whitestone Expressway, Suite 200 • Whitestone, NY 11357  
Phone: (718) 886-3310 • Fax: (718) 886-8885

January 23, 2017

Halcyon Construction Corp.  
65 Marble Avenue  
Pleasantville, NY 10570

To Whom It May Concern:

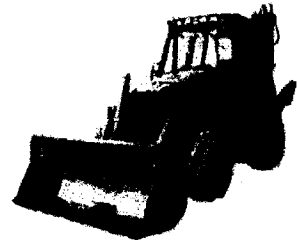
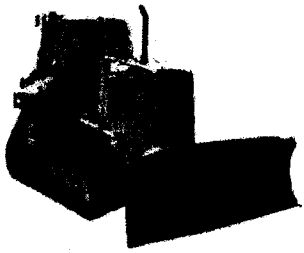
This will confirm that Local 1010 Apprentice, Skill Improvement and Training Fund to which you contribute, sponsors the Local 1010 Pavers Joint Apprenticeship Committee. The Local 1010 JAC is an Approved Apprenticeship Program by the New York State Department of Labor, registered under Sponsor#12607 and ATP Code 18-514 for Skilled Construction Laborers. This letter also confirms that Halcyon Construction Corp is a signatory company in good standing with Local 1010.

If you have any questions, please feel free to contact me at the Union Hall at 718-886-3310.

Very truly yours,

Francisco Fernandez  
JAC Union Trustee  
Highway, Road & Street Construction  
Laborers' Local 1010

International Union Of Operating Engineers  
Local 15, 15A, 15B, 15C & 15D



# training center

APPRENTICESHIP • SKILL IMPROVEMENT & SAFETY  
P.O. BOX 489 • STATION B • HOWARD BEACH, NEW YORK 11414  
(718) 835-0400 • FAX (718) 835-2210

UNION TRUSTEES  
JAMES T. CALLAHAN  
THOMAS A. CALLAHAN

502  
**PATRICK J. PETERSON**  
DIRECTOR

EMPLOYER TRUSTEES  
MICHAEL SALGO  
DENISE RICHARDSON

January 24, 2017

To whom it may concern:

**Re: Halcyon Construction Corp.**

Please be advised that The International Union of Operating Engineers Local 15 has an Apprentice program registered with the New York State Department of Labor which meets the standards established by the Commissioner of Labor and the United States Department of Labor, Bureau of Apprenticeship Training in accordance with (29CFR29).

The I.U.O.E. Local 15 Apprentice Training Program is a joint apprenticeship committee operated program. The committee is composed of an equal number of representatives of the employers and of the employees represented by a bona fide collective bargaining agreement and has been established to conduct, operate, and administer the apprenticeship program.

Since the above-mentioned employer is a signatory to our agreements, they are therefore participants in our apprenticeship-training program.

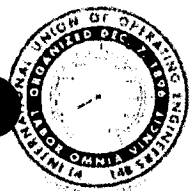
If any further information is needed, please do not hesitate to contact me at the above number.

Sincerely,

A handwritten signature in cursive script that reads "Patrick Peterson".

Patrick Peterson  
Director of Apprenticeship and Training

PJP/da



**INTERNATIONAL UNION OF OPERATING ENGINEERS**  
AFFILIATED WITH THE A.F.L.-C.I.O.  
**LOCAL UNION 14-14B**

© 1994 IUE

**CHRISTOPHER T. CONFREY**  
President

**KENNETH B. KLEMENS, JR.**  
Vice-President

**JOHN R. POWERS**  
Rec./Corr. Secretary

**THOMAS ROEMER, JR.**  
Treasurer

**HUGH MANLEY**  
Financial Secretary

**EDWIN L. CHRISTIAN**  
Business Manager

*BUSINESS REPRESENTATIVES*

**CHRISTOPHER T. CONFREY**

**JOHN R. POWERS**

**HUGH MANLEY**

**KENNETH B. KLEMENS, JR.**

**January 23, 2017**

**To Whom It May Concern:**

Kindly allow this letter to confirm that Halcyon Construction Corp. is signatory to a current collective bargaining agreement with the International Union of Operating Engineers, Local 14-14B, AFL-CIO. The Operating Engineers Local 14-14B Joint Apprenticeship Committee is a registered apprenticeship program recognized by the New York State Department of Labor that has been providing apprentice opportunities for registered apprentices in accordance with the training standards approved by the Department of Labor since May 1, 1994.

In the event that you have any questions, please contact our office.

Very truly yours,

**Edwin L. Christian**  
Business Manager

ELC:cp

Project ID. HWKK 2005

### 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: **HALCYON CONSTRUCTION CORP.**  
Company Name: 65 MARBLE AVENUE  
PLEASANTVILLE, NEW YORK 10570

DDC Project Number: HWKK 2005

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

Company has previously worked for DDC  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	_____	_____
Highway and Street Construction	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Heavy Construction, except highways	_____	_____
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. HWKK P005

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
<u>2017</u>	<u>.94</u>	/
<u>2016</u>	<u>.94</u>	/
<u>2015</u>	<u>1.00</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.

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
<u>2017</u>	<u>161,373</u>	<u>8.68</u>
<u>2016</u>	<u>169,815</u>	<u>7.07</u>
<u>2015</u>	<u>157,070</u>	<u>3.82</u>

Project ID. HWKK P005

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	<del>8.7</del>
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): MED606RR MED600B HED553

YES  NO Accident on previous DDC Project(s).

DDC Project Number(s): MED606RR MED600B HED553

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: 3/29/2018 By:   
(Signature of Owner, Partner, Corporate Officer)

Title: V.P.



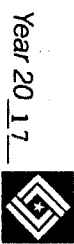
# Log of Work-Related Injuries and Illnesses

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.

Establishment name **Halcyon Construction Corp**  
 City **Pleasantville** State **NY**

U.S. Department of Labor  
 Occupational Safety and Health Administration  
 Form approved OSHA no. 1218-0178



**Identify the person**

**Describe the case**

**Classify the case**

**Enter the number of days the injured or ill worker was:**

**Check the "Injury" column or choose one type of illness**

(A) Case no.	(B) Employee's name	(C) Job title (e.g., Welder)	(D) Date of injury or onset of illness	(E) Where the event occurred (e.g., Landing deck north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g., Second degree burns on right forearm from accident torch)	(G) Death	(H) Days away from work	(I) Restricted work	(J) On job transfer or restriction	(K) Days away from work	(L) On job transfer or restriction	(M) Injury	(N) Skin disorder	(O) Respiratory condition	(P) Poisoning	(Q) Hearing loss	(R) All other illnesses
01	Truglio, Gennaro	Lab Fore	01/04 mon/tuesday	Southern Blvd	Bruised left calf, ankle, top of left foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
02	Anselona, Matthew	Plumber	02/03 mon/tuesday	Owlshhead	Right Shoulder Pain & Stiffness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
03	Grobarcik, Steven	Timberman	02/08 mon/tuesday	Southern Blvd	Right Foot	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
04	Mozzo, Pablo	Lab Mech	03/17 mon/tuesday	Southern Blvd	Broken Right Foot	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
05	Grobarcik, Michael C	Laborer	07/10 mon/tuesday	Southern Blvd	Right Shoulder Pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
06	Santos, Rene	Laborer	07/27 mon/tuesday	Southern Blvd	Back	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
07	Nickerson, Dustin W	Plumber	09/13 mon/tuesday	Mamanoneck Ave	Shoulder/Hernia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Page totals</b>						0	3	0	0	164	0	7	0	0	0	0	0

Public reporting burden for this collection of information is estimated to average 14 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 estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3694, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

Page \_\_\_ of \_\_\_

# Summary of Work-Related Injuries and Illnesses

Year 20 17

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 307 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
164	0
(k)	(l)

## Injury and Illness Types

Total number of... (M)	(1) Injuries	(2) Skin disorders	(3) Respiratory conditions	(4) Poisonings	(5) Hearing loss	(6) All other illnesses
	7	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 38 minutes per response, including time to review the instructions, search existing data sources, 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 this estimate or any other aspect of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3614, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

### Establishment Information

Your establishment name: Halcyon Construction Corp  
 Street: 65 Marble Avenue  
 City: Pleasantville State: NY ZIP: 10570

Industry description (e.g., *Manufacture of motor vehicle parts*):  
Construction

Standard Industrial Classification (SIC), if known (e.g., 3715):  
4 6 2 4

North American Industrial Classification (NAICS), if known (e.g., 336212):  
 \_\_\_\_\_

**Employment information** (If you don't have these figures, see the Worksheet on the back of this page to estimate.)  
 Annual average number of employees: 82

Total hours worked by all employees last year: 161,372.5

### 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.

Christine Gencarelli PR Mgr/HR Admin  
 Company Representative Title  
 Phone: (914)741-1112 Fax: 01 66 2018

# Summary of Work-Related Injuries and Illnesses

Year 20 16

U.S. Department of Labor  
Occupational Safety and Health Administration  
Form approved OMB no. 1218-0075

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 307 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	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
139	0
(k)	(l)

## Injury and Illness Types

Total number of ...	(m)	(n)	(o)
(1) Injuries	6	(4) Poisonings	0
(2) Skin disorders	0	(5) Hearing loss	0
(3) Respiratory conditions	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 58 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 estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3614, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

### Establishment Information

Your establishment name: Halcyon Construction Corp  
 Street: 65 Marble Avenue  
 City: Pleasantville State: NY ZIP: 10570

Industry description (e.g., *Manufacture of motor truck trailers*):  
Construction

Standard Industrial Classification (SIC), if known (e.g., 3715):  
4624

OR  
 North American Industrial Classification (NAICS), if known (e.g., 336212):  
 \_\_\_\_\_

**Employment Information** (If you don't have these figures, see the Worksheet on the back of this page to estimate.)

Annual average number of employees: 82

Total hours worked by all employees last year: 169815

### 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.

Christine Gencarelli, PR Mgr/HR Admin  
 Company executive  
(914) 741-1112 Date: 01/17/17



# Summary of Work-Related Injuries and Illnesses

Year 20 1 5

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	2	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
21	0
(k)	(l)

## Injury and Illness Types

Total number of . . .	(m)	(n)	(o)
(1) Injuries	3	(4) Poisonings	0
(2) Skin disorders	0	(5) Hearing loss	0
(3) Respiratory conditions	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 38 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 estimates of burden or any other aspect of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

### Establishment Information

Your establishment name Halcyon Construction Corp

Street 65 Marble Avenue

City Pleasantville State NY ZIP 10570

Industry description (e.g., *Manufacture of motor truck trailers*)  
Construction

Standard Industrial Classification (SIC), if known (e.g., 3715)  
4 6 2 4

OR

North American Industrial Classification (NAICS), if known (e.g., 336212)  
\_\_\_\_\_

Employment information (If you don't have these figures, see the Worksheet on the back of this page to estimate.)

Annual average number of employees 76

Total hours worked by all employees last year 157070

### 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 Christine Gencarelli Title PR Mgr/HR Admin

Signature (914) 741-1112 Date 01/8/16



## 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

**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.**

## 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, 9<sup>th</sup> 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: \_\_\_\_\_

# 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.

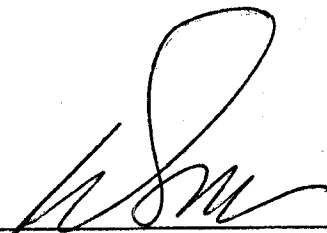
**BIDDER'S CERTIFICATION OF COMPLIANCE WITH  
IRAN DIVESTMENT ACT**

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  
  
CHARLES CASARELLA  
\_\_\_\_\_  
PRINTED NAME  
  
PRESIDENT  
\_\_\_\_\_  
TITLE

Sworn to before me this  
28th day of Nov 20 18

  
\_\_\_\_\_  
Notary Public

Dated: 3.28.18

MARIA DIOGUARDI  
Notary Public, State of New York  
No. 01-DI6234276  
Qualified in Westchester County  
Commission Expires Jan 18, 2019

**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**

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
---------------------------	-------------------------------	--------------------------------------	---	--------------------------------------

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 731, 1010, 15, 14, 1556
6. Are you a Veteran owned company? Yes  No

**PART I: CONTRACTOR/SUBCONTRACTOR INFORMATION**

7. 13-2995431 SLEPOLOPO63@GMAIL.COM  
Employer Identification Number or Federal Tax I.D. Email Address
8. HALCYON CONSTRUCTION CORP.  
Company Name
9. 65 MARBLE AVENUE  
PLEASANTVILLE, NEW YORK 10570  
Company Address and Zip Code
10. CHARLES CASARELLA 914-741-1112  
Chief Operating Officer Telephone Number
11. "SAME" 914-741-1112  
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: 75

14. Contract information:

(a) NYC DDC  
Contracting Agency (City Agency)

(b) -  
Contract Amount

(c) HWKK P005  
Procurement Identification Number (PIN)

(d) -  
Contract Registration Number (CT#)

(e) 1/2019  
Projected Commencement Date

(f) 1/2024  
Projected Completion Date

(g) Description and location of proposed contract:

RECONSTR. OF DUMBO, BROOKLYN

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.

FILED AT HALCYON CONSTRUCTION CORP.  
65 MARBLE AVENUE  
PLEASANTVILLE, NEW YORK 10570

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).

---

---

100-100000-100000  
The Y... of ...  
2000-0000-0000  
Y...  
P...

SIGNATURE PAGE

I, (print name of authorized official signing) CHARLES CASTRELLA 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.

HALCYON CONSTRUCTION CORP.

Contractor's Name 65 MARBLE AVENUE

PLEASANTVILLE, NEW YORK 10570

Name of person who prepared this Employment Report CHARLES CASTRELLA Title PRES.

Name of official authorized to sign on behalf of the contractor CHARLES CASTRELLA Title PRES

Telephone Number 914-741-1112

Signature of authorized official [Signature] Date 3/28/18

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 25<sup>th</sup> day of March 2018

Notary Public [Signature] Authorized Signature Date 3-28-18

MARIA DIOGUARDI  
Notary Public, State of New York  
No. 01-D16234276  
Qualified in Westchester County  
Commission Expires Jan 18, 2019

**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 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: APPRENTICE

Union Affiliation, if applicable  
731 / 1010

Total (Col. #1-10):

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

Total Female  
 (Col. #6 - 10):

	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	10	5	10							
H										
A										
TRN										
TOT	10	5	10							

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: ENG.

Union Affiliation, if applicable  
14/15

Total (Col. #1-10):

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

Total Female  
(Col. #6 - 10):

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

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

UNIONS

**FOR CURRENT WORKFORCE**

**TRADE CLASSIFICATION CODES**

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

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: TIMBERMAN

Union Affiliation, if applicable  
ISSB

Total (Col. #1-10):

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

Total Female  
(Col. #6 - 10):

	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	3	3	4							
H										
A										
TRN										
TOT	3	3	4							

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

4 UNIONS

**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): \_\_\_\_\_

**FEMALES**

**MALES**

	(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																					

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)

ATTACH TO CONTRACT DOCUMENTS

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

PROJECT ID: HWKKP005

RECONSTRUCTION OF  
DUMBO D.M.A. / VINEGAR HILL AREA

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

Together With All Work Incidental Thereto

BOROUGH OF BROOKLYN  
CITY OF NEW YORK

ADDENDUM NO. 1

DATED: MARCH 20, 2108

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

1. Refer to the Bid and Contract Documents, Volume 1 of 3;  
Delete Bid Schedule pages B-3 through B-25 in their entirety;  
Insert attached revised Bid Schedule pages B-3 [REVISION # 1] through B-37 [REVISION # 1].

**NOTE: 1) REVISED QUANTITY AND UNIT PRICE ITEM NO. 7.88 AA and ITEM NO. HW-908;  
2) REVISED UNIT PRICE FOR ITEM 60.24SB36.**

2. Refer to the Contract Drawings, sheet 211 of 283, upper right corner, LEGEND;  
Delete the text PK - 13 B (1/2") in its entirety;  
Substitute with the new text PK-13A (1/2").
3. For additional information, see the attached ONE (1) page of "Questions Submitted by Bidders and DDC's Responses".

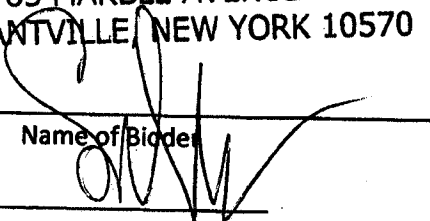
END OF ADDENDUM NO. 1

By signing in the space provided below, the bidder acknowledges receipt of this Addendum consisting of ONE (1) page and attachments consisting of THIRTY-SIX (36) pages.

THIS ADDENDUM MUST BE SIGNED BY ALL BIDDERS AND ATTACHED TO THEIR BID

HALCYON CONSTRUCTION CORP.  
65 MARBLE AVENUE  
PLEASANTVILLE, NEW YORK 10570

  
HOW SHEEN PAU, P.E.  
Assistant Commissioner

By:   
Name of Bidder

**Questions Submitted by Bidders and DDC's Responses**

**QUESTION #1:**

With reference to above contract being bid on March 30. Due to the complexity and detail of this project we request a 3 week postponement in order to properly cost contract.

**DDC's RESPONSE:**

*There shall be no TIME EXTENSION in Bid Date.*

**Questions Submitted by Bidders and DDC's Responses**

**QUESTION #1:**

With reference to above contract being bid on March 30. Due to the complexity and detail of this project we request a 3 week postponement in order to properly cost contract.

**DDC's RESPONSE:**

*There shall be no TIME EXTENSION in Bid Date.*

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

## ADDENDA CONTROL SHEET

BID OPENING DATE: MARCH 30, 2018

PROJECT NO.: HWKKP005

DESCRIPTION: RECONSTRUCTION OF DUMBO D.M.A. / VINEGAR HILL AREA

Addendum		Addendum Contains:				
No.	Date	Revised Bid Date/Time	Revised Bid Schedule	Questions & Responses	Additional Ammendments	Drawings (number)
1	3/20/2018	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> (0)
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (0)
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (0)
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (0)
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (0)
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (0)
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (0)
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (0)
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (0)
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (0)
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (0)
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (0)
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (0)

The Table above is a guide. Refer to the referenced Addendum for specific information.



ATTACH TO CONTRACT DOCUMENTS

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

PROJECT ID: HWKKP005

RECONSTRUCTION OF  
DUMBO D.M.A. / VINEGAR HILL AREA

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

Together With All Work Incidental Thereto

BOROUGH OF BROOKLYN  
CITY OF NEW YORK

ADDENDUM NO. 1

DATED: MARCH 20, 2108

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

1. Refer to the Bid and Contract Documents, Volume 1 of 3;  
Delete Bid Schedule pages B-3 through B-25 in their entirety;  
Insert attached revised Bid Schedule pages B-3 [REVISION # 1] through B-37 [REVISION # 1].

**NOTE: 1) REVISED QUANTITY AND UNIT PRICE ITEM NO. 7.88 AA and ITEM NO. HW-908;**  
**2) REVISED UNIT PRICE FOR ITEM 60.24SB36.**

2. Refer to the Contract Drawings, sheet 211 of 283, upper right corner, LEGEND;  
Delete the text PK - 13 B (1/2") in its entirety;  
Substitute with the new text PK-13A (1/2").
3. For additional information, see the attached ONE (1) page of "Questions Submitted by Bidders and DDC's Responses".

END OF ADDENDUM NO. 1

By signing in the space provided below, the bidder acknowledges receipt of this Addendum consisting of ONE (1) page and attachments consisting of THIRTY-SIX (36) pages.

THIS ADDENDUM MUST BE SIGNED BY ALL BIDDERS AND ATTACHED TO THEIR BID

  
HOW SHEEN PAU, P.E.  
Assistant Commissioner

\_\_\_\_\_  
Name of Bidder

By: \_\_\_\_\_

**Questions Submitted by Bidders and DDC's Responses**

**QUESTION #1:**

With reference to above contract being bid on March 30. Due to the complexity and detail of this project we request a 3 week postponement in order to properly cost contract.

**DDC's RESPONSE:**

*There shall be no TIME EXTENSION in Bid Date.*

**Questions Submitted by Bidders and DDC's Responses**

**QUESTION #1:**

With reference to above contract being bid on March 30. Due to the complexity and detail of this project we request a 3 week postponement in order to properly cost contract.

**DDC's RESPONSE:**

*There shall be no TIME EXTENSION in Bid Date.*

## BID SCHEDULE

- NOTE:**
- (1) The Bid multiplier located on Page C-4 of the BID BOOKLET shall be applied to each of the fixed unit prices in the bid schedule, excluding items with "F.S." ("Fixed Sum") as the unit of measurement and that adjusted unit price shall represent the 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 fixed unit prices, in this Multiplier Bid Contract, adjusted by the Bid multiplier are to be paid for the actual quantities of the several classes of work in the completed work or structure, and those adjusted unit prices 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 MULTIPLIER IS ENTERED, IN INK, ON PAGE C-4 OF THE BID BOOKLET.  
Alterations must be initiated in ink by the Bidder.
  - (4) 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 [REVISION # 1] Through B - 37 [REVISION # 1]

**THE BIDDER SHALL INSERT THE BID MULTIPLIER IN  
THE BID FORM ON PAGE C-4 OF THIS BID BOOKLET.**



3/20/2018 9:02 AM

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION PROJECT ID:HWKKP005  
 DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN CONTRACT PIN: 8502016HW00063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
001	4.02 AG	500.0 S.Y.	ASPHALTIC CONCRETE WEARING COURSE, 3" THICK	\$ 31.00
002	4.02 CB	6,000.0 TONS	ASPHALTIC CONCRETE MIXTURE	\$ 128.00
003	4.04 HC	5,200.0 C.Y.	CONCRETE BASE FOR PAVEMENT, 8" THICK (HIGH-EARLY STRENGTH)	\$ 264.00
004	4.06	646.0 C.Y.	CONCRETE IN STRUCTURES, CLASS A-40	\$ 1,000.00
005	4.07 AB	300.0 L.F.	RESET BLUESTONE CURB	\$ 45.00
006	4.07 NYHA	10,480.0 L.F.	NEW NY HISTORICAL GRANITE CURB, STRAIGHT	\$ 110.00
007	4.07 NYHC	1,200.0 L.F.	NEW NY HISTORICAL GRANITE CURB, CORNER	\$ 140.00
008	4.07 NYHD	1,250.0 L.F.	NEW NY HISTORICAL STRAIGHT GRANITE CURB, DEPRESSED AND TRANSITIONAL	\$ 120.00
009	4.11 CA	630.0 C.Y.	FILL, PLACE MEASUREMENT	\$ 35.00
010	4.12 GR6	200.0 L.F.	REMOVE, STORE AND RESET EXISTING GRANITE HEADER, 6" WIDE	\$ 125.00
011	4.13 AAS	240.0 S.F.	4" CONCRETE SIDEWALK (UNPIGMENTED)	\$ 15.00
012	4.13 CABS	118,360.0 S.F.	4" CONCRETE SIDEWALK (PIGMENTED) (SAW CUT TYPE JOINTS)	\$ 11.00
013	4.13 CBBS	20,900.0 S.F.	7" CONCRETE SIDEWALK (PIGMENTED) (SAW CUT TYPE JOINTS)	\$ 13.00
014	4.13 DE	1,243.0 S.F.	EMBEDDED PREFORMED DETECTABLE WARNING UNITS	\$ 25.00
015	4.14	62,800.0 LBS.	STEEL REINFORCEMENT BARS	\$ 3.00
016	4.14 E	2,370.0 LBS.	EPOXY COATED STEEL REINFORCEMENT BARS	\$ 3.50



3/20/2018 9:02 AM

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

PROJECT ID:HWKPK005

CONTRACT PIN:8502016HW0063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
017	4.15	170.0 C.Y.	TOPSOIL	\$ 83.00
018	4.16 AA	9.0 EACH	TREES REMOVED (4' TO UNDER 12" CALIPER)	\$ 364.00
019	4.16 BA510	83.0 EACH	TREES PLANTED, 2-1/2" TO 3" CALIPER, ALL TYPES, IN 5' X 10' TREE PITS	\$ 916.00
020	4.16 STUMP	1.0 UNITS	STUMP REMOVAL	\$ 397.00
021	4.17 EG3G	128.0 EACH	SHRUBS PLANTED, EVERGREEN, 3 GALLON, ALL TYPES	\$ 60.00
022	4.17 FB	384.0 EACH	FLOWERING BULB, PLANTED, ALL TYPES	\$ 5.00
023	4.17 L	256.0 EACH	GROUND COVER PLANTED, LIRIOPE MUSCARI "BIG BLUE"	\$ 10.00
024	4.18 A	21.0 EACH	MAINTENANCE TREE PRUNING (UNDER 12" CAL.)	\$ 198.00
025	4.18 B	1.0 EACH	MAINTENANCE TREE PRUNING (12" TO UNDER 18" CAL.)	\$ 263.00
026	4.18 C	3.0 EACH	MAINTENANCE TREE PRUNING (18" TO UNDER 24" CAL.)	\$ 229.00
027	4.21	480.0 P/HR	TREE CONSULTANT	\$ 77.00
028	50.11MS030020	570.0 L.F.	3'-0"W X 2'-0"H SINGLE BARREL FLAT TOP REINFORCED CONCRETE STORM SEWER	\$ 1,300.00
029	50.11MS036020	260.0 L.F.	3'-6"W X 2'-0"H SINGLE BARREL FLAT TOP REINFORCED CONCRETE STORM SEWER	\$ 1,350.00
030	50.11MS046020	250.0 L.F.	4'-6"W X 2'-0"H SINGLE BARREL FLAT TOP REINFORCED CONCRETE STORM SEWER	\$ 1,475.00
031	50.11MS050020	290.0 L.F.	5'-0"W X 2'-0"H SINGLE BARREL FLAT TOP REINFORCED CONCRETE STORM SEWER	\$ 1,550.00
032	50.21C3C024D	220.0 L.F.	24" R.C.P. CLASS III COMBINED SEWER, ON CONCRETE CRADLE	\$ 700.00

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
033	50.21C3C036D	70.0 L.F.	36" R.C.P. CLASS III COMBINED SEWER, ON CONCRETE CRADLE	\$ 850.00
034	50.21M3E024D	1,250.0 L.F.	24" R.C.P. CLASS III STORM SEWER, ENCASED IN CONCRETE	\$ 600.00
035	50.21S3C024D	170.0 L.F.	24" R.C.P. CLASS III SANITARY SEWER, ON CONCRETE CRADLE	\$ 700.00
036	50.31CC15	1,790.0 L.F.	15" E.S.V.P. COMBINED SEWER, ON CONCRETE CRADLE	\$ 550.00
037	50.31CC18	210.0 L.F.	18" E.S.V.P. COMBINED SEWER, ON CONCRETE CRADLE	\$ 600.00
038	50.31ME12	420.0 L.F.	12" E.S.V.P. STORM SEWER, ENCASED IN CONCRETE	\$ 500.00
039	50.31ME15	70.0 L.F.	15" E.S.V.P. STORM SEWER, ENCASED IN CONCRETE	\$ 550.00
040	50.31ME18	290.0 L.F.	18" E.S.V.P. STORM SEWER, ENCASED IN CONCRETE	\$ 600.00
041	50.31SC15	190.0 L.F.	15" E.S.V.P. SANITARY SEWER, ON CONCRETE CRADLE	\$ 550.00
042	51.11C001	1.0 EACH	CHAMBER NO. 1	\$ 175,000.00
043	51.11C002	1.0 EACH	CHAMBER NO. 2	\$ 150,000.00
044	51.11C003	1.0 EACH	CHAMBER NO. 3	\$ 250,000.00
045	51.11C004	1.0 EACH	CHAMBER NO. 4	\$ 200,000.00
046	51.11C005	1.0 EACH	CHAMBER NO. 5	\$ 550,000.00
047	51.11C006	1.0 EACH	CHAMBER NO. 6	\$ 325,000.00
048	51.11P004	3.0 EACH	STANDARD 4'-0" DIAMETER PRECAST MANHOLE	\$ 7,000.00
049	51.11P005	2.0 EACH	STANDARD 5'-0" DIAMETER PRECAST MANHOLE	\$ 8,000.00



3/20/2018 9:02 AM

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION  
 DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN  
 PROJECT ID:HWKKP005  
 CONTRACT PIN:8502016HW0063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
050	51.11P006	3.0 EACH	STANDARD 6'-0" DIAMETER PRECAST MANHOLE	\$ 9,500.00
051	51.11P007	1.0 EACH	STANDARD 7'-0" DIAMETER PRECAST MANHOLE	\$ 12,000.00
052	51.11P008	1.0 EACH	STANDARD 8'-0" DIAMETER PRECAST MANHOLE	\$ 15,000.00
053	51.21A000000C	3.0 EACH	ACCESS MANHOLE	\$ 8,000.00
054	51.21C000000C	7.0 EACH	CLEANOUT MANHOLE	\$ 7,000.00
055	51.21L001000V	1.0 EACH	SPECIAL MANHOLE NO. 1	\$ 8,000.00
056	51.21L002000V	1.0 EACH	SPECIAL MANHOLE NO. 2	\$ 8,000.00
057	51.21L003000V	1.0 EACH	SPECIAL MANHOLE NO. 3	\$ 7,500.00
058	51.21S0A1000V	15.0 EACH	STANDARD MANHOLE TYPE A-1	\$ 6,500.00
059	51.21S0A3000V	16.0 EACH	STANDARD SHALLOW MANHOLE TYPE A-3	\$ 6,500.00
060	51.23RF	185.0 EACH	REPLACEMENT OF EXISTING MANHOLE FRAME AND COVER	\$ 927.00
061	51.41P000	7.0 EACH	SPECIAL CATCH BASIN	\$ 6,000.00
062	51.41S001	77.0 EACH	STANDARD CATCH BASIN, TYPE 1	\$ 7,000.00
063	51.41S002	5.0 EACH	STANDARD CATCH BASIN, TYPE 2	\$ 8,000.00
064	51.42S1SX	25.0 EACH	INCREMENTAL COST OF STANDARD CATCH BASIN TYPE 3 WITHOUT CURB PIECE IN LIEU OF STANDARD CATCH BASIN TYPE 1	\$ 3,000.00
065	51.61F000	1.0 EACH	OUTFALL	\$ 1,500,000.00



**BID SCHEDULE FORM**

COL 1 SEQ. NO	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
066	52.11D06	80.0 L.F.	6" DUCTILE IRON PIPE BASIN CONNECTION	\$ 150.00
067	52.11D08	105.0 L.F.	8" DUCTILE IRON PIPE BASIN CONNECTION	\$ 175.00
068	52.11D12	1,605.0 L.F.	12" DUCTILE IRON PIPE BASIN CONNECTION	\$ 225.00
069	52.31V06C15	12.0 EACH	6" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 15" E.S.V.P. COMBINED SEWER	\$ 250.00
070	52.31V06C18	1.0 EACH	6" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 18" E.S.V.P. COMBINED SEWER	\$ 260.00
071	52.31V06S15	1.0 EACH	6" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 15" E.S.V.P. SANITARY SEWER	\$ 250.00
072	52.31V08C15	24.0 EACH	8" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 15" E.S.V.P. COMBINED SEWER	\$ 280.00
073	52.31V08C18	1.0 EACH	8" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 18" E.S.V.P. COMBINED SEWER	\$ 290.00
074	52.31V08S15	1.0 EACH	8" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 15" E.S.V.P. SANITARY SEWER	\$ 280.00
075	52.31V10C15	1.0 EACH	10" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 15" E.S.V.P. COMBINED SEWER	\$ 400.00
076	52.31V10C18	1.0 EACH	10" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 18" E.S.V.P. COMBINED SEWER	\$ 420.00
077	52.31V10S15	1.0 EACH	10" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 15" E.S.V.P. SANITARY SEWER	\$ 400.00
078	52.41V06R	72.0 L.F.	6" E.S.V.P. HOUSE CONNECTION DRAIN ON CONCRETE CRADLE (RECONNECTION)	\$ 95.00
079	52.41V08R	144.0 L.F.	8" E.S.V.P. HOUSE CONNECTION DRAIN ON CONCRETE CRADLE (RECONNECTION)	\$ 115.00
080	52.41V10R	12.0 L.F.	10" E.S.V.P. HOUSE CONNECTION DRAIN ON CONCRETE CRADLE (RECONNECTION)	\$ 125.00

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
081	53.11DR	6,050.0 L.F.	TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS	\$ 3.50
082	6.01 AC	760.0 S.Y.	CLEARING AND GRUBBING	\$ 25.00
083	6.02 AAN	10,204.0 C.Y.	UNCLASSIFIED EXCAVATION	\$ 76.00
084	6.02 XHEC	1,651.0 C.Y.	INCREMENTAL COST FOR MODIFYING WORK METHODS NEAR (WITHIN 3 FEET OF) TRANSIT FACILITIES AND BUILDING VAULTS	\$ 250.00
085	6.02 XSCW	1,910.0 C.Y.	INCREMENTAL COST FOR USING SPECIAL CARE WORK METHODS NEAR (FROM 3 FEET TO 50 FEET) TRANSIT FACILITIES	\$ 46.00
086	6.03 SEPS	26,240.0 S.Y.	STRIPPING EXISTING PAVEMENT SURFACES	\$ 30.00
087	6.04 DX	60.0 S.Y.	REINSTALL HISTORIC GRANITE SLAB PAVEMENT	\$ 210.00
088	6.04 GB	15,990.0 S.Y.	FURNISH AND INSTALL GRANITE BLOCK PAVEMENT	\$ 225.00
089	6.04 GH	3,191.0 L.F.	GRANITE BLOCK HEADER COURSE	\$ 160.00
090	6.04 NGP	3,060.0 S.Y.	NEW GRANITE PAVER WEARING COURSE FURNISHED AND INSTALLED	\$ 600.00
091	6.04 NGSB	2,200.0 S.Y.	NEW GRANITE SLAB PAVEMENT FURNISHED AND INSTALLED IN BIKE LANES	\$ 800.00
092	6.04 NGSI	1,370.0 S.Y.	NEW GRANITE SLAB PAVEMENT FURNISHED AND INSTALLED IN INTERSECTIONS	\$ 900.00
093	6.04 NGSS	270.0 S.Y.	NEW GRANITE SLAB PAVEMENT FURNISHED AND INSTALLED IN SIDEWALKS	\$ 800.00
094	6.04 NGSX	1,500.0 S.Y.	NEW GRANITE SLAB PAVEMENT FURNISHED AND INSTALLED IN CROSSWALKS	\$ 800.00
095	6.04 SHG	60.0 S.Y.	SALVAGE HISTORIC GRANITE SLAB PAVEMENT	\$ 150.00
096	6.04 UGB	3,100.0 S.Y.	FURNISH AND INSTALL USED GRANITE BLOCK PAVEMENT	\$ 250.00

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
097	6.05 DP	120.0 S.F.	RESTORATION OF DISTINCTIVE PAVEMENT	\$ 45.00
098	6.07 AA	4,400.0 S.F.	EXISTING BLUESTONE FLAGS RELAID	\$ 20.00
099	6.07 AB	1,300.0 S.F.	NEW BLUESTONE FLAGS, FURNISHED AND LAID	\$ 59.00
100	6.22 F	10,000.0 LBS.	ADDITIONAL HARDWARE	\$ 2.00
101	6.23 AB	2.0 EACH	REMOVE EXISTING FIRE ALARM POST	\$ 320.00
102	6.23 BA	3.0 EACH	FURNISH AND INSTALL FIRE ALARM POST AND SUBBASE IN ACCORDANCE WITH F.D. STD. DWG. #141	\$ 1,100.00
103	6.23 BD	415.0 L.F.	FURNISH AND INSTALL 4-PAIR FIRE ALARM CABLE	\$ 10.10
104	6.23 BES	2.0 EACH	FURNISH AND INSTALL FIRE DEPARTMENT SLOTTED MANHOLE TYPE "A" WITH FRAME AND COVER IN ACCORDANCE WITH F.D. STD. DWG. #140, #144S & #144E	\$ 5,000.00
105	6.23 BFB	1.0 EACH	FURNISH AND INSTALL FIRE DEPARTMENT 24 WIRE TERMINAL BOX AND TERMINATE FIRE ALARM CABLES	\$ 1,110.00
106	6.23 BFC	2.0 EACH	FURNISH AND INSTALL FIRE DEPARTMENT 12 WIRE TERMINAL BOX AND TERMINATE FIRE ALARM CABLES	\$ 616.00
107	6.23 BGSE	45.0 L.F.	FURNISH AND INSTALL 4" P.V.C. CONDUIT, SCHEDULE 40, U.L. 651 (WITH PAVEMENT EXCAVATION)	\$ 200.00
108	6.23 BGTE	260.0 L.F.	FURNISH AND INSTALL 2 - 4" P.V.C. CONDUIT, SCHEDULE 40, U.L. 651 IN ONE TRENCH (WITH PAVEMENT EXCAVATION, ONE ON TOP OF THE OTHER)	\$ 240.00
109	6.23 BHE	3.0 EACH	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	\$ 240.00
110	6.23 BP	3.0 SETS	FURNISH AND INSTALL FIRE ALARM PEDESTAL BUMPERS (2 REQUIRED PER SET) IN ACCORDANCE WITH F.D. STD. DWG. #168	\$ 1,500.00
111	6.23 RM	1.0 EACH	REMOVE EXISTING F.D.N.Y. MANHOLE	\$ 1,400.00

**BID SCHEDULE FORM**

COL 1 SEQ. NO	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
112	6.25 RS	600.0 S.F.	TEMPORARY SIGNS	\$ 15.00
113	6.26	20,700.0 L.F.	TIMBER CURB	\$ 5.00
114	6.28 AA	9,300.0 L.F.	LIGHTED TIMBER BARRICADES	\$ 10.00
115	6.34 ADTP	1,480.0 L.F.	TEMPORARY CHAIN LINK FENCE, 8'-0" HIGH (WITH TOP AND BOTTOM RAILS AND POSTS MOUNTED ON STEEL PLATES)	\$ 80.00
116	6.34 DE	227.0 L.F.	DECORATIVE STEEL PICKET FENCE - EXTRUDED PANEL	\$ 890.00
117	6.34 DF	157.0 L.F.	DECORATIVE STEEL PICKET FENCE - FLUSH PANEL	\$ 619.00
118	6.34 DG	1.0 EACH	DECORATIVE STEEL DOUBLE SWING GATE	\$ 16,900.00
119	6.36 DR	10.0 C.Y.	STRUCTURAL REPAIR AND ADJUSTMENT OF UTILITY STRUCTURES	\$ 900.00
120	6.39 A	1.0 L.S.	MOBILIZATION	\$ 3,511,992.11
121	6.40 DU	66.0 MONTH	ENGINEER'S FIELD OFFICE (JOINT USE) (TYPE DU)	\$ 15,000.00
122	6.41	1.0 L.S.	LINE AND GRADE SURVEYS	\$ 70,000.00
123	6.43 D	6,000.0 SETS	DIGITAL PHOTOGRAPHS	\$ 20.00
124	6.50	86.0 EACH	CLEANING OF DRAINAGE STRUCTURES	\$ 491.00
125	6.52 CG	55,099.0 P/HR	CROSSING GUARD	\$ 40.00
126	6.55	700.0 L.F.	SAWCUTTING EXISTING PAVEMENT	\$ 4.00
127	6.67	1,490.0 C.Y.	SUBBASE COURSE, SELECT GRANULAR MATERIAL	\$ 91.00
128	6.68	3,000.0 S.Y.	PLASTIC FILTER FABRIC	\$ 2.00

**BID SCHEDULE FORM**

COL 1 SEQ. NO	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN DOLLARS)
129	6.74 PRA	930.0 L.F.	PAVER RESTRAINT ANCHORAGE	\$ 25.00
130	6.74 PRE	930.0 L.F.	PAVER RESTRAINT EDGE	\$ 17.00
131	6.74 SWPBA	8.0 EACH	STEEL AND WOOD PLANTER BENCH UNIT TYPE A	\$ 11,000.00
132	6.74 SWPBB	8.0 EACH	STEEL AND WOOD PLANTER BENCH UNIT TYPE B	\$ 13,200.00
133	6.77 SP-4	3.0 EACH	SOLAR POWERED TRASH COMPACTOR WITH INTEGRATED SINGLE STEAM RECYCLING UNIT	\$ 5,000.00
134	6.79 BD	140.0 L.F.	6" DUCTILE IRON PIPE CLASS 56 CONNECTION DRAIN	\$ 120.00
135	6.82 A	1,000.0 S.F.	REMOVING EXISTING TRAFFIC AND STREET NAME SIGNS	\$ 6.00
136	6.82 B	1,270.0 L.F.	REMOVING EXISTING TRAFFIC AND STREET NAME SIGN POSTS	\$ 6.00
137	6.83 AA	230.0 S.F.	FURNISHING NEW NON-REFLECTORIZED TRAFFIC SIGNS	\$ 18.00
138	6.83 AB	1,410.0 L.F.	FURNISHING NEW TRAFFIC SIGN POSTS	\$ 10.00
139	6.83 AR	900.0 S.F.	FURNISHING NEW REFLECTORIZED TRAFFIC SIGNS	\$ 25.00
140	6.83 BA	1,130.0 S.F.	INSTALLING TRAFFIC SIGNS	\$ 15.00
141	6.83 BB	1,410.0 L.F.	INSTALLING TRAFFIC SIGN POSTS	\$ 14.00
142	6.86 AA	190.0 S.F.	FURNISHING NEW STREET NAME SIGNS	\$ 30.00
143	6.86 AB	90.0 L.F.	FURNISHING NEW STREET NAME SIGN POSTS	\$ 9.00
144	6.86 BA	190.0 S.F.	INSTALLING STREET NAME SIGNS	\$ 15.00
145	6.86 BB	90.0 L.F.	INSTALLING STREET NAME SIGN POSTS	\$ 10.00

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
146	6.87	2,300.0 EACH	PLASTIC BARRELS	\$ 12.00
147	6.91	13,890.0 L.F.	REFLECTIVE CRACKING MEMBRANE (18" WIDE)	\$ 3.00
148	6.99	1.0 L.S.	AUDIO AND VIDEO DOCUMENTATION SURVEY	\$ 8,000.00
149	60.11R516	20.0 L.F.	FURNISHING AND DELIVERING 16-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	\$ 100.00
150	60.11R520	980.0 L.F.	FURNISHING AND DELIVERING 20-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	\$ 125.00
151	60.11R606	475.0 L.F.	FURNISHING AND DELIVERING 6-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	\$ 50.00
152	60.11R608	855.0 L.F.	FURNISHING AND DELIVERING 8-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	\$ 60.00
153	60.11R612	4,915.0 L.F.	FURNISHING AND DELIVERING 12-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	\$ 80.00
154	60.12D06	525.0 L.F.	LAYING 6-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 120.00
155	60.12D08	1,090.0 L.F.	LAYING 8-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 140.00
156	60.12D12	6,055.0 L.F.	LAYING 12-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 160.00
157	60.12D16	30.0 L.F.	LAYING 16-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 180.00
158	60.12D20	1,265.0 L.F.	LAYING 20-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 200.00
159	60.13M0A24	76.0 TONS	FURNISHING AND DELIVERING DUCTILE IRON MECHANICAL JOINT 24-INCH DIAMETER AND SMALLER FITTINGS, INCLUDING WEDGE TYPE RETAINER GLANDS	\$ 9,000.00
160	60.18BJC20EL	6.0 EACH	FURNISHING, DELIVERING AND INSTALLING BELL JOINT CLAMPS, COMPLETE FOR 20-INCH PIPE AND LESS	\$ 1,000.00

**BID SCHEDULE FORM**

COL 1 SEQ. NO	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
161	60.19TLS12E	4.0 EACH	FURNISHING, DELIVERING AND INSTALLING TEMPORARY LINE STOPS ON EXISTING 12-INCH WATER MAINS	\$ 15,000.00
162	60.19TLS20E	2.0 EACH	FURNISHING, DELIVERING AND INSTALLING TEMPORARY LINE STOPS ON EXISTING 20-INCH WATER MAINS	\$ 20,000.00
163	60.21SP3T36	2,285.0 L.F.	FURNISHING, DELIVERING AND LAYING 36-INCH STRAIGHT STEEL PIPE, 3/8-INCH WALL THICKNESS	\$ 1,800.00
164	60.22BR3T36	60.0 L.F.	FURNISHING, DELIVERING AND LAYING 36-INCH STEEL BENDS AND REDUCERS, 3/8-INCH WALL THICKNESS	\$ 1,800.00
165	60.24SB36	1.0 EACH	FURNISHING, DELIVERING AND INSTALLING 36-INCH DIAMETER STEEL BULKHEAD	\$ 10,000.00
166	60.25PSO	3,000.0 LBS.	FURNISHING, DELIVERING AND INSTALLING PLATE STEEL OUTLETS ON STEEL PIPE, ACCESS MANHOLE OUTLETS WITH COVERS, AND NUTS AND BOLTS COMPLETE	\$ 25.00
167	60.29CP	1.0 L.S.	FURNISHING, INSTALLING AND TESTING CORROSION CONTROL AND/OR CATHODIC PROTECTION SYSTEM	\$ 54,600.00
168	61.11DFM06	3.0 EACH	FURNISHING AND DELIVERING 6-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$ 2,200.00
169	61.11DFM12	1.0 EACH	FURNISHING AND DELIVERING 12-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$ 4,000.00
170	61.11DFM20	2.0 EACH	FURNISHING AND DELIVERING 20-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$ 20,000.00
171	61.11DMM06	33.0 EACH	FURNISHING AND DELIVERING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1,200.00
172	61.11DMM08	11.0 EACH	FURNISHING AND DELIVERING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1,800.00

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
173	61.11DMM12	16.0 EACH	FURNISHING AND DELIVERING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 3,000.00
174	61.11DMM20	3.0 EACH	FURNISHING AND DELIVERING 20-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 17,000.00
175	61.11TWC03	30.0 EACH	FURNISHING AND DELIVERING 3-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 600.00
176	61.11TWC04	20.0 EACH	FURNISHING AND DELIVERING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 650.00
177	61.11TWC06	10.0 EACH	FURNISHING AND DELIVERING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 750.00
178	61.11TWC08	5.0 EACH	FURNISHING AND DELIVERING 8-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 900.00
179	61.11TWC10	2.0 EACH	FURNISHING AND DELIVERING 10-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1,100.00
180	61.11TWC12	2.0 EACH	FURNISHING AND DELIVERING 12-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1,300.00
181	61.12DFM06	3.0 EACH	SETTING 6-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$ 1,000.00
182	61.12DFM12	1.0 EACH	SETTING 12-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$ 2,000.00
183	61.12DFM20	2.0 EACH	SETTING 20-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$ 5,000.00
184	61.12DMM06	33.0 EACH	SETTING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 650.00
185	61.12DMM08	11.0 EACH	SETTING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 900.00
186	61.12DMM12	16.0 EACH	SETTING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1,200.00



**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
187	61.12DMM20	3.0 EACH	SETTING 20-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 3,500.00
188	61.12TWC03	30.0 EACH	SETTING 3-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 300.00
189	61.12TWC04	20.0 EACH	SETTING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 350.00
190	61.12TWC06	10.0 EACH	SETTING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 400.00
191	61.12TWC08	5.0 EACH	SETTING 8-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 450.00
192	61.12TWC10	2.0 EACH	SETTING 10-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 500.00
193	61.12TWC12	2.0 EACH	SETTING 12-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 550.00
194	62.11SS	35.0 EACH	FURNISHING AND DELIVERING HYDRANTS - SMITH TYPE (S-2-LP)	\$ 3,000.00
195	62.12SG	35.0 EACH	SETTING HYDRANTS COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1,500.00
196	62.13RH	27.0 EACH	REMOVING HYDRANTS	\$ 700.00
197	62.14FD	74.0 EACH	FURNISHING, DELIVERING AND INSTALLING HYDRANT FENDERS WITH DECORATIVE CAPS (BLACK)	\$ 300.00
198	63.11MH	2.0 TONS	FURNISHING, DELIVERING AND INSTALLING 36-INCH CAST IRON MANHOLE HEADS AND COVERS	\$ 1,500.00
199	63.11MS	40.0 EACH	FURNISHING, DELIVERING AND INSTALLING MANHOLE STEPS TYPE PS2-PF	\$ 20.00
200	63.11VC	54.0 TONS	FURNISHING AND DELIVERING VARIOUS CASTINGS	\$ 1,500.00
201	64.11EL	10.0 EACH	WITHDRAWING AND REPLACING HOUSE SERVICES USING 1-1/2-INCH OR LARGER SCREW TAPS	\$ 300.00



3/20/2018 9:02 AM

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

PROJECT ID:HWKPK005

CONTRACT PIN:8502016HW0063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
202	64.11ST	10.0 EACH	WITHDRAWING AND REPLACING HOUSE SERVICES USING SMALLER THAN 1-1/2-INCH SCREW TAPS	\$ 250.00
203	64.12COEG	20.0 L.F.	CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	\$ 200.00
204	64.12COLT	40.0 L.F.	CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	\$ 100.00
205	64.12ESEG	200.0 L.F.	EXTENDING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	\$ 75.00
206	64.12ESLT	400.0 L.F.	EXTENDING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	\$ 50.00
207	64.13WC08	20.0 EACH	FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 8-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	\$ 1,200.00
208	64.13WC12	40.0 EACH	FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 12-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	\$ 1,500.00
209	64.13WC20	9.0 EACH	FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 20-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	\$ 2,500.00
210	65.11BR	1,900.0 LBS.	FURNISHING, DELIVERING AND INSTALLING BANDS, RODS, WASHERS, ETC., COMPLETE, FOR RESTRAINING JOINTS	\$ 3.00
211	65.21PS	6,853.0 L.F.	FURNISHING AND PLACING POLYETHYLENE SLEEVE	\$ 1.00
212	65.31FF	173,555.0 S.F.	FURNISHING, DELIVERING AND PLACING FILTER FABRIC	\$ 0.25
213	65.41PS06	3.0 EACH	FURNISHING, DELIVERING AND INSTALLING 6-INCH PIPE-TO-WALL PENETRATION SEAL, INCLUDING STEEL SLEEVE AND ANCHOR/WATER STOP PLATE	\$ 700.00
214	65.41PS12	1.0 EACH	FURNISHING, DELIVERING AND INSTALLING 12-INCH PIPE-TO-WALL PENETRATION SEAL, INCLUDING STEEL SLEEVE AND ANCHOR/WATER STOP PLATE	\$ 1,000.00
215	65.41PS20	1.0 EACH	FURNISHING, DELIVERING AND INSTALLING 20-INCH PIPE-TO-WALL PENETRATION SEAL, INCLUDING STEEL SLEEVE AND ANCHOR/WATER STOP PLATE	\$ 1,800.00



3/20/2018 9:02 AM

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

PROJECT ID:HWKKP005

CONTRACT PIN:8502016HW0063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
216	65.51PC	715.0 C.Y.	FURNISHING AND PLACING CAST-IN-PLACE CONCRETE CLASS 40 AND PRECAST CONCRETE CLASS 50	\$ 960.00
217	65.61SS	61,400.0 LBS.	FURNISHING, DELIVERING AND PLACING STRUCTURAL, REINFORCING AND MISCELLANEOUS STEEL	\$ 3.00
218	65.71SG	1,112.0 C.Y.	FURNISHING, DELIVERING AND PLACING SCREENED GRAVEL OR SCREENED BROKEN STONE BEDDING	\$ 40.00
219	7.07 RR	8.0 EACH	REMOVE AND RESET EXISTING METAL BOLLARDS	\$ 2,500.00
220	7.12 A	40.0 EACH	PROCTOR ANALYSIS	\$ 160.00
221	7.12 B	120.0 EACH	IN-PLACE SOIL DENSITY TEST	\$ 146.00
222	7.13 B	60.0 MONTH	MAINTENANCE OF SITE	\$ 10,000.00
223	7.18 CM	2,000.0 C.Y.	CONTROLLED LOW STRENGTH MATERIAL (CLSM)	\$ 163.00
224	7.20	600.0 L.F.	RESET BASEMENT ACCESS	\$ 45.00
225	7.30 NGRC	50.0 L.F.	FURNISH AND INSTALL NEW GIRDER RAIL - CURVED SECTION	\$ 250.00
226	7.30 NGRS	170.0 L.F.	FURNISH AND INSTALL NEW GIRDER RAIL - STRAIGHT SECTION	\$ 220.00
227	7.30 NTRC	630.0 L.F.	FURNISH AND INSTALL NEW TEE RAIL - CURVED SECTION	\$ 185.00
228	7.30 NTRS	360.0 L.F.	FURNISH AND INSTALL NEW TEE RAIL - STRAIGHT SECTION	\$ 170.00
229	7.30 NTRSW	700.0 L.F.	FURNISH AND INSTALL NEW TEE RAIL IN SIDEWALK	\$ 125.00
230	7.30 RRT	3,390.0 L.F.	REMOVE AND STORE GIRDER RAIL	\$ 125.00
231	7.30 SGR	2,690.0 L.F.	REINSTALL SALVAGED GIRDER RAIL	\$ 210.00



3/20/2018 9:02 AM

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION  
 DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN  
 PROJECT ID:HWKKP005  
 CONTRACT PIN:8502016HW0063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
232	7.36	19,900.0 L.F.	PEDESTRIAN STEEL BARRICADES	\$ 15.00
233	7.50 SF-DO1	16.0 EACH	TABLES	\$ 1,090.00
234	7.50 SF-DO2	32.0 EACH	CHAIRS	\$ 320.00
235	7.50 SF-DO3	8.0 EACH	UMBRELLAS	\$ 1,800.00
236	7.50 SF-DO4	8.0 EACH	UMBRELLA ANCHORS	\$ 1,000.00
237	7.50 SF-DO5	20.0 EACH	LOUNGE CHAIR	\$ 1,250.00
238	7.50 SF-DO6	4.0 EACH	BENCH	\$ 1,714.00
239	7.50 SF-DO7	20.0 EACH	PICNIC TABLE	\$ 10,725.00
240	7.50 SF-DOT	12.0 EACH	TRASH RECEPTACLE	\$ 1,372.00
241	7.50 SWBSA	1.0 EACH	STEEL AND WOOD BLEACHER SEAT UNIT TYPE A	\$ 145,600.00
242	7.50 SWBSB	1.0 EACH	STEEL AND WOOD BLEACHER SEAT UNIT TYPE B	\$ 156,000.00
243	7.57 DGRA	240.0 L.F.	DRILL AND GROUT REINFORCEMENT BARS	\$ 47.00
244	7.88 AA	1.0 L.S.	RODENT INFESTATION SURVEY AND MONITORING	\$ 15,000.00
245	7.88 AB	2,000.0 EACH	RODENT BAIT STATIONS	\$ 60.00
246	7.88 AC	2,000.0 EACH	BAITING OF RODENT BAIT STATIONS	\$ 10.00
247	7.88 AD	600.0 BLOCK	WATERBUG BAIT APPLICATIONS	\$ 65.00
248	70.12AN	40,320.0 V.F.	CONTINUOUS FLIGHT AUGER (CFA) PILES	\$ 135.00



3/20/2018 9:02 AM

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION PROJECT ID:HWKKP005  
 DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN CONTRACT PIN: 8502016HW0063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
249	70.12AT	2.0 EACH	CONTINUOUS FLIGHT AUGER (CFA) PILES, LOAD TEST	\$ 40,000.00
250	70.21DK	2,200.0 S.Y.	DECKING	\$ 100.00
251	70.31FN	15,700.0 L.F.	FENCING	\$ 4.00
252	70.51EO	66.0 C.Y.	EXCAVATION OF BOULDERS IN OPEN CUT	\$ 150.00
253	70.61RE	46.0 C.Y.	ROCK EXCAVATION	\$ 500.00
254	70.71SB	238.0 C.Y.	STONE BALLAST	\$ 30.00
255	70.81CB	8,783.0 C.Y.	CLEAN BACKFILL	\$ 30.00
256	70.91SW12	49,830.0 S.F.	FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 12-INCH IN DIAMETER AND LESS	\$ 1.00
257	70.91SW20	10,000.0 S.F.	FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 20-INCH IN DIAMETER	\$ 1.00
258	72.11HF	370.0 C.Y.	HYDRAULIC FILL FOR ABANDONED SEWERS AND WATER MAINS	\$ 95.00
259	73.11AB	37.0 C.Y.	ADDITIONAL BRICK MASONRY	\$ 125.00
260	73.21AC	93.0 C.Y.	ADDITIONAL CONCRETE	\$ 125.00
261	73.31AE0	595.0 C.Y.	ADDITIONAL EARTH EXCAVATION INCLUDING TEST PITS (ALL DEPTHS)	\$ 80.00
262	73.41AG	68.0 C.Y.	ADDITIONAL SELECT GRANULAR BACKFILL	\$ 30.00
263	73.51AS	1,200.0 LBS.	ADDITIONAL STEEL REINFORCING BARS	\$ 2.00
264	73.61AT	20.0 C.Y.	ADDITIONAL STONE BALLAST	\$ 30.00

**BID SCHEDULE FORM**

COL 1 SEQ. NO	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
265	76.11CR	1.0 L.S.	CONSTRUCTION REPORT	\$ 50,000.00
266	76.21MR	1.0 L.S.	MONITORING AND POST-CONSTRUCTION REPORT	\$ 40,000.00
267	76.31CM	48.0 MONTH	CONTINUOUS REAL-TIME MONITORING FOR VIBRATIONS AND MOVEMENTS AND POST-CONSTRUCTION REPORT	\$ 9,000.00
268	8.01 C1	20,000.0 TONS	HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOIL	\$ 85.00
269	8.01 C2	30.0 SETS	SAMPLING AND TESTING OF CONTAMINATED/POTENTIALLY HAZARDOUS SOIL FOR DISPOSAL PURPOSES	\$ 2,000.00
270	8.01 H	1,000.0 TONS	HANDLING, TRANSPORTING AND DISPOSAL OF HAZARDOUS SOIL	\$ 400.00
271	8.01 S	1.0 L.S.	HEALTH AND SAFETY	\$ 25,000.00
272	8.01 W1	150.0 DAY	REMOVAL, TREATMENT, AND DISCHARGED/DISPOSAL OF CONTAMINATED WATER	\$ 1,700.00
273	8.01 W2	30.0 SETS	SAMPLING AND TESTING OF CONTAMINATED WATER	\$ 1,400.00
274	8.02 A	9,615.0 S.F.	SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	\$ 4.00
275	8.02 B	1,660.0 L.F.	SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	\$ 10.00
276	8.06	12,200.0 S.F.	SHEET MEMBRANE WATERPROOFING	\$ 17.00
277	8.15 DUMBO	1.0 EACH	BOTTLE FILLER WITH DRINKING FOUNTAIN	\$ 4,625.00
278	8.32	130.0 S.Y.	BARK CHIP MULCH	\$ 15.00
279	8.52 DUMBO	13,600.0 LBS.	STRUCTURAL STEEL	\$ 6.50
280	8.52 WSF-A	1.0 EACH	WAYFINDING SIGN FOOTING TYPE A	\$ 8,556.00



3/20/2018 9:02 AM

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

PROJECT ID:HWKKP005  
 CONTRACT PIN:8502016HW0063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
281	8.52 WSF-B	4.0 EACH	WAYFINDING SIGN FOOTING TYPE B	\$ 9,574.00
282	9.00 B	240.0 L.I.	DRILLING PILOT HOLES	\$ 15.00
283	9.00 C	600.0 C.F.	EXPLORATORY TEST PITS	\$ 35.00
284	9.04 HW	1.0 F.S.	ALLOWANCE FOR ANTI-FREEZE ADDITIVE IN CONCRETE	\$ 67,500.00
285	9.06 HW	1.0 F.S.	ALLOWANCE FOR DECORATIVE MESH FABRIC	\$ 40,000.00
286	9.10 WSS	5,500.0 S.F.	TEMPORARY WALL SUPPORT SYSTEM	\$ 65.00
287	9.13 HD4	50.0 L.F.	4" HIGH-DENSITY POLYETHYLENE DRAINAGE PIPE	\$ 30.00
288	9.30	1.0 L.S.	STORM WATER POLLUTION PREVENTION	\$ 90,000.00
289	BMP-7.09	2.0 DAY	LICENSED SURVEYOR	\$ 3,000.00
290	BMP-7.107-B	50.0 C.Y.	RIP-RAP AND ANGULAR NATURAL FIELD STONE	\$ 225.00
291	BMP-7.109	450.0 S.F.	GEOTEXTILE FABRIC	\$ 3.00
292	BMP-7.307-A	2,450.0 S.F.	GRADING	\$ 0.50
293	BMP-7.404-B	52.0 DAY	EROSION AND SEDIMENT CONTROL LICENSED/CERTIFIED PROFESSIONAL	\$ 637.00
294	BMP-7.418	140.0 C.Y.	CLEAN SAND FOR RESTORED AREA	\$ 34.00
295	BMP-7.502	85.0 L.F.	CONSTRUCTION LIMIT FENCE	\$ 25.00
296	BMP-7.510	1.0 EACH	PORTABLE SEDIMENT TANK	\$ 8,715.00
297	BMP-7.516	145.0 L.F.	TURBIDITY CURTAIN	\$ 30.00



3/20/2018 9:02 AM

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

PROJECT ID:HWKKP005  
 CONTRACT PIN: 8502016HW0063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
298	DUMBO-STO	60.0 MONTH	STORAGE FACILITY - PAVERS	\$ 12,500.00
299	E 260519 AA	1,480.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 4/0 AWG WIRE)	\$ 10.00
300	E 260519 B	350.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 2 AWG WIRE)	\$ 5.00
301	E 260519 G	12,415.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 10 AWG WIRE)	\$ 3.00
302	E 260519 J	2,955.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (350 MCM WIRE)	\$ 12.00
303	E 260526	90.0 L.F.	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS	\$ 15.00
304	E 260526 C	765.0 L.F.	BARE #1/0 AWG COPPER GROUND WIRE	\$ 6.00
305	E 260526 E	2,030.0 L.F.	BARE #8 AWG COPPER GROUND WIRE	\$ 2.00
306	E 260533 AF	700.0 L.F.	METAL CONDUIT AND TUBING (4" PVC COATED RIGID STEEL CONDUIT)	\$ 50.00
307	E 260533 BA	3.0 EACH	LOCKABLE STAINLESS STEEL ENCLOSURE FOR UTILITY SERVICE AND DISTRIBUTION PANEL	\$ 6,000.00
308	E 260533 BB	1.0 EACH	FREESTANDING LOCKABLE EVENT BOX OUTLETS ENCLOSURE	\$ 4,000.00
309	E 260533 CD	1.0 EACH	CON EDISON PROPERTY LINE SPLICE BOX	\$ 4,000.00
310	E 260943 A	1.0 L.S.	SPECIALTY LIGHTING CONTROLS SYSTEM	\$ 30,000.00
311	E 262713 B	3.0 EACH	ELECTRICITY METERING, 200 A UTILITY METER	\$ 6,000.00
312	E 262726 AB	4.0 EACH	ELECTRICAL RECEPTACLE MOUNTED ON SUPPORTS	\$ 300.00
313	E 262726 AC	5.0 EACH	ELECTRICAL RECEPTACLE MOUNTED ON FENCE	\$ 350.00





3/20/2018 9:02 AM

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

PROJECT ID:HWKPK005  
 CONTRACT PIN:8502016HW0063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
314	E 262726 F	1.0 EACH	ELECTRIC HEATER	\$ 2,500.00
315	E 262726 G	10.0 EACH	EVENT BOX RECEPTACLES (20A)	\$ 2,000.00
316	E 262726 RPB	2.0 EACH	RETRACTABLE POWER BOLLARD	\$ 6,000.00
317	E 262816 A	3.0 EACH	ENCLOSED SWITCH, FUSED, 200 A	\$ 5,000.00
318	E 265619 A1	48.0 EACH	SPECIALTY LIGHTING FIXTURES (TYPE 1)	\$ 2,900.00
319	E 265619 A2	88.0 EACH	SPECIALTY LIGHTING FIXTURES (TYPE 2)	\$ 1,300.00
320	E 265619 A2A	40.0 EACH	SPECIALTY LIGHTING FIXTURES (TYPE 2A)	\$ 1,035.00
321	E 265619 A3	16.0 EACH	SPECIALTY LIGHTING FIXTURES (TYPE 3)	\$ 3,300.00
322	E 265619 A4	50.0 EACH	SPECIALTY LIGHTING FIXTURES (TYPE 4)	\$ 3,300.00
323	E 265619 LED	215.0 L.F.	LED STRIP LIGHTING SYSTEM	\$ 85.00
324	E260526 B	370.0 L.F.	BARE #2 AWG COPPER GROUND WIRE	\$ 4.00
325	E260533 AA	890.0 L.F.	METAL CONDUIT AND TUBING (1" PVC COATED RIGID STEEL CONDUIT)	\$ 30.00
326	E260533 AC	870.0 L.F.	METAL CONDUIT AND TUBING (2" PVC COATED RIGID STEEL CONDUIT)	\$ 35.00
327	E260533 AE	345.0 L.F.	METAL CONDUIT AND TUBING (3" PVC COATED RIGID STEEL CONDUIT)	\$ 40.00
328	E260533 CA	26.0 EACH	HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING	\$ 6,500.00
329	E262416 A	1.0 EACH	PANELBOARDS, 225 A 24 POLE WITH (24) IP-20A CB	\$ 15,000.00



3/20/2018 9:02 AM

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

PROJECT ID:HWKPK005  
 CONTRACT PIN:8502016HW0063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
330	HW-900-AVW	1.0 F.S.	ALLOWANCE FOR ADDITIONAL VAULT RELATED WORK	\$ 1,300,000.00
331	HW-908	1.0 F.S.	ALLOWANCE FOR EXTRA WORK DUE TO ARCHAEOLOGICAL DISCOVERIES	\$ 100,000.00
332	HW-914	1.0 F.S.	ALLOWANCE FOR WAYFINDING TOTEMS	\$ 100,000.00
333	HW-91X	1.0 F.S.	ALLOWANCE FOR RAMP TO BUILDING ENTRANCE	\$ 80,000.00
334	JB 100.1 (VERZ)	12.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE.1)	\$ 595.00
335	JB 100.1(CE)	8.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION AND/OR TEST PIT (TYPE.1)	\$ 360.00
336	JB 100.1(TW)	21.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION AND/OR TEST PIT (TYPE.1)	\$ 550.00
337	JB 100.2(CE)	12.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION AND/OR TEST PIT (TYPE.2)	\$ 674.00
338	JB 100.2(VERZ)	10.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION AND/OR TEST PIT (TYPE.2)	\$ 808.00
339	JB 100.3 (VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION AND/OR TEST PIT (TYPE.3)	\$ 998.00
340	JB 100.3(CE)	16.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION AND/OR TEST PIT (TYPE.3)	\$ 1,000.00
341	JB 100.4(CE)	2.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION AND/OR TEST PIT (TYPE.4)	\$ 1,300.00
342	JB 100.4(VERZ)	2.0 EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION AND/OR TEST PIT (TYPE.4)	\$ 1,413.00
343	JB 101.1 (VERZ)	4.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE. 1)	\$ 2,364.00
344	JB 101.1(CE)	16.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE. 1)	\$ 3,062.00

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
345	JB 101.1(TW)	8.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .1)	\$ 2,000.00
346	JB 101.2(CE)	3.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .2)	\$ 3,800.00
347	JB 101.2(VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .2)	\$ 2,394.00
348	JB 101.3(CE)	10.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .3)	\$ 5,000.00
349	JB 101.3(VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .3)	\$ 3,309.00
350	JB 101.4 (VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .4)	\$ 3,630.00
351	JB 102.1 (TW)	3.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER	\$ 3,000.00
352	JB 102.1(VERZ)	9.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .1)	\$ 2,905.00
353	JB 102.2(CE)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .2)	\$ 3,850.00
354	JB 102.2(VERZ)	6.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .2)	\$ 2,905.00
355	JB 103.1(TW)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .1)	\$ 3,500.00
356	JB 103.1(VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .1)	\$ 3,971.00
357	JB 103.2(CE)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .2)	\$ 4,280.00
358	JB 103.2(VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .2)	\$ 3,971.00
359	JB 103.3(VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .3)	\$ 4,900.00

**BID SCHEDULE FORM**

COL 1 SEQ. NO	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
360	JB 104.2(CE)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 48" TO 54" DIAMETER (TYPE.2)	\$ 4,680.00
361	JB 105.1(CE)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER (TYPE.1)	\$ 4,275.00
362	JB 105.2(CE)	1.0 EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER (TYPE.2)	\$ 5,050.00
363	JB 108.1(CE)	26.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE.1)	\$ 490.00
364	JB 108.1(TW)	20.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE.1)	\$ 600.00
365	JB 108.1(VERZ)	20.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE.1)	\$ 886.00
366	JB 108.2(CE)	26.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE.2)	\$ 1,540.00
367	JB 108.2(VERZ)	12.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE.2)	\$ 1,097.00
368	JB 108.3(CE)	16.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE.3)	\$ 2,500.00
369	JB 108.3(VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE.3)	\$ 1,322.00
370	JB 109.1(CE)	2.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE.1)	\$ 1,260.00
371	JB 109.1(TW)	7.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE.1)	\$ 1,000.00
372	JB 109.1(VERZ)	8.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE.1)	\$ 1,003.00
373	JB 109.2(CE)	5.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE.2)	\$ 1,900.00
374	JB 109.2(VERZ)	2.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE.2)	\$ 1,345.00

**BID SCHEDULE FORM**

COL 1 SEQ. NO	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
375	JB 109.3(CE)	2.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE.3)	\$ 3,040.00
376	JB 109.3(VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE.3)	\$ 1,666.00
377	JB 109.4(VERZ)	1.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE.4)	\$ 2,007.00
378	JB 110.1(CE)	12.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE.1)	\$ 1,750.00
379	JB 110.1(TW)	6.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" TO 36" DIAMETER	\$ 1,400.00
380	JB 110.1(VERZ)	3.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE.1)	\$ 1,345.00
381	JB 110.2(CE)	4.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE.2)	\$ 2,380.00
382	JB 110.2(VERZ)	4.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE.2)	\$ 1,505.00
383	JB 110.3(CE)	2.0 EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE.3)	\$ 3,400.00
384	JB 200 (VERZ)	62.0 L.F.	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTION PIPES	\$ 170.00
385	JB 200(CE)	157.0 L.F.	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTION PIPES	\$ 120.00
386	JB 225(CE)	13.0 EACH	INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	\$ 5,168.00
387	JB 225(TW)	7.0 EACH	INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	\$ 2,800.00
388	JB 225(VERZ)	5.0 EACH	INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	\$ 2,925.00
389	JB 226 (VERZ)	16.0 EACH	INSTALLATION OF CATCH BASINS WITH INTERFERENCES	\$ 1,463.00



3/20/2018 9:02 AM

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION PROJECT ID:HWKKP005  
 DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN CONTRACT PIN: 8502016HW0063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
390	JB 226(CE)	23.0 EACH	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES	\$ 3,743.00
391	JB 227(CE)	8.0 EACH	REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	\$ 1,946.00
392	JB 227(VERZ)	6.0 EACH	REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	\$ 1,463.00
393	JB 300(CE)	184.0 C.Y.	SPECIAL CARE EXCAVATION AND BACKFILLING	\$ 234.00
394	JB 300(NG)	200.0 C.Y.	SPECIAL CARE EXCAVATION AND BACKFILLING	\$ 150.00
395	JB 300(TW)	19.0 C.Y.	SPECIAL CARE EXCAVATION AND BACKFILLING	\$ 150.00
396	JB 300(VERZ)	20.0 C.Y.	SPECIAL CARE EXCAVATION AND BACKFILLING	\$ 167.00
397	JB 301(CE)	177.0 C.Y.	SPECIAL CARE EXCAVATION AND BACKFILLING FOR OIL-O-STATIC PIPE	\$ 285.00
398	JB 303T(CE)	357.0 C.Y.	FURNISH, DELIVER AND INSTALL THERMAL SAND BACKFILL	\$ 38.00
399	JB 330E.1(CE)	80.0 L.F.	SUPPORT AND PROTECTION OF ELECTRIC AND GAS FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE WITHIN TRENCH LIMITS (TYPE.1)	\$ 25.00
400	JB 330E.2(CE)	485.0 L.F.	SUPPORT AND PROTECTION OF ELECTRIC AND GAS FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE WITHIN TRENCH LIMITS (TYPE.2)	\$ 30.00
401	JB 330E.3(CE)	445.0 L.F.	SUPPORT AND PROTECTION OF ELECTRIC AND GAS FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE WITHIN TRENCH LIMITS (TYPE.3)	\$ 34.00
402	JB 330T1(TW)	995.0 L.F.	SUPPORT AND PROTECTION OF COMMUNICATION UTILITY FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN PARALLELING COMMUNICATION FACILITIES LIE COMPLETELY IN THE PROPOSED TRENCH	\$ 100.00



3/20/2018 9:02 AM

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

PROJECT ID:HWKPK005  
 CONTRACT PIN:8502016HW0063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
403	JB 330T1(VERZ)	1,530.0 L.F.	SUPPORT AND PROTECTION OF COMMUNICATION UTILITY FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE IN OR IN CLOSE PROXIMITY TO TRENCH LIMITS	\$ 115.00
404	JB 350T(VERZ)	1.0 L.S.	OVERHEAD ACCOMMODATION, PROTECTION OF OH FACILITIES & APPURTENANCES	\$ 6,370.00
405	JB 400(CE)	230.0 C.Y.	TEST PITS FOR UTILITY FACILITIES	\$ 200.00
406	JB 400(VERZ)	50.0 C.Y.	TEST PITS FOR UTILITY FACILITIES	\$ 218.00
407	JB 401(CE)	525.0 C.Y.	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES	\$ 240.00
408	JB 401(TW)	57.0 C.Y.	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES	\$ 200.00
409	JB 401(VERZ)	107.0 C.Y.	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES	\$ 228.00
410	JB 401AT (VERZ)	175.0 C.Y.	SPECIAL CARE PAVEMENT EXCAVATION FOR ADJUSTMENT OF TELECOMMUNICATION FACILITIES CONNECTED TO OR NEAR THE BASE PAVEMENT	\$ 76.00
411	JB 402.1(CE)	4,765.0 L.F.	EXISTING CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	\$ 71.00
412	JB 402.2(CE)	3,165.0 L.F.	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	\$ 44.00
413	JB 402.2A(TW)	176.0 L.F.	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	\$ 35.00
414	JB 402T.2A(VERZ)	1,468.0 L.F.	EXISTING OCCUPIED NON-CONCRETE ENCASED TELECOMMUNICATION CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	\$ 44.00
415	JB 402T.V2A(VERZ)	367.0 L.F.	EXISTING VACANT NON-CONCRETE ENCASED TELECOMMUNICATION CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	\$ 26.00
416	JB 403(CE)	384.0 S.F.	PLACING STEEL PROTECTION PLATES FOR UTILITY FACILITIES	\$ 2.20

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
417	JB 403T (CE)	300.0 S.F.	PLACING 1" THICK PROTECTION PLATES FOR UTILITY FACILITIES	\$ 3.00
418	JB 403T.2(VERZ)	1,500.0 S.F.	Placing steel protection plates for utilities facilities	\$ 14.85
419	JB 405.1(CE)	772.0 C.Y.	TRENCH EXCAVATION FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS LESS THAN FIVE FEET	\$ 205.00
420	JB 405.2(CE)	1,866.0 C.Y.	TRENCH EXCAVATION FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS EQUAL TO OR GREATER THAN FIVE FEET, REQUIRING SHEETING	\$ 295.00
421	JB 406(CE)	540.0 C.Y.	EXCAVATION FOR UTILITY STRUCTURE	\$ 230.00
422	JB 410.1(CE)	46.0 C.Y.	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES UP TO AND INCLUDING 20% (TYPE .1)	\$ 284.00
423	JB 410.2(CE)	641.0 C.Y.	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES OVER 20% AND UP TO AND INCLUDING 40% (TYPE .2)	\$ 355.00
424	JB 410.3(CE)	228.0 C.Y.	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES OVER 40% AND UP TO AND INCLUDING 60% (TYPE .3)	\$ 430.00
425	JB 410.5(CE)	742.0 C.Y.	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES UP TO AND INCLUDING 20% WITH TRENCH DEPTH EQUAL TO OR GREATER THAN FIVE FEET (TYPE .5)	\$ 290.00
426	JB 410.6(CE)	449.0 C.Y.	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES OVER 20% AND UP TO AND INCLUDING 40% WITH TRENCH DEPTH EQUAL TO OR GREATER THAN FIVE FEET (TYPE .6)	\$ 367.00
427	JB 410.7(CE)	201.0 C.Y.	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES OVER 40% AND UP TO AND INCLUDING 60% WITH TRENCH DEPTH EQUAL TO OR GREATER THAN FIVE FEET (TYPE .7)	\$ 442.00
428	JB 450.1(CE)	231.0 CREW/HR	CONSTRUCTION FIELD SUPPORT - SURVEY CREW (TYPE .1)	\$ 278.00
429	JB 450.2(CE)	1,314.0 CREW/HR	CONSTRUCTION FIELD SUPPORT - SMALL SIZE CREW (TYPE .2)	\$ 270.00
430	JB 450.3(CE)	1,346.0 CREW/HR	CONSTRUCTION FIELD SUPPORT - MEDIUM SIZE CREW (TYPE .3)	\$ 780.00





3/20/2018 9:02 AM

Department of  
Design and  
Construction

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

PROJECT ID:HWKPK005  
CONTRACT PIN:8502016HW0063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
431	JB 500(CE)	4,800.0 L.F.	REMOVAL OF ABANDONED UTILITY CONDUITS (NON-CONCRETE ENCASED)	\$ 3.00
432	JB 501(CE)	741.0 C.Y.	REMOVAL OF ABANDONED MASONRY FOR UTILITY FACILITIES	\$ 300.00
433	JB 603E.1(CE)	32,125.0 L.F.	INSTALL UTILITY CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	\$ 4.50
434	JB 636 EA(NG)	50.0 EACH	ADJUSTMENT OF UTILITY HARDWARE (UNDER 7" WIDTH)	\$ 179.99
435	JB 636 EB(NG)	10.0 EACH	ADJUSTMENT OF UTILITY HARDWARE (7" TO UNDER 14" WIDTH)	\$ 185.55
436	JB 636 EC(NG)	6.0 EACH	ADJUSTMENT OF UTILITY HARWARE (14" TO UNDER 30" WIDTH)	\$ 270.52
437	JB 636 ED(CE)	73.0 EACH	ADJUSTMENT OF UTILITY HARDWARE (30" TO UNDER 34" WIDTH)	\$ 785.00
438	JB 636 EE(CE)	23.0 EACH	ADJUSTMENT OF UTILITY HARDWARE (34" TO UNDER 41" WIDTH)	\$ 900.00
439	JB 636 EE(VERZ)	17.0 EACH	ADJUSTMENT OF UTILITY HARDWARE (34" TO UNDER 41" WIDTH)	\$ 490.00
440	JB 636 EG(TW)	14.0 EACH	ADJUSTMENT OF UTILITY HARDWARE (41" TO UNDER 75" WIDTH)	\$ 500.00
441	JB 636 EH(CE)	12.0 EACH	ADJUSTMENT OF UTILITY HARDWARE (75" TO UNDER 125" WIDTH)	\$ 1,180.00
442	JB 636 R(CE)	25.0 C.Y.	REPAIR TO UTILITY STRUCTURES	\$ 211.00
443	JB 638 N(CE)	236.0 C.Y.	INSTALLATION OF FIELD CONSTRUCTED UTILITY STRUCTURE	\$ 990.00
444	JB 638 N(VERZ)	10.0 C.Y.	INSTALLATION OF FIELD CONSTRUCTED UTILITIES STRUCTURES.	\$ 2,576.00
445	JB 638 R(CE)	90.0 C.Y.	BREAK OUT AND REMOVE UTILITY STRUCTURE	\$ 790.00
446	JB 638 R(VERZ)	10.0 C.Y.	BREAK OUT AND REMOVE UTILITY STRUCTURE	\$ 353.00



3/20/2018 9:02 AM

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION  
 DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN  
 PROJECT ID:HWKPK005  
 CONTRACT PIN:8502016HW0063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
447	JB 700(CE)	1,839.0 C.Y.	SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER	\$ 47.00
448	JB 700(NG)	500.0 C.Y.	SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER	\$ 140.26
449	JB 700(TW)	638.0 C.Y.	SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER	\$ 75.00
450	JB 700(VERZ)	852.0 C.Y.	SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER	\$ 95.00
451	JB 710.1(CE)	1,500.0 L.F.	REMOVAL OF ABANDONED UTILITY STEEL/CAST IRON/ PLASTIC PIPES, UP TO AND INCLUDING 12" DIAMETER PIPE	\$ 12.00
452	JB 710.1(NG)	450.0 L.F.	REMOVAL OF ABANDONED UTILITY STEEL/CAST IRON/ PLASTIC PIPES, UP TO AND INCLUDING 12" DIAMETER PIPE	\$ 15.23
453	JB 781(CE)	4.0 EACH	REMOVABLE CURB SIDEWALK PANEL FOR ACCESS TO UTILITY STRUCTURE OPENINGS	\$ 209.00
454	JB 798(VERZ)	135.0 L.F.	MODIFICATION OF NON-CONCRETE YOKE TROLLEY STRUCTURES REMOVAL WHEN CROSSING UTILITY FACILITIES	\$ 150.00
455	JB 799(VERZ)	325.0 L.F.	MODIFICATION OF NON-CONCRETE TROLLEY STRUCTURES REMOVAL PARALLEL TO UTILITY FACILITIES	\$ 32.00
456	JB 800(CE)	200.0 L.F.	MODIFICATION OF TROLLEY STRUCTURE REMOVAL WHEN CROSSING UTILITY FACILITIES	\$ 160.00
457	JB 801(CE)	220.0 L.F.	MODIFICATION OF TROLLEY STRUCTURE REMOVAL PARALLEL TO UTILITY FACILITIES	\$ 148.00
458	JB 802A(CE)	4,750.0 S.F.	SPECIAL CARE EXCAVATION AND RESOTRATION FOR SIDEWALK WORK	\$ 3.00
459	JB 802A(NG)	7,400.0 S.F.	SPECIAL CARE EXCAVATION AND RESOTRATION FOR SIDEWALK WORK	\$ 7.88
460	JB 802A(TW)	877.0 S.F.	SPECIAL CARE EXCAVATION AND RESOTRATION FOR SIDEWALK WORK	\$ 7.88



3/20/2018 9:02 AM

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

PROJECT ID:HWKKP005

CONTRACT PIN:8502016HW00063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
461	JB 802A(VERZ)	8,980.0 S.F.	SPECIAL CARE EXCAVATION AND RESOTRATION FOR SIDEWALK WORK	\$ 4.00
462	JB 802B(CE)	2,000.0 L.F.	SPECIAL CARE EXCAVATION AND RESOTRATION FOR CURB WORK	\$ 10.00
463	JB 802B(NG)	1,000.0 L.F.	SPECIAL CARE EXCAVATION AND RESOTRATION FOR CURB WORK	\$ 13.35
464	JB 802B(TW)	76.0 L.F.	SPECIAL CARE EXCAVATION AND RESOTRATION FOR CURB WORK	\$ 13.35
465	JB 802B(VERZ)	765.0 L.F.	SPECIAL CARE EXCAVATION AND RESOTRATION FOR CURB WORK	\$ 10.00
466	JB 803.2(CE)	3,684.0 L.F.	LINE CUT BY PNEUMATIC TOOLS IN LIEU OF SAW CUT ASSOCIATED WITH ROADWAY REMOVAL OPERATIONS (LINE CUT ANY COMBINATION OF ASPHALT AND CONCRETE ROADWAY)	\$ 8.00
467	JB 850(CE)	450.0 S.F.	PLACING RUBBER SHEETS FOR UTILITY FACILITIES	\$ 3.00
468	JB 900(CE)	1.0 F.S.	EXTRA UTILITY WORK COSTS ALLOWANCE	\$ 1,353,700.00
469	JB 900(NG)	1.0 F.S.	EXTRA UTILITY WORK COSTS ALLOWANCE	\$ 38,655.52
470	JB 900(TW)	1.0 F.S.	EXTRA UTILITY WORK COSTS ALLOWANCE	\$ 39,271.50
471	JB 900(VERZ)	1.0 F.S.	EXTRA UTILITY WORK COSTS ALLOWANCE	\$ 150,000.00
472	NYC-665.16000011	9.0 EACH	FURNISH AND INSTALL BOLLARDS	\$ 2,050.00
473	PK-12D	1.0 EACH	WATER TAP, 2" DIAMETER	\$ 5,000.00
474	PK-13A	12.0 L.F.	TYPE K COPPER TUBING, 1/2" DIAMETER	\$ 24.00
475	PK-13D	460.0 L.F.	TYPE K COPPER TUBING, 1" DIAMETER	\$ 45.00
476	PK-13E	82.0 L.F.	TYPE K COPPER TUBING, 1-1/2" DIAMETER	\$ 63.00

**BID SCHEDULE FORM**

COL 1 SEQ. NO	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
477	PK-13F	286.0 L.F.	TYPE K COPPER TUBING, 2" DIAMETER	\$ 80.00
478	PK-143	1.0 EACH	RPZ & WATER METER WITH REMOTE & STRUCTURE - 2" DIA.	\$ 25,000.00
479	PK-14B	1.0 EACH	CURB GATE VALVE - 1/2" DIA.	\$ 600.00
480	PK-14C1	7.0 EACH	CURB VALVE- 1" DIAMETER	\$ 750.00
481	PK-14D	1.0 EACH	CURB GATE VALVE, 2" DIAMETER	\$ 800.00
482	PK-17	9.0 EACH	CAST IRON VALVE BOX, 5-1/4" DIAMETER	\$ 750.00
483	PK-184-GH1	3.0 EACH	GROUND HYDRANT - 1" DIAMETER	\$ 2,500.00
484	SL-20.02.02	71.0 EACH	FURNISH AND INSTALL STANDARD TYPE ANCHOR BOLT FOUNDATION, AS PER DRAWING E-3788	\$ 1,457.00
485	SL-20.08.01	53.0 EACH	REMOVE STANDARD TYPE ANCHOR BOLT CONCRETE FOUNDATION	\$ 521.00
486	SL-21.04.69	71.0 EACH	FURNISH AND INSTALL TYPE "CITY LIGHT" LAMPPOST WITH TRANSFORMER BASE	\$ 4,000.00
487	SL-21.09.05	53.0 EACH	REMOVE STANDARD FABRICATED STEEL, SPUN ALUMINUM NO. 10, ETC. WITH ARM(S), LUMINAIRE(S), CONTROL(S) WITH ALL ATTACHMENTS, IF ANY.	\$ 750.00
488	SL-22.16.01	71.0 EACH	INSTALL CITY LIGHT LED FIXTURE	\$ 500.00
489	SL-22.16.02	71.0 EACH	FURNISH SINGLE-ARM CITY LIGHT LED FIXTURE	\$ 1,500.00
490	SL-26.01.04	71.0 EACH	FURNISH AND INSTALL LONG LIFE PHOTO ELECTRIC CONTROL WITH SURGE PROTECTION FOR LED LIGHT	\$ 105.00
491	SL-26.06.02	1.0 EACH	FURNISH AND INSTALL LED FIRE ALARM LUMINAIRES.	\$ 260.00
492	SL-33.01.02	65.0 L.F.	FURNISH AND INSTALL NO. 6 AWG XLP COPPER CABLE OR EQUAL IN CONDUIT	\$ 6.00



3/20/2018 9:02 AM

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION  
 DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN  
 PROJECT ID:HWKKP005  
 CONTRACT PIN:8502016HW0063C

**BID SCHEDULE FORM**

COL 1 SEQ. NO.	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
493	SL-35.03.04	30.0 L.F.	FURNISH AND INSTALL 2" HOT DIPPED GALVANIZED STEEL CONDUIT IN UNPAVED AREA.	\$ 75.00
494	SL-37.05.07	2.0 EACH	FURNISH AND INSTALL TYPE 4824 SIDEWALK CONCRETE BOX WITH CAST IRON FRAME AND COVER WITH TAMPER PROOF BOLTS AS PER DWG J-3179A.	\$ 1,200.00
495	UTL-6.01.1	36.0 EACH	GAS MAIN CROSSING SEWER UP TO 24" IN DIAMETER (S6.01)	\$ 1,040.00
496	UTL-6.01.11	6.0 EACH	GAS MAIN CROSSING WATER MAIN 36" THRU 42" IN DIAMETER (S6.01)	\$ 685.00
497	UTL-6.01.3	1.0 EACH	GAS MAIN CROSSING SEWER 36" THRU 42" IN DIAMETER (S6.01)	\$ 2,040.00
498	UTL-6.01.3D	2.0 EACH	GAS MAIN CROSSING 3'-6"W X 2'-0"H FLAT TOP REINFORCED CONCRETE STORM SEWER (S6.01)	\$ 2,040.00
499	UTL-6.01.3E	2.0 EACH	GAS MAIN CROSSING 3'-0"W X 2'-0"H FLAT TOP REINFORCED CONCRETE STORM SEWER (S6.01)	\$ 2,040.00
500	UTL-6.01.40	3.0 EACH	GAS MAIN CROSSING 4'-6"W X 2'-0"H FLAT TOP REINFORCED CONCRETE STORM SEWER (S6.01)	\$ 2,080.00
501	UTL-6.01.5M	1.0 EACH	GAS MAIN CROSSING 5'-0"W X 2'-0"H FLAT TOP REINFORCED CONCRETE STORM SEWER (S6.01)	\$ 2,320.00
502	UTL-6.01.8	20.0 EACH	GAS SERVICES CROSSING TRENCHES AND/OR EXCAVATIONS (S6.01)	\$ 465.00
503	UTL-6.01.9	20.0 EACH	GAS MAIN CROSSING WATER MAIN UP TO 20" IN DIAMETER (S6.01)	\$ 485.00
504	UTL-6.02	6.0 EACH	EXTRA EXCAVATION FOR THE INSTALLATION OF CATCH BASIN SEWER DRAIN PIPES WITH GAS INTERFERENCES (S6.02)	\$ 715.00
505	UTL-6.03	4,000.0 L.F.	REMOVAL OF ABANDONED GAS FACILITIES. ALL SIZES. (S6.03)	\$ 15.00
506	UTL-6.03.1	400.0 L.F.	REMOVAL OF ABANDONED GAS FACILITIES WITH POSSIBLE COAL TAR WRAP. ALL SIZES. (FOR NATIONAL GRID WORK ONLY) (S6.03)	\$ 25.00
507	UTL-6.04	45.0 EACH	ADJUST HARDWARE TO GRADE USING SPACER RINGS/ADAPTORS. (STREET REPAVING.) (S6.04)	\$ 35.00

**BID SCHEDULE FORM**

COL 1 SEQ. NO	COL 2 ITEM NUMBER	COL 3 ENGINEER'S ESTIMATE OF QUANTITIES	COL 4 CLASSIFICATION	COL 5 UNIT PRICES (IN FIGURES)
508	UTL-6.05	65.0 EACH	ADJUST HARDWARE TO GRADE BY RESETTING. (ROAD RECONSTRUCTION.) (\$6.05)	\$ 65.00
509	UTL-6.06	8,500.0 C.Y.	SPECIAL CARE EXCAVATION AND BACKFILLING (\$6.06)	\$ 180.00
510	UTL-6.07	50.0 C.Y.	TEST PITS FOR GAS FACILITIES (\$6.07)	\$ 100.00
511	UTL-6.09	50.0 C.Y.	TRENCH EXCAVATION AND BACKFILL FOR GAS MAINS AND SERVICES. GAS INSTALLED BY OTHERS (FOR NATIONAL GRID WORK ONLY). (\$6.09)	\$ 190.00
512	UTL-GCS-2WS	1.0 F.S.	GAS INTERFERENCES AND ACCOMMODATIONS	\$ 150,000.00

THE BIDDER SHALL INSERT THE BID MULTIPLIER IN  
 THE BID FORM ON PAGE C-4 OF THIS BID BOOKLET.



Department of  
Design and  
Construction

**INFRASTRUCTURE DIVISION  
BUREAU OF DESIGN**

**VOLUME 1 OF 3**

PROJECT ID: HWKKP005

RECONSTRUCTION OF  
DUMBO D.M.A. / VINEGAR HILL AREA

MAIN STREET FROM FRONT STREET TO PLYMOUTH STREET  
ADAMS STREET FROM FRONT STREET TO JOHN STREET  
PEARL STREET FROM FRONT STREET TO JOHN STREET  
JAY STREET FROM WATER STREET TO JOHN STREET  
GOLD STREET FROM FRONT STREET TO WATER STREET  
FRONT STREET FROM MAIN STREET TO PEARL STREET  
WATER STREET FROM PEARL STREET TO HUDSON AVENUE  
PLYMOUTH STREET FROM MAIN STREET TO JAY STREET  
JOHN STREET FROM ADAMS STREET TO JAY STREET  
ANCHORAGE PLACE FROM FRONT STREET TO PLYMOUTH STREET

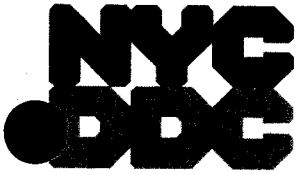
INCLUDING SEWER, WATER MAIN, TRUNK MAIN, STREET LIGHTING  
AND TRAFFIC WORK

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](http://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:       HWKKP005**

**RECONSTRUCTION OF  
DUMBO D.M.A. / VINEGAR HILL AREA**

**MAIN STREET FROM FRONT STREET TO PLYMOUTH STREET  
ADAMS STREET FROM FRONT STREET TO JOHN STREET  
PEARL STREET FROM FRONT STREET TO JOHN STREET  
JAY STREET FROM WATER STREET TO JOHN STREET  
GOLD STREET FROM FRONT STREET TO WATER STREET  
FRONT STREET FROM MAIN STREET TO PEARL STREET  
WATER STREET FROM PEARL STREET TO HUDSON AVENUE  
PLYMOUTH STREET FROM MAIN STREET TO JAY STREET  
JOHN STREET FROM ADAMS STREET TO JAY STREET  
ANCHORAGE PLACE FROM FRONT STREET TO PLYMOUTH STREET**

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

Together With All Work Incidental Thereto

**BOROUGH OF BROOKLYN  
CITY OF NEW YORK**

FOR THE DEPARTMENT OF TRANSPORTATION  
PREPARED BY

*AECOM*

**OCTOBER 10, 2017**



**8-088**





**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 [www.nyc.gov/buildnyc](http://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:



FOR THE DEPARTMENT OF TRANSPORTATION  
PREPARED BY

**DECEMBER 19, 2017**

# NOTICE TO BIDDERS

The City of New York has issued a new Standard Construction Contract. The new Contract, which is incorporated in this bid, is different from the 2013 version previously used by the City. Some of the significant changes are listed below. In addition, this March 2017 version incorporates the Insurance Rider (Articles 22.1.1(c) and 22.3.3), the Paid Sick Leave Law Contract Rider (Article 35.5), and the Hiring and Employment Rider: HireNYC and Reporting Requirements (Article 35.6). 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 if there are any discrepancies between this notice and the Standard Construction Contract.

**Significant changes include the following:**

- **ARTICLE 11 - DAMAGES CAUSED BY DELAYS:** Article 11 no longer provides for agencies to make determinations on claims for damages for delay or make payments for those claims through a change order. Instead claims will be submitted to the Comptroller in accordance with the standards in the Contract. The revised Article 11 also sets forth additional detail of what delay costs are compensable and how they are to be calculated.
- **ARTICLE 12 - COORDINATION WITH OTHER CONTRACTORS:** The March 2017 version revises Article 12.3 concerning the Engineer's failure to issue directions to an Other Contractor.
- **ARTICLE 14 - COMPLETION AND FINAL ACCEPTANCE OF THE WORK:** The March 2017 version clarifies Article 14.2.2 concerning the dates to complete punch list work.
- **ARTICLE 30 - NOTICE AND DOCUMENTATION OF COSTS AND DAMAGES; PRODUCTION OF FINANCIAL RECORDS:** The March 2017 version clarifies the relationship between the requirements in Article 30.1 concerning when the contractor must submit notice and documentation of claims for delay damages, extra work, and other claims and the requirements that are set forth in Articles 11 and 27.
- **ARTICLE 56 - CLAIMS AND ACTIONS THEREON:** The March 2017 version revises Article 56.2.2 concerning the time to commence an action arising out of the Commissioner's exercise of his/her right to complete punch list or unsatisfactory work.
- **ARTICLE 78 - EXAMINATION AND VIEWING OF SITE, CONSIDERATION OF OTHER SOURCES OF INFORMATION AND CHANGED SITE CONDITIONS:** The March 2017 version adds a new Article 78 requiring pre-bid viewing of the site and allowing the contractor to obtain a change order for extra work due to changed subsurface conditions.

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

**INFORMATION FOR BIDDERS**

**JUNE 2015**

*CITY OF NEW YORK CITY  
DEPARTMENT OF DESIGN AND CONSTRUCTION  
INFORMATION FOR BIDDERS*

*TABLE OF CONTENTS*

SECTION 1.	DESCRIPTION AND LOCATION OF WORK	1
SECTION 2.	TIME AND PLACE FOR RECEIPT OF BIDS	1
SECTION 3.	DEFINITIONS	1
SECTION 4.	INVITATION FOR BIDS AND CONTRACT DOCUMENTS	1
SECTION 5.	PRE-BID CONFERENCE	2
SECTION 6.	AGENCY CONTACT	2
SECTION 7.	BIDDER'S OATH	2
SECTION 8.	EXAMINATION AND VIEWING OF SITE, CONSIDERATION OF OTHER SOURCES OF INFORMATION AND CHANGED CONDITIONS	2
SECTION 9.	EXAMINATION OF PROPOSED CONTRACT	3
SECTION 10.	FORM OF BID	3
SECTION 11.	IRREVOCABILITY OF BID	3
SECTION 12.	ACKNOWLEDGMENT OF AMENDMENTS	4
SECTION 13.	BID SAMPLES AND DESCRIPTIVE LITERATURE	4
SECTION 14.	PROPRIETARY INFORMATION/TRADE SECRETS	4
SECTION 15.	PRE-OPENING MODIFICATION OR WITHDRAWAL OF BIDS	4
SECTION 16.	BID EVALUATION AND AWARD	4
SECTION 17.	LATE BIDS, LATE WITHDRAWALS AND LATE MODIFICATIONS	5
SECTION 18.	WITHDRAWAL OF BIDS.	5
SECTION 19.	MISTAKE IN BIDS	5
SECTION 20.	LOW TIE BIDS	6
SECTION 21.	REJECTION OF BIDS	6
SECTION 22.	RIGHT TO APPEAL DETERMINATIONS OF NON-RESPONSIVENESS OR NON-RESPONSIBILITY AND RIGHT TO PROTEST SOLICITATIONS AND AWARD	7
SECTION 23.	AFFIRMATIVE ACTION AND EQUAL EMPLOYMENT OPPORTUNITY	7
SECTION 24.	VENDEX QUESTIONNAIRES	7
SECTION 25.	COMPLAINTS ABOUT THE BID PROCESS	8
SECTION 26.	BID, PERFORMANCE AND PAYMENT SECURITY	8
SECTION 27.	FAILURE TO EXECUTE CONTRACT	9
SECTION 28.	BIDDER RESPONSIBILITIES AND QUALIFICATIONS	9
SECTION 29.	EMPLOYMENT REPORT	10
SECTION 30.	LABOR LAW REQUIREMENTS	10
SECTION 31.	INSURANCE	10
SECTION 32.	LUMP SUM CONTRACTS	11
SECTION 33.	UNIT PRICE CONTRACTS	11
SECTION 34.	EXCISE TAX	11
SECTION 35.	LICENSES AND PERMITS	11
SECTION 36.	MULTIPLE PRIME CONTRACTORS	11
SECTION 37.	LOCALLY BASED ENTERPRISE REQUIREMENTS (LBE)	12
SECTION 38.	BID SUBMISSION REQUIREMENTS	13
SECTION 39.	COMPTROLLER'S CERTIFICATE	14
SECTION 40.	PROCUREMENT POLICY BOARD RULES	14
SECTION 41.	DDC SAFETY REQUIREMENTS	14

## 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](http://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.**

City of New York Department of Design and Construction: Safety Requirements  
Safety and Site Support- Quality Assurance and Construction Safety

**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.

City of New York Department of Design and Construction: Safety Requirements  
Safety and Site Support– Quality Assurance and Construction Safety

- 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

City of New York Department of Design and Construction: Safety Requirements  
Safety and Site Support— Quality Assurance and Construction Safety

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.



City of New York Department of Design and Construction: Safety Requirements  
Safety and Site Support- Quality Assurance and Construction Safety

**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

City of New York Department of Design and Construction: Safety Requirements  
Safety and Site Support- Quality Assurance and Construction Safety

- 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.

City of New York Department of Design and Construction: Safety Requirements  
Safety and Site Support– Quality Assurance and Construction Safety

- 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.

City of New York Department of Design and Construction: Safety Requirements  
Safety and Site Support- Quality Assurance and Construction Safety

**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.

**CITY OF NEW YORK**  
**STANDARD CONSTRUCTION CONTRACT**

**March 2017**

**CITY OF NEW YORK**  
**STANDARD CONSTRUCTION CONTRACT**

**TABLE OF CONTENTS**

CHAPTER I: THE CONTRACT AND DEFINITIONS .....	1
ARTICLE 1. THE CONTRACT .....	1
ARTICLE 2. DEFINITIONS .....	1
CHAPTER II: THE WORK AND ITS PERFORMANCE.....	4
ARTICLE 3. CHARACTER OF THE WORK.....	4
ARTICLE 4. MEANS AND METHODS OF CONSTRUCTION.....	4
ARTICLE 5. COMPLIANCE WITH LAWS.....	5
ARTICLE 6. INSPECTION .....	10
ARTICLE 7. PROTECTION OF WORK AND OF PERSONS AND PROPERTY; NOTICES AND INDEMNIFICATION .....	11
CHAPTER III: TIME PROVISIONS .....	12
ARTICLE 8. COMMENCEMENT AND PROSECUTION OF THE WORK.....	12
ARTICLE 9. PROGRESS SCHEDULES.....	13
ARTICLE 10. REQUESTS FOR INFORMATION OR APPROVAL .....	13
ARTICLE 11. NOTICE OF CONDITIONS CAUSING DELAY AND DOCUMENTATION OF DAMAGES CAUSED BY DELAY .....	14
ARTICLE 12. COORDINATION WITH OTHER CONTRACTORS.....	18
ARTICLE 13. EXTENSION OF TIME FOR PERFORMANCE .....	19
ARTICLE 14. COMPLETION AND FINAL ACCEPTANCE OF THE WORK .....	21
ARTICLE 15. LIQUIDATED DAMAGES .....	23
ARTICLE 16. OCCUPATION OR USE PRIOR TO COMPLETION .....	23
CHAPTER IV: SUBCONTRACTS AND ASSIGNMENTS .....	24
ARTICLE 17. SUBCONTRACTS.....	24
ARTICLE 18. ASSIGNMENTS .....	26
CHAPTER V: CONTRACTOR'S SECURITY AND GUARANTEE .....	26
ARTICLE 19. SECURITY DEPOSIT .....	26
ARTICLE 20. PAYMENT GUARANTEE.....	27
ARTICLE 21. RETAINED PERCENTAGE.....	29
ARTICLE 22. INSURANCE.....	30
ARTICLE 23. MONEY RETAINED AGAINST CLAIMS .....	36
ARTICLE 24. MAINTENANCE AND GUARANTY .....	37
CHAPTER VI: CHANGES, EXTRA WORK, AND DOCUMENTATION OF CLAIM .....	38
ARTICLE 25. CHANGES.....	38
ARTICLE 26. METHODS OF PAYMENT FOR OVERRUNS AND EXTRA WORK .....	38
ARTICLE 27. RESOLUTION OF DISPUTES.....	41
ARTICLE 28. RECORD KEEPING FOR EXTRA OR DISPUTED WORK OR WORK ON A TIME & MATERIALS BASIS.....	45
ARTICLE 29. OMITTED WORK.....	46
ARTICLE 30. NOTICE AND DOCUMENTATION OF COSTS AND DAMAGES; PRODUCTION OF FINANCIAL RECORDS .....	46
CHAPTER VII: POWERS OF THE RESIDENT ENGINEER, THE ENGINEER OR ARCHITECT AND THE COMMISSIONER .....	48
ARTICLE 31. THE RESIDENT ENGINEER.....	48
ARTICLE 32. THE ENGINEER OR ARCHITECT OR PROJECT MANAGER.....	48
ARTICLE 33. THE COMMISSIONER .....	48
ARTICLE 34. NO ESTOPPEL .....	49
CHAPTER VIII: LABOR PROVISIONS.....	49
ARTICLE 35. EMPLOYEES .....	49
ARTICLE 36. NO DISCRIMINATION .....	57
ARTICLE 37. LABOR LAW REQUIREMENTS .....	59

ARTICLE 38. PAYROLL REPORTS .....	64
ARTICLE 39. DUST HAZARDS .....	64
CHAPTER IX: PARTIAL AND FINAL PAYMENTS .....	65
ARTICLE 40. CONTRACT PRICE .....	65
ARTICLE 41. BID BREAKDOWN ON LUMP SUM.....	65
ARTICLE 42. PARTIAL PAYMENTS .....	65
ARTICLE 43. PROMPT PAYMENT .....	66
ARTICLE 44. SUBSTANTIAL COMPLETION PAYMENT.....	66
ARTICLE 45. FINAL PAYMENT .....	67
ARTICLE 46. ACCEPTANCE OF FINAL PAYMENT.....	68
ARTICLE 47. APPROVAL BY PUBLIC DESIGN COMMISSION.....	69
CHAPTER X: CONTRACTOR'S DEFAULT .....	69
ARTICLE 48. COMMISSIONER'S RIGHT TO DECLARE CONTRACTOR IN DEFAULT .....	69
ARTICLE 49. EXERCISE OF THE RIGHT TO DECLARE DEFAULT .....	71
ARTICLE 50. QUITTING THE SITE.....	71
ARTICLE 51. COMPLETION OF THE WORK.....	71
ARTICLE 52. PARTIAL DEFAULT .....	71
ARTICLE 53. PERFORMANCE OF UNCOMPLETED WORK.....	72
ARTICLE 54. OTHER REMEDIES.....	72
CHAPTER XI: MISCELLANEOUS PROVISIONS .....	72
ARTICLE 55. CONTRACTOR'S WARRANTIES.....	72
ARTICLE 56. CLAIMS AND ACTIONS THEREON.....	73
ARTICLE 57. INFRINGEMENT .....	73
ARTICLE 58. NO CLAIM AGAINST OFFICIALS, AGENTS OR EMPLOYEES.....	74
ARTICLE 59. SERVICE OF NOTICES .....	74
ARTICLE 60. UNLAWFUL PROVISIONS DEEMED STRICKEN FROM CONTRACT.....	74
ARTICLE 61. ALL LEGAL PROVISIONS DEEMED INCLUDED .....	74
ARTICLE 62. TAX EXEMPTION .....	74
ARTICLE 63. INVESTIGATION(S) CLAUSE.....	76
ARTICLE 64. TERMINATION BY THE CITY .....	78
ARTICLE 65. CHOICE OF LAW, CONSENT TO JURISDICTION AND VENUE .....	80
ARTICLE 66. PARTICIPATION IN AN INTERNATIONAL BOYCOTT .....	81
ARTICLE 67. LOCALLY BASED ENTERPRISE PROGRAM .....	82
ARTICLE 68. ANTITRUST .....	82
ARTICLE 69. MACBRIDE PRINCIPLES PROVISIONS .....	83
ARTICLE 70. ELECTRONIC FILING/NYC DEVELOPMENT HUB .....	85
ARTICLE 71. PROHIBITION OF TROPICAL HARDWOODS.....	85
ARTICLE 72. CONFLICTS OF INTEREST.....	85
ARTICLE 73. MERGER CLAUSE .....	85
ARTICLE 74. STATEMENT OF WORK.....	85
ARTICLE 75. COMPENSATION TO BE PAID TO CONTRACTOR .....	85
ARTICLE 76. ELECTRONIC FUNDS TRANSFER.....	85
ARTICLE 77. RECORDS RETENTION .....	86
ARTICLE 78. EXAMINATION AND VIEWING OF SITE, CONSIDERATION OF OTHER SOURCES OF INFORMATION AND CHANGED SITE CONDITIONS.....	86

**ARTICLE 79: PARTICIPATION BY MINORITY-OWNED AND WOMEN-OWNED  
BUSINESS ENTERPRISES IN CITY PROCUREMENT .....87**

**SIGNATURES .....95**

**ACKNOWLEDGMENT BY CORPORATION .....96**

**ACKNOWLEDGMENT BY PARTNERSHIP.....96**

**ACKNOWLEDGMENT BY INDIVIDUAL .....96**

**ACKNOWLEDGMENT BY COMMISSIONER .....97**

**AUTHORITY .....98**

**COMPTROLLER’S CERTIFICATE .....98**

**MAYOR’S CERTIFICATE .....99**

**PERFORMANCE BOND #1 .....100**

**PERFORMANCE BOND #2.....104**

**PAYMENT BOND .....108**

---



**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](http://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 fifteen (15) **Days** after the **Contractor** becomes aware or reasonably should be aware of each such condition, the **Contractor** must notify the **Resident Engineer** or **Engineer**, as directed by the **Commissioner**, 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. Such notice shall include a description of the construction activities that are or could be affected by the condition and may include any recommendations the **Contractor** may have to address the delay condition and any activities the **Contractor** may take to avoid or minimize the 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 for each such condition, the **Contractor** shall submit to the **Commissioner** a verified written statement of the details and estimates of the amounts of such damages, including categories of expected damages and projected monthly costs, together with documentary evidence of such damages as the **Contractor** may have at the time of submission ("statement of delay damages"), as further detailed in Article 11.6. The **Contractor** may submit the above statement within such additional time as may be granted by the **Commissioner** in writing upon written request therefor.

11.1.3 Articles 11.1.1 and 11.1.2 do not relieve the **Contractor** of its obligation to comply with the provisions of Article 44.

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 both 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 progress 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** to the extent required by the **Contract**, 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 Unreasonable delays attributable to the review of shop drawings, the issuance of change orders, or the cumulative impact of change orders that were not brought about by any act or omission of the **Contractor**.

11.4.1.3 The unavailability of the **Site** caused by acts or omissions of the **City**.

11.4.1.4 The issuance by the **Engineer** of a stop work order that was not brought about through any act or omission of the **Contractor**.

11.4.1.5 Differing site conditions or environmental hazards 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** if the **Work** will be or 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, or unless there is a provision in the **Contract** providing for additional compensation for early completion.

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 that would be generally recognized by a reasonably prudent contractor 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 act 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 estimated amount of additional compensation sought and a breakdown of that amount into categories as described 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 Additional insurance and bond costs;
- 11.7.1.5 Extended **Site** overhead, field office rental, salaries of field office staff, on-site project managers and superintendents, field office staff vehicles, **Project**-specific storage, field office utilities and telephone, and field office consumables;
- 11.7.1.6 Labor escalation costs based on actual costs;
- 11.7.1.7 Materials and equipment escalation costs based on applicable industry indices unless documentation of actual increased cost is provided;
- 11.7.1.8 Additional material and equipment storage costs based on actual documented costs and additional costs necessitated by extended manufacturer warranty periods; and
- 11.7.1.9 Extended home office overhead calculated based on the following formula:
  - (1) Subtract from the original **Contract** amount the amount earned by original contractual **Substantial Completion** date (not including change orders);
  - (2) Remove 15% overhead and profit from the calculation in item (1) by dividing the results of item (1) by 1.15;
  - (3) Multiply the result of item (2) by 7.25% for the total home office overhead;
  - (4) Multiply the result of item (3) by 7.25% for the total profit; and
  - (5) The total extended home office overhead will be the total of items (3) and (4).

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 11.7.1.8, and an additional overhead of 5% 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, except as provided in Article 11.7.1.9;
- 11.7.3.2 Consequential damages, including, but not limited to, construction or bridge loans or interest paid on such loans, 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 except those included in Article 11.7.1;
- 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 Any claims for delay 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 Any compensation provided to the **Contractor** in accordance with this Article 11 will be made pursuant to a claim filed with the **Comptroller**. Nothing in this Article 11 extends the time for the **Contractor** to file an action with respect to a claim within six months after **Substantial Completion** pursuant to Article 56.

## **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 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** or **Resident Engineer**, as applicable, 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/Resident 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/Resident Engineer** within ten (10) **Days** of the **Engineer/Resident 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** neither accepts the dates nor proposes alternative dates within ten (10) **Days**, the schedule proposed by the **Engineer/Resident Engineer** shall be deemed accepted. If the **Contractor** proposes alternative dates, then, within a reasonable time after receipt, the **Engineer/Resident Engineer**, in a written notification to the **Contractor**, shall approve the **Contractor's** completion dates or, if they are unable to agree, the **Engineer/Resident Engineer** shall establish dates for the completion of each item of **Work**. 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/Resident 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/Resident 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/Resident 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/Resident Engineer's** inspection if, upon such inspection, the **Engineer/Resident 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/Resident Engineer** for the purpose of **Substantial Completion** or **Final Acceptance** shall be made within fourteen (14) **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/Resident 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/Resident 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/Resident 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/Resident 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/Resident 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** or **Resident Engineer**, as applicable, 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/Resident 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](http://www.nyc.gov/pip).<sup>1</sup> 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.

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

<sup>1</sup> 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](http://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](mailto:pip@fisa.nyc.gov).



**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, the **Contractor** shall provide Commercial General Liability Insurance with limits of at least those required by 1 RCNY section 101-08 or greater limits required by the Agency in accordance with Schedule A. 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 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; (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 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.

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, atn: 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 to the extent additional damages are being incurred for the same condition, 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. This Article 30.1 does not apply to claims submitted to the **Commissioner** pursuant to Article 11 or to claims disputing a determination under Article 27.

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 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.

35.5 Paid Sick Leave Law.

35.5.1 Introduction and General Provisions.

35.5.1(a) 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.<sup>2</sup> Contractors of the **City** or of other governmental entities may be required to provide sick time pursuant to the PSLL.

35.5.1(b) 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").

<sup>2</sup> 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.

35.5.1(c) The **Contractor** agrees to comply in all respects with the PSLL and the Rules, and as amended, if applicable, in the performance of this **Contract**. The **Contractor** further acknowledges that such compliance is a material term of this **Contract** and that failure to comply with the PSLL in performance of this **Contract** may result in its termination.

35.5.1(d) The **Contractor** must notify the **Agency Chief Contracting Officer** of the **Agency** 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 **Contract**. Additionally, the **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.

35.5.1(e) The PSLL is summarized below for the convenience of the **Contractor**. The **Contractor** is advised to review the PSLL and Rules in their entirety. On the website [www.nyc.gov/PaidSickLeave](http://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 the **Contractor** can get more information about how to comply with the PSLL. The **Contractor** acknowledges that it is responsible for compliance with the PSLL notwithstanding any inconsistent language contained herein.

#### 35.5.2 Pursuant to the PSLL and the Rules: Applicability, Accrual, and Use.

35.5.2(a) 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 be provided at the greater of the employee's regular hourly rate or the minimum wage. Employers are not required to provide more than 40 hours of sick time to an employee in any Year.

35.5.2(b) 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 40 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.

35.5.2(c) An employee entitled to sick time pursuant to the PSLL may use sick time for any of the following:

- i. 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;
- ii. 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;

- iii. closure of such employee's place of business by order of a public official due to a public health emergency; or
- iv. such employee's need to care for a child whose school or childcare provider has been closed due to a public health emergency.

35.5.2(d) 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 PSL. 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 PSL must be treated by the employer as confidential.

35.5.2(e) 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.

35.5.2(f) 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.

35.5.3 Exemptions and Exceptions. Notwithstanding the above, the PSL does not apply to any of the following:

35.5.3(a) an independent contractor who does not meet the definition of employee under section 190(2) of the New York State Labor Law;

35.5.3(b) an employee covered by a valid collective bargaining agreement in effect on April 1, 2014, until the termination of such agreement;

35.5.3(c) an employee in the construction or grocery industry covered by a valid collective bargaining agreement if the provisions of the PSL are expressly waived in such collective bargaining agreement;

35.5.3(d) 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 PSL for such employee;

35.5.3(e) 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;

35.5.3(f) an employee in a work study program under Section 2753 of Chapter 42 of the United States Code;

35.5.3(g) 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

35.5.3(h) a participant in a Work Experience Program (WEP) under section 336-c of the New York State Social Services Law.

35.5.4 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.

35.5.5 Notice of Rights.

35.5.5(a) 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>.

35.5.5(b) 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.

35.5.6 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.

35.5.7 Enforcement and Penalties.

35.5.7(a) 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.

35.5.7(b) 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.

35.5.8 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.

35.6 HireNYC: Hiring and Reporting Requirements. This Article 35.6 applies to construction contracts of \$1,000,000 or more. The **Contractor** shall comply with the requirements of Articles 35.6.1-35.6.5 for all non-trades jobs (e.g., for an administrative position arising out of **Work** ant located in New York City). The **Contractor** shall reasonably cooperate with SBS and the **City** on specific outreach events, including "Hire-on-the-Spot" events, for the hiring of trades workers in connection with the **Work**. If provided elsewhere in this **Contract**, this **Contract** is subject to a project labor agreement.

35.6.1 Enrollment. The **Contractor** shall enroll with the HireNYC system, found at [www.nyc.gov/sbs](http://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.

#### 35.6.2 Job Posting Requirements.

35.6.2(a) 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.

35.6.2(b) 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.

35.6.2(c) 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** pursuant to Charter section 328 and each anniversary date.

35.6.2(d) 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 Article 35.6 shall be interpreted so as to require the **Contractor** to employ any particular worker.

35.6.2(e) In addition, the provisions of this Article 35.6 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 Article 35.6.1, above, and, if such positions subsequently become open, then the remaining provisions of this Article 35.6 will apply.

35.6.3 Breach and Liquidated Damages. If the **Contractor** fails to comply with the terms of the **Contract** and this Article 35.6 (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 **Agency** may assess liquidated damages in the amount of two-thousand five hundred dollars (\$2,500) per breach. For all other events of noncompliance with the terms of this Article 35.6, 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 Article 35.6 during the term of the **Contract**, the **City** may hold the **Contractor** in default of this **Contract**.

35.6.4 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.

35.6.5 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**, 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 as otherwise requested by the **City**.

35.6.6 Federal Hiring Requirements. If this **Contract** is federally funded (as indicated elsewhere in this **Contract**), the **Contractor** shall comply with all federal hiring requirements as may be set forth in this **Contract**, including, as applicable: (a) 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 and 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.



**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 If the **Commissioner** exercises his/her right to complete or cause to complete any or all unsatisfactory or uncompleted punch list **Work** that remains after the completion date specified in the **Final Approved Punch List** pursuant to Article 54, any such action shall be commenced within six (6) months from the date the **Commissioner** notifies the **Contractor** in writing that he/she has exercised such right. 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 contraction 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 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](http://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 as shown in Schedule A.

## **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 shown in Schedule A, 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**.

## **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 payments 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. EXAMINATION AND VIEWING OF SITE, CONSIDERATION OF OTHER SOURCES OF INFORMATION AND CHANGED SITE CONDITIONS**

78.1 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 and hazards on, about or above the **Site** relating to or affecting in any way the performance of the **Work** to be done under the **Contract** that were or should have been known by a reasonably prudent bidder. To arrange a date for visiting the **Site**, bidders are to contact the **Agency** contact person specified in the bid documents.

78.2 Should the **Contractor** encounter during the progress of the **Work** site conditions or environmental hazards at the **Site** materially differing from any shown on the **Contract Drawings** or indicated in the **Specifications** or such conditions or environmental hazards as could not reasonably have been anticipated by the **Contractor**, which conditions or hazards 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 or hazards before they are disturbed. The **Commissioner** shall thereupon promptly investigate the conditions or hazards. If the **Commissioner** finds that they do so materially differ, and that they could not have been reasonably anticipated by the **Contractor**, the **Contract** may be modified with the **Commissioner's** written approval.

**ARTICLE 79. 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](http://www.nyc.gov/buycertified), by emailing DSBS at [buyer@sbs.nyc.gov](mailto: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](http://www.nyc.gov/getcertified), emailing [MWBE@sbs.nyc.gov](mailto: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](mailto: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 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:   
Deputy Commissioner

CONTRACTOR:

By:   
(Member of Firm or Officer of Corporation)

Title: VICE PRESIDENT

(Where Contractor is a Corporation, add):  
Attest:

\_\_\_\_\_  
Secretary

(Seal)

ACKNOWLEDGEMENT OF PRINCIPAL, IF A CORPORATION

State of New York County of Queens ss:

On this 21 day of JUNE, 2018, before me personally came SALLEPOLPO to me known who, being by me duly sworn did depose and say that he resides at ORANGEBURG NY that he is the VICE 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.

**VICTORIAAYO-VAUGHAN**  
Notary Public, State of New York  
Registration #01AY5014042  
Qualified in Queens County  
Commission Expires July 15, 2019  
\_\_\_\_\_  
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.

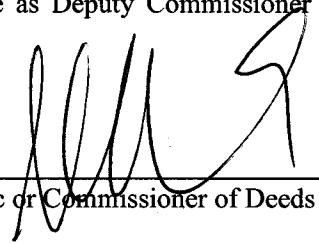
\_\_\_\_\_  
Notary Public or Commissioner of Deeds



ACKNOWLEDGEMENT BY COMMISSIONER

State of New York County of Queens ss:

On this 21<sup>st</sup> day of June, 2018, 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

VICTORIA AYO-VAUGHAN  
Notary Public, State of New York  
Registration #01AY5014042  
Qualified in Queens County  
Commission Expires July 18, 2019

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

*ninety three million one hundred twenty seven thousand five hundred seventy eight & ninety five cents*

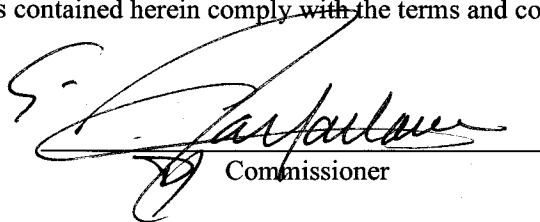
Dollars (\$) 93,127,578.95

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.

  
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



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
6/18/2018

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).

<b>PRODUCER</b> Fairfield County Bank Insurance Services, LLC 401 Main Street Ridgefield CT 06877	<b>CONTACT NAME:</b> AnnMarie Spencer	
	<b>PHONE (A/C, No, Ext):</b> 203-438-0404	<b>FAX (A/C, No):</b> 203-431-8789
<b>E-MAIL ADDRESS:</b> annmarie.spencer@fcbins.com		
<b>INSURER(S) AFFORDING COVERAGE</b>		<b>NAIC #</b>
<b>INSURER A :</b> Star Indemnity & Liability Co.		38318
<b>INSURER B :</b> St. Paul Fire and Marine		24767
<b>INSURER C :</b>		
<b>INSURER D :</b>		
<b>INSURER E :</b>		
<b>INSURER F :</b>		

<b>INSURED</b> The Halcyon Construction Corp 65 Marble Avenue Pleasantville NY 10570	HALCCON-01
---	------------

COVERAGES      CERTIFICATE NUMBER: 1180858230      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 INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> contractual liab <input checked="" type="checkbox"/> Completed Ops GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input checked="" type="checkbox"/> OTHER: XCU Included	Y	Y	1000025409171	7/1/2018	7/1/2019	EACH OCCURRENCE \$ 2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 2,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMP/OP AGG \$ 4,000,000 \$
A	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> Hired AUTOS ONLY <input checked="" type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS ONLY	Y	Y	SISIPCA08249917	7/1/2018	7/1/2019	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	<b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> RETENTION \$ 10,000	Y	Y	1000022827	7/1/2018	7/1/2019	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? <input type="checkbox"/> Y/N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		N/A				PER STATUTE <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
B	Excess Liability	Y		ZUP71M5883817NF	7/1/2018	7/1/2019	Limit occ/Agg 15000000/15000000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)  
RE: HWKPP005  
E-PIN: 85018B0108001 Reconstruction of Dumbo D.M.A.- Vinegar Hill Area -Brooklyn  
City of New York including its officials and employees are included as additional insured with coverage at least as broad as ISO form CG2010 and CG2037.  
Federal Emergency Management Agency (FEMA), including its officials and employees,  
The New York City Transit Authority (NYCTA) Manhattan and Bronx Surface Transit Operation Authority (MABSTOA) Staten Island Rapid Transit Operation Authority (SIRTOA), Metropolitan Transportation Authority (MTA) its subsidiaries and affiliated, and National Grid are included as additional insureds on General Liability, Automobile and Umbrella.  
Commercial Umbrella is excess over General Liability, Automobile, and Workers Compensation

CERTIFICATE HOLDER      CANCELLATION

NYC Department of Design and Construction  
30-30 Thomson Avenue  
Long Island CITY NY 11101

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



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
6/18/2018

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).

<b>PRODUCER</b> Fairfield County Bank Insurance Services, LLC 401 Main Street Ridgefield CT 06877	<b>CONTACT NAME:</b> _____	
	<b>PHONE (A/C. No. Ext):</b> 203-438-0404	<b>FAX (A/C. No.):</b> 203-431-8789
<b>E-MAIL ADDRESS:</b> annmarie.spencer@fcbins.com		
<b>INSURER(S) AFFORDING COVERAGE</b>		<b>NAIC #</b>
<b>INSURER A :</b> Travelers Property Casualty Insurance Company of A		25674
<b>INSURER B :</b> _____		
<b>INSURER C :</b> _____		
<b>INSURER D :</b> _____		
<b>INSURER E :</b> _____		
<b>INSURER F :</b> _____		


**INSURED** HALCCON-01  
 The Halcyon Construction Corp  
 65 Marble Avenue  
 Pleasantville NY 10570

**COVERAGES** **CERTIFICATE NUMBER:** 1042458100 **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 INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	<b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER: _____						EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	<b>UMBRELLA LIAB</b> <input type="checkbox"/> OCCUR <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE DED _____ RETENTION \$ _____						EACH OCCURRENCE \$ AGGREGATE \$ \$
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A					<input type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
A	Property			6601G400244	7/1/2018	7/1/2019	Limit Special Form 40,000 Included

**DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)**  
 RE: HWKKP005  
 E-PIN : 85018B0108001 Reconstruction of Dumbo D.M.A. - Vinegar Hill Area -Brooklyn  
 New York City is Loss payee with respects Engineer's Field Office insurance coverage

<b>CERTIFICATE HOLDER</b>  NYC Department of Design and Construction 30-30 Thomson Avenue Long Island City NY 11101	<b>CANCELLATION</b>  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 
---	--



CERTIFICATE OF NYS WORKERS' COMPENSATION INSURANCE COVERAGE

Form with fields for: 1a. Legal Name & Address of Insured, 1b. Business Telephone Number of Insured, 1c. NYS Unemployment Insurance Employer Registration Number of Insured, 1d. Federal Employer Identification Number of Insured or Social Security Number, 2. Name and Address of Entity Requesting Proof of Coverage, 3a. Name of Insurance Carrier, 3b. Policy Number of Entity Listed in Box "1a", 3c. Policy effective period, 3d. The Proprietor, Partners or Executive Officers are

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: Mark Connelly (Print name of authorized representative or licensed agent of insurance carrier)

Approved by: [Signature] 6/18/2018 (Signature) (Date)

Title: PRESIDENT

Telephone Number of authorized representative or licensed agent of insurance carrier: 203-438-0404

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.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART  
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location And Description Of Completed Operations
The City of New York, Including Its officials and employees  National Grid	HWKKP005 Vinegar Hill Area-Brooklyn
Federal Emergency Management Agency (FEMA) its officials and employees Metropolitan Transportation Authority (MTA) its subsidiaries and affiliated	
New York City Transit Authority(NYCTA) Manhattan and Bronx Surface Transit Operation Authority(MABSTOA) Staten Island Rapid Transit Operation Authority(SIRTOA)	
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.



**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

**SCHEDULE**

Name Of Additional Insured Person(s) Or Organization(s)	Location(s) Of Covered Operations
Metropolitan Transportation Authority (MTA) Its subsidiaries and affiliated New York City Transit Authority (NYCTA) Manhattan and Bronx Surface Transit Operation Authority (MABSTOA) Staten Island Rapid Transit Operation Authority (SIRTOA)	HWKKP005 Vinegar Hill Area - Brooklyn
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

**A. Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

**B.** With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

C. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or

2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## ADDITIONAL INSURED – DESIGNATED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

### SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):

The City of New York, Including Its officials and employees  
National Grid  
Federal Emergency Management Agency (FEMA) its officials and employees  
Metropolitan Transportation Authority (MTA) its subsidiaries and affiliated  
New York City Transit Authority (NYCTA) Manhattan and Bronx Surface Transit  
Operation Authority (MABSTOA) Staten Island Rapid Transit Operation  
Authority (SIRTOA)

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your acts or omissions or the acts or omissions of those acting on your behalf:

1. In the performance of your ongoing operations; or
2. In connection with your premises owned by or rented to you.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

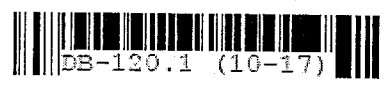


# CERTIFICATE OF INSURANCE COVERAGE

## DISABILITY AND PAID FAMILY LEAVE BENEFITS LAW

<b>PART 1. To be completed by Disability and Paid Family Leave Benefits Carrier or Licensed Insurance Agent of that Carrier</b>	
<p>1a. Legal Name &amp; Address of Insured (use street address only)</p> <p>THE HALCYON CONSTRUCTION CORP. 65 MARBLE AVENUE PLEASANTVILLE, NY 10570</p> <p><i>Work Location of Insured (Only required if coverage is specifically limited to certain locations in New York State, i.e., Wrap-Up Policy)</i></p>	<p>1b. Business Telephone Number of Insured</p> <p style="text-align: center;">914-741-1112</p> <p>1c. Federal Employer Identification Number or Social Security Number</p> <p style="text-align: center;">132995431</p>
<p>2. Name and Address of Entity Requesting Proof of Coverage (Entity Being Listed as the Certificate Holder)</p> <p>New York City Department of Design and Construction 30-30 Thomson Avenue Long Island City NY 11101</p>	<p>3a Name of Insurance Carrier</p> <p style="text-align: center;">HARTFORD LIFE AND ACCIDENT</p> <p>3b Policy Number of Entity Listed in Box "1a"</p> <p style="text-align: center;">DBL165369</p> <p>3c Policy effective period</p> <p style="text-align: center;">10-01-2017 to 09-30-2018</p>
<p>4. Policy provides the following benefits:</p> <p><input checked="" type="checkbox"/> A. Both disability and paid family leave benefits.</p> <p><input type="checkbox"/> B. Disability benefits only.</p> <p><input type="checkbox"/> C. Paid family leave benefits only.</p> <p>5. Policy covers:</p> <p><input checked="" type="checkbox"/> A. All of the employer's employees eligible under the NYS Disability and Paid Family Leave Benefits Law.</p> <p><input type="checkbox"/> B. Only the following class or classes of employer's employees:</p>	
<p>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 NYS Disability and/or Paid Family Leave Benefits insurance coverage as described above.</p> <p>Date Signed <u>06-18-2018</u> <span style="float: right;"><i>Elizabeth Tello</i></span></p> <p style="text-align: center; font-size: small;">(Signature of insurance carrier's authorized representative or NYS Licensed Insurance Agent of that insurance carrier)</p>	
<p>Telephone Number (212) 553-8074 <span style="float: right;">Name and Title: Elizabeth Tello – Assistant Director, Statutory Services</span></p>	
<p><b>IMPORTANT:</b> If Boxes 4A and 5A are checked, and this form is signed by the insurance carrier's authorized representative or NYS Licensed Insurance Agent of that carrier, this certificate is COMPLETE. Mail it directly to the certificate holder.</p> <p>If Box 4B, 4C or 5B is checked, this certificate is NOT COMPLETE for purposes of Section 220, Subd. 8 of the NYS Disability and Paid Family Leave Benefits Law. It must be mailed for completion to the Workers' Compensation Board, Plans Acceptance Unit, PO Box 5200, Binghamton, NY 13902-5200.</p>	
<p><b>PART 2. To be completed by the NYS Workers' Compensation Board (Only if Box 4C or 5B of Part 1 has been checked)</b></p>	
<p><b>State of New York</b> <b>Workers' Compensation Board</b></p> <p>According to information maintained by the NYS Workers' Compensation Board, the above-named employer has complied with the NYS Disability and Paid Family Leave Benefits Law with respect to all of his/her employees.</p>	
<p>Date Signed _____ By _____</p> <p style="text-align: right; font-size: small;">(Signature of Authorized NYS Workers' Compensation Board Employee)</p>	
<p>Telephone Number _____ Name and Title _____</p>	

*Please Note: Only insurance carriers licensed to write NYS disability and paid family leave benefits insurance policies and NYS licensed insurance agents of those insurance carriers are authorized to issue Form DB-120.1. Insurance brokers are NOT authorized to issue this form.*



## Additional Instructions for Form DB-120.1

By signing this form, the insurance carrier identified in Box 3 on this form is certifying that it is insuring the business referenced in box "1 a" for disability and/or paid family leave benefits under the New York State Disability and Paid Family Leave Benefits Law. The Insurance Carrier or its licensed agent will send this Certificate of Insurance to the entity listed as the certificate holder in Box 2.

The insurance carrier must notify the above certificate holder and the Workers' Compensation Board within 10 days IF a policy is cancelled due to nonpayment of premiums or within 30 days IF there are reasons other than nonpayment of premiums that cancel the policy or eliminate the insured from coverage indicated on this Certificate. (These notices may be sent by regular mail.) Otherwise, this Certificate is valid for one year after this form is approved by the insurance carrier or its licensed agent, or until the policy expiration date listed in Box 3c, whichever is earlier.

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 Disability and/or Paid Family Leave Benefits contract of insurance only while the underlying policy is in effect.

**Please Note:** Upon the cancellation of the disability and/or paid family leave benefits 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 NYS Disability and/or Paid Family Leave Benefits Coverage or other authorized proof that the business is complying with the mandatory coverage requirements of the New York State Disability and Paid Family Leave Benefits Law.

### DISABILITY AND PAID FAMILY LEAVE BENEFITS LAW

#### §220. Subd. 8

(a) 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 employment as defined in this article, 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 the payment of disability benefits and after January first, two thousand and twenty-one, the payment of family leave benefits for all employees has been secured as provided by this article. 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 disability benefits to any such employee if so employed.

(b) 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 employment as defined in this article and 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 the payment of disability benefits and after January first, two thousand eighteen, the payment of family leave benefits for all employees has been secured as provided by this article.

CITY OF NEW YORK  
CERTIFICATION BY INSURANCE BROKER OR AGENT

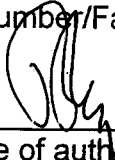
The undersigned insurance broker represents to the City of New York that the attached Certificate of Insurance is accurate in all material respects.

Fairfield County Bank Insurance Services LLC  
[Name of broker or agent (typewritten)]

401 Main Street Ridgefield CT 06877  
[Address of broker or agent (typewritten)]

mark.connelly@fcbins.com  
[Email address of broker or agent (typewritten)]

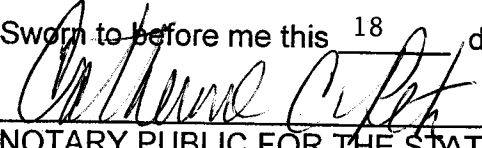
203-894-3188/ 203-431-8789  
[Phone number/Fax number of broker or agent (typewritten)]

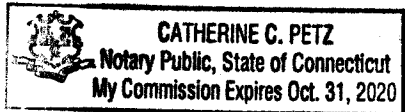
  
[Signature of authorized official, broker, or agent]

Mark Connelly, President  
[Name and title of authorized official, broker, or agent (typewritten)]

State of ...CT.....)  
  ) ss.:  
County of ..Fairfield.....)

Sworn to before me this 18 day of June, 2018

  
NOTARY PUBLIC FOR THE STATE OF CT



My Commission Expires Oct. 31, 2011  
Notary Public, State of Connecticut  
CATHERINE C. PUTS

Bond No. 106825243

**Payment Bond (Pages 108 to 111): 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, \_\_\_\_\_

THE HALCYON CONSTRUCTION CORPORATION

65 MARBLE AVENUE, PLEASANTVILLE, NY 10570

hereinafter referred to as the "Principal", and Travelers Casualty and Surety Company of America

One Tower Square , Hartford, CT 06183

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

Ninety Three Million One Hundred Twenty Seven Thousand Five Hundred Seventy Eight Dollars and

95/100

(\$ 93,127,578.95 ) 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: HWKKP005 - DDC PIN: 8502016HW0063C - RECONSTRUCTION OF DUMBO D.M.A. -  
VINEGAR HILL AREA/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

CITY OF NEW YORK  
DDC

STANDARD CONSTRUCTION CONTRACT  
March 2017



**Payment Bond (Pages 108 to 111): 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 placed 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 108 to 111): 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 June, 2018.

(Seal)

THE HALCYON CONSTRUCTION CORPORATION (L.S.)  
Principal

By: [Signature]

(Seal)



Travelers Casualty and Surety Company of America  
Surety

By: [Signature]  
William D. Haas, Attorney-in-Fact

(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 108 to 111): 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 Westchester ss:

On this 18<sup>th</sup> day of June, 2018, before me personally came Charles Casarella to me known, who, being by me duly sworn did depose and say that he resides at Pound Ridge 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.

MARIA DIOGUARDI  
Notary Public, State of New York  
No. 01-D16234276  
Qualified in Westchester County  
Commission Expires Jan 18, 2019

[Signature]  
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.

BOND

BOND

**ACKNOWLEDGMENT BY SURETY COMPANY**  
**(Signed by One Authorized Person)**


STATE OF NEW YORK        )  
  ) ss.:  
COUNTY OF                    )

On this 18TH day of JUNE, 2018, before me personally came  
WILLIAM D. HAAS to me known, and known to me to be the  
*(Name)*  
ATTORNEY-IN-FACT of TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA  
*(Title)* *(Name of Corporation)*

the Corporation described in and which executed the within instrument, who being by me duly  
sworn did depose and say that he/she resides at RYE, NEW YORK

\_\_\_\_\_ and that he/she is the ATTORNEY-IN-FACT of said Corporation  
*(Title)*

and knows the Corporate Seal of the said Corporation; that the seal affixed to the within  
instrument is such Corporate Seal and so affixed by order of the Board of Directors of said  
Corporation and that he/she signed his/her name thereto by like order; and that the said  
Corporation has received from the Superintendent of Insurance of the State of New York a  
Certificate of Solvency, and of its sufficiency as Surety or Guarantor, pursuant to Section 327 of  
the Insurance Law of the State of New York as amended, and that such Certificate has not been  
revoked.

  
\_\_\_\_\_  
Notary Public

ALICE McCARTHY  
NOTARY PUBLIC, State of New York  
No. 01MC5079342  
Qualified in Dutchess County  
Commission Expires June 02, 2019

TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA

HARTFORD, CONNECTICUT 06183

FINANCIAL STATEMENT AS OF DECEMBER 31, 2017

CAPITAL STOCK \$ 6,480,000

ASSETS		LIABILITIES & SURPLUS	
CASH AND INVESTED CASH	\$ 137,626,346	UNEARNED PREMIUMS	\$ 920,416,346
BONDS	3,372,829,396	LOSSES	820,933,807
STOCKS	326,030,613	LOSS ADJUSTMENT EXPENSES	181,114,296
INVESTMENT INCOME DUE AND ACCRUED	39,230,403	COMMISSIONS	42,188,100
OTHER INVESTED ASSETS	2,641,903	TAXES, LICENSES AND FEES	13,242,954
PREMIUM BALANCES	235,708,836	OTHER EXPENSES	42,889,177
NET DEFERRED TAX ASSET	48,322,453	CURRENT FEDERAL AND FOREIGN INCOME TAXES	1,313,124
REINSURANCE RECOVERABLE	23,906,019	REMITTANCES AND ITEMS NOT ALLOCATED	82,545,307
SECURITIES LENDING REINVESTED COLLATERAL ASSETS	20,555,872	AMOUNTS WITHHELD / RETAINED BY COMPANY FOR OTHERS	35,924,031
RECEIVABLES FROM PARENT, SUBSIDIARIES AND AFFILIATES	21,488,218	RETROACTIVE REINSURANCE RESERVE ASSUMED	793,031
ASSUMED REINSURANCE RECEIVABLE AND PAYABLE	626,835	POLICYHOLDER DIVIDENDS	9,857,423
OTHER ASSETS	5,795,705	PROVISION FOR REINSURANCE	5,066,347
		ADVANCE PREMIUM	1,256,751
		ESCHEAT LIABILITY	637,143
		PAYABLE FOR SECURITIES LENDING	20,555,872
		CEDED REINSURANCE NET PREMIUMS PAYABLE	36,704,062
		OTHER ACCRUED EXPENSES AND LIABILITIES	686,481
		<b>TOTAL LIABILITIES</b>	<b>\$ 2,216,124,272</b>
		CAPITAL STOCK	\$ 6,480,000
		PAID IN SURPLUS	433,803,761
		OTHER SURPLUS	1,576,352,561
		<b>TOTAL SURPLUS TO POLICYHOLDERS</b>	<b>\$ 2,016,636,322</b>
<b>TOTAL ASSETS</b>	<b>\$ 4,232,760,589</b>	<b>TOTAL LIABILITIES &amp; SURPLUS</b>	<b>\$ 4,232,760,589</b>

STATE OF CONNECTICUT )  
 COUNTY OF HARTFORD ) ss.  
 CITY OF HARTFORD )

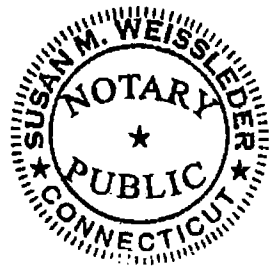
MICHAEL J. DOODY, BEING DULY SWORN, SAYS THAT HE IS SECOND VICE PRESIDENT, OF TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA, AND THAT TO THE BEST OF HIS KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT STATEMENT OF THE FINANCIAL CONDITION OF SAID COMPANY AS OF THE 31ST DAY OF DECEMBER, 2017.

*Michael J. Doody*  
 SECOND VICE PRESIDENT

*Susan M. Weissleder*  
 NOTARY PUBLIC

SUBSCRIBED AND SWORN TO BEFORE ME THIS  
 16TH DAY OF MARCH, 2018

SUSAN M. WEISSLEDER  
 Notary Public  
 My Commission Expires November 30, 2022





POWER OF ATTORNEY

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company

Surety Bond No. 106825243

Principal: THE HALCYON CONSTRUCTION CORPORATION

OR

Project Description: FMS ID: HWKKP005 - DDC PIN: 8502016HW0063C -
RECONSTRUCTION OF DUMBO D.M.A. - VINEGAR HILL

Obligee: City of New York

KNOW ALL MEN BY THESE PRESENTS: That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc. is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint William D. Haas of the City of White Plains, State of NY, their true and lawful Attorney-in-Fact, to sign, execute, seal and acknowledge the surety bond(s) referenced above.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 24th day of June, 2016.

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company



State of Connecticut

City of Hartford ss.

By:

Robert L. Raney, Senior Vice President

On this the 24th day of June, 2016, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed 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 hereunto set my hand and official seal.

My Commission expires the 30th day of June, 2021.



Marie C. Tetreault
Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, which resolutions are now in full force and effect, reading as follows:

**RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

**FURTHER RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

**FURTHER RESOLVED**, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

**FURTHER RESOLVED**, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, Kevin E. Hughes, the undersigned, Assistant Secretary, of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which 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 June, 2018



Kevin E. Hughes, Assistant Secretary



To verify the authenticity of this Power of Attorney, call 1-800-421-3880 or contact us at [www.travelersbond.com](http://www.travelersbond.com). Please refer to the Attorney-In-Fact number, the above-named individuals and the details of the bond to which the power is attached.

Bond No. 106825243

**Performance Bond #2 (Pages 104 to 107): 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, THE HALCYON CONSTRUCTION CORPORATION

65 MARBLE AVENUE, PLEASANTVILLE, NY 10570

hereinafter referred to as the "Principal,"  
and, Travelers Casualty and Surety Company of America

One Tower Square, Hartford, CT 06183

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 Ninety Three Million One Hundred Twenty Seven Thousand Five Hundred Seventy Eight Dollars

and 95/100

(\$ 93,127,578.95) 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: HWKKP005 - DDC PIN: 8502016HW0063C - RECONSTRUCTION OF DUMBO D.M.A. -

VINEGAR HILL AREA/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

CITY OF NEW YORK  
DDC

STANDARD CONSTRUCTION CONTRACT  
March 2017



**Performance Bond #2 (Pages 104 to 107): 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 104 to 107): 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 June 2018.

(Seal)

THE HALCYON CONSTRUCTION CORPORATION (L.S.)  
Principal

By: [Signature]

(Seal)



Travelers Casualty and Surety Company of America  
Surety

By: [Signature]  
William D. Haas, Attorney-in-Fact

(Seal)

\_\_\_\_\_  
Surety

By: \_\_\_\_\_

(Seal)

\_\_\_\_\_  
Surety

By: \_\_\_\_\_

(Seal)

\_\_\_\_\_  
Surety

By: \_\_\_\_\_

(Seal)

\_\_\_\_\_  
Surety

By: \_\_\_\_\_

Bond Premium Rate \$11.70 SLIDE

Bond Premium Cost \$841,820

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 104 to 107): 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 Westchester ss:

On this 18th day of June, 2018 before me personally came Charles Casanella

to me known, who, being by me duly sworn did depose and say that he/she resides

at Pound Ridge NY

; that he/she is the President 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.

M. Dioguardi  
Notary Public or Commissioner of Deeds

MARIA DIOGUARDI  
Notary Public, State of New York  
No. 01-D16234276  
Qualified in Westchester County  
Commission Expires Jan 18, 2019

**ACKNOWLEDGMENT OF PRINCIPAL IF A PARTNERSHIP**

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/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 \_\_\_\_\_, \_\_\_\_\_ 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.

WALTER DICKSTEIN  
Notary Public, State of New York  
No. 07-63337B  
Qualified in Westchester County  
Commission Expires Jan 18, 2018

BOND

BOND

**ACKNOWLEDGMENT BY SURETY COMPANY**  
**(Signed by One Authorized Person)**

STATE OF NEW YORK        )  
  ) ss.:  
COUNTY OF                    )

On this 18TH day of JUNE, 2018, before me personally came

WILLIAM D. HAAS to me known, and known to me to be the  
*(Name)*

ATTORNEY-IN-FACT of TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA  
*(Title)* *(Name of Corporation)*

the Corporation described in and which executed the within instrument, who being by me duly  
sworn did depose and say that he/she resides at RYE, NEW YORK

\_\_\_\_\_ and that he/she is the ATTORNEY-IN-FACT of said Corporation  
*(Title)*

and knows the Corporate Seal of the said Corporation; that the seal affixed to the within  
instrument is such Corporate Seal and so affixed by order of the Board of Directors of said  
Corporation and that he/she signed his/her name thereto by like order; and that the said  
Corporation has received from the Superintendent of Insurance of the State of New York a  
Certificate of Solvency, and of its sufficiency as Surety or Guarantor, pursuant to Section 327 of  
the Insurance Law of the State of New York as amended, and that such Certificate has not been  
revoked.

  
\_\_\_\_\_  
Notary Public

ALICE McCARTHY  
NOTARY PUBLIC, State of New York  
No. 01MC5079342  
Qualified in Dutchess County  
Commission Expires June 02, 2019

TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA

HARTFORD, CONNECTICUT 06183

FINANCIAL STATEMENT AS OF DECEMBER 31, 2017

CAPITAL STOCK \$ 6,480,000

ASSETS		LIABILITIES & SURPLUS	
CASH AND INVESTED CASH	\$ 137,626,346	UNEARNED PREMIUMS	\$ 920,416,346
BONDS	3,372,829,396	LOSSES	820,933,807
STOCKS	326,030,613	LOSS ADJUSTMENT EXPENSES	181,114,296
INVESTMENT INCOME DUE AND ACCRUED	39,230,403	COMMISSIONS	42,188,100
OTHER INVESTED ASSETS	2,641,903	TAXES, LICENSES AND FEES	13,242,950
PREMIUM BALANCES	235,706,836	OTHER EXPENSES	42,889,178
NET DEFERRED TAX ASSET	48,322,453	CURRENT FEDERAL AND FOREIGN INCOME TAXES	1,313,126
REINSURANCE RECOVERABLE	23,908,019	REMITTANCES AND ITEMS NOT ALLOCATED	82,545,307
SECURITIES LENDING REINVESTED COLLATERAL ASSETS	20,555,872	AMOUNTS WITHHELD / RETAINED BY COMPANY FOR OTHERS	35,924,031
RECEIVABLES FROM PARENT, SUBSIDIARIES AND AFFILIATES	21,488,218	RETROACTIVE REINSURANCE RESERVE ASSUMED	793,031
ASSUMED REINSURANCE RECEIVABLE AND PAYABLE	626,835	POLICYHOLDER DIVIDENDS	9,857,423
OTHER ASSETS	5,795,705	PROVISION FOR REINSURANCE	5,066,347
		ADVANCE PREMIUM	1,256,758
		ESCHEAT LIABILITY	837,143
		PAYABLE FOR SECURITIES LENDING	20,555,872
		CEDED REINSURANCE NET PREMIUMS PAYABLE	36,704,062
		OTHER ACCRUED EXPENSES AND LIABILITIES	686,488
		TOTAL LIABILITIES	\$ 2,216,124,272
		CAPITAL STOCK	\$ 6,480,000
		PAID IN SURPLUS	433,803,760
		OTHER SURPLUS	1,576,352,567
		TOTAL SURPLUS TO POLICYHOLDERS	\$ 2,016,636,327
TOTAL ASSETS	\$ 4,232,760,599	TOTAL LIABILITIES & SURPLUS	\$ 4,232,760,599

STATE OF CONNECTICUT )  
 COUNTY OF HARTFORD ) SS.  
 CITY OF HARTFORD )

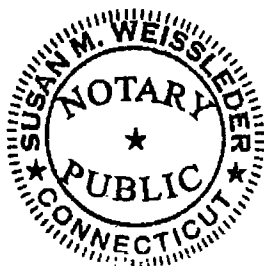
MICHAEL J. DOODY, BEING DULY SWORN, SAYS THAT HE IS SECOND VICE PRESIDENT, OF TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA, AND THAT TO THE BEST OF HIS KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT STATEMENT OF THE FINANCIAL CONDITION OF SAID COMPANY AS OF THE 31ST DAY OF DECEMBER, 2017.

*Michael J. Doody*  
 SECOND VICE PRESIDENT

*Susan M. Weissleder*  
 NOTARY PUBLIC

SUBSCRIBED AND SWORN TO BEFORE ME THIS  
 16TH DAY OF MARCH, 2018

SUSAN M. WEISSLEDER  
 Notary Public  
 My Commission Expires November 30, 2022





POWER OF ATTORNEY

Farmington Casualty Company  
Fidelity and Guaranty Insurance Company  
Fidelity and Guaranty Insurance Underwriters, Inc.  
St. Paul Fire and Marine Insurance Company  
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company  
Travelers Casualty and Surety Company  
Travelers Casualty and Surety Company of America  
United States Fidelity and Guaranty Company

Surety Bond No. 106825243

Principal: THE HALCYON CONSTRUCTION CORPORATION

OR

Project Description: FMS ID: HWKKP005 - DDC PIN: 8502016HW0063C -  
RECONSTRUCTION OF DUMBO D.M.A. - VINEGAR HILL

Obligee: City of New York

**KNOW ALL MEN BY THESE PRESENTS:** That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc. is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **William D. Haas** of the City of **White Plains**, State of **NY**, their true and lawful Attorney-in-Fact, to sign, execute, seal and acknowledge the surety bond(s) referenced above.

**IN WITNESS WHEREOF**, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this **24<sup>th</sup>** day of **June, 2016**.

Farmington Casualty Company  
Fidelity and Guaranty Insurance Company  
Fidelity and Guaranty Insurance Underwriters, Inc.  
St. Paul Fire and Marine Insurance Company  
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company  
Travelers Casualty and Surety Company  
Travelers Casualty and Surety Company of America  
United States Fidelity and Guaranty Company



State of Connecticut

City of Hartford ss.

By:

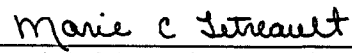
  
Robert L. Raney, Senior Vice President

On this the **24<sup>th</sup>** day of **June, 2016**, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed 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 hereunto set my hand and official seal.

My Commission expires the **30th** day of **June, 2021**.



  
Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, which resolutions are now in full force and effect, reading as follows:

**RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

**FURTHER RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

**FURTHER RESOLVED**, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

**FURTHER RESOLVED**, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, Kevin E. Hughes, the undersigned, Assistant Secretary, of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which 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 June, 2018



Kevin E. Hughes, Assistant Secretary



To verify the authenticity of this Power of Attorney, call 1-800-421-3880 or contact us at [www.travelersbond.com](http://www.travelersbond.com). Please refer to the Attorney-In-Fact number, the above-named individuals and the details of the bond to which the power is attached.



(NO TEXT ON THIS PAGE)

**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) 669-4443. 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: Wasyl Kinach, P.E., Office of the Comptroller, 1 Centre Street, Room 651, 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](http://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](http://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) 669-4443, 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 fringe 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 fringe benefits and wage supplements which cost the employer no less than the prevailing supplemental benefits rate in total.

Although prevailing wage laws do not require employers to provide bona fide fringe benefits (as opposed to wage supplements) to their employees, other laws may. For example, the Employee Retirement Income Security Act, 29 U.S.C. § 1001 et seq., the Patient Protection and Affordable Care Act, 42 U.S.C. § 18001 et seq., and the New York City Paid Sick Leave Law, N.Y.C. Admin. Code § 20-911 et seq., require certain employers to provide certain benefits to their employees. Labor agreements to which employers are a party may also require certain benefits. The Comptroller's Office does not enforce these laws or agreements.

**Employers must provide prevailing supplemental benefits at the straight time rate for each hour worked unless otherwise noted in the classification.**

**Wasył Kinach, P.E.  
Director of Classifications  
Bureau of Labor Law**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

**TABLE OF CONTENTS**

<b><u>CLASSIFICATION</u></b>	<b><u>PAGE</u></b>
ASBESTOS HANDLER .....	5
BLASTER .....	5
BOILERMAKER.....	7
BRICKLAYER.....	8
CARPENTER - BUILDING COMMERCIAL .....	9
CARPENTER - HEAVY CONSTRUCTION WORK .....	10
CARPENTER - HIGH RISE CONCRETE FORMS .....	11
CARPENTER - SIDEWALK SHED, SCAFFOLD AND HOIST.....	12
CEMENT & CONCRETE WORKER.....	13
CEMENT MASON.....	14
CORE DRILLER .....	15
DERRICKPERSON AND RIGGER .....	16
DIVER .....	17
DOCKBUILDER - PILE DRIVER.....	18
DRIVER: TRUCK (TEAMSTER) .....	19
ELECTRICIAN .....	21
ELECTRICIAN - ALARM TECHNICIAN.....	24
ELECTRICIAN-STREET LIGHTING WORKER .....	25
ELEVATOR CONSTRUCTOR .....	26
ELEVATOR REPAIR & MAINTENANCE.....	27
ENGINEER .....	28
ENGINEER - CITY SURVEYOR AND CONSULTANT.....	33
ENGINEER - FIELD (BUILDING CONSTRUCTION) .....	34
ENGINEER - FIELD (HEAVY CONSTRUCTION) .....	35
ENGINEER - FIELD (STEEL ERECTION) .....	36
ENGINEER - OPERATING .....	37
FLOOR COVERER .....	45
GLAZIER .....	46
GLAZIER - REPAIR & MAINTENANCE .....	47
HEAT AND FROST INSULATOR .....	48
HOUSE WRECKER.....	49
IRON WORKER - ORNAMENTAL.....	49
IRON WORKER - STRUCTURAL.....	50
LABORER .....	51
LANDSCAPING .....	52

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

MARBLE MECHANIC.....	54
MASON TENDER .....	55
MASON TENDER (INTERIOR DEMOLITION WORKER).....	56
METALLIC LATHER.....	56
MILLWRIGHT .....	57
MOSAIC MECHANIC.....	58
PAINTER .....	59
PAINTER - METAL POLISHER.....	60
PAINTER - STRIPER.....	61
PAINTER - STRUCTURAL STEEL.....	62
PAPERHANGER .....	63
PAVER AND ROADBUILDER.....	64
PLASTERER .....	66
PLASTERER - TENDER.....	67
PLUMBER .....	67
PLUMBER (MECHANICAL EQUIPMENT AND SERVICE).....	68
PLUMBER (RESIDENTIAL RATES FOR 1, 2 AND 3 FAMILY HOME CONSTRUCTION).....	69
PLUMBER: PUMP & TANK.....	70
POINTER, WATERPROOFER, CAULKER, SANDBLASTER, STEAMBLASTER.....	71
ROOFER.....	72
SHEET METAL WORKER.....	72
SHEET METAL WORKER - SPECIALTY .....	73
SHIPYARD WORKER.....	74
SIGN ERECTOR.....	76
STEAMFITTER .....	76
STEAMFITTER - REFRIGERATION AND AIR CONDITIONER .....	78
STONE MASON - SETTER.....	80
TAPER.....	81
TELECOMMUNICATION WORKER.....	82
TILE FINISHER.....	83
TILE LAYER - SETTER .....	84
TIMBERPERSON .....	84
TUNNEL WORKER .....	85
WELDER.....	87

## **ASBESTOS HANDLER**

**(Hazardous Material; Disturbs, removes, encapsulates, repairs, or encloses friable asbestos material)**

### **Asbestos Handler**

Effective Period: 7/1/2017 - 6/30/2018

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$46.27**

Supplemental Benefit Rate per Hour: **\$47.99**

### **Blaster (Hydraulic)**

Effective Period: 7/1/2017 - 6/30/2018

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: \$47.15  
Supplemental Benefit Rate per Hour: \$47.99

**Blaster - Trac Drill Hydraulic**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$41.29  
Supplemental Benefit Rate per Hour: \$47.99

**Blaster - Wagon: Air Trac: Quarry Bar: Drillrunners**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$40.46  
Supplemental Benefit Rate per Hour: \$47.99

**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: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$39.34  
Supplemental Benefit Rate per Hour: \$47.99

**Blaster - Powder Carriers**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$35.17  
Supplemental Benefit Rate per Hour: \$47.99

**Blaster - Hydraulic Trac Drill Chuck Tender**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$33.81  
Supplemental Benefit Rate per Hour: \$47.99

**Blaster - Chuck Tender & Nipper**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$33.00  
Supplemental Benefit Rate per Hour: \$47.99

**Blaster - Magazine Keepers: (Watch Person)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$18.22  
Supplemental Benefit Rate per Hour: \$47.99

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

A 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: 7/1/2017 - 12/31/2017

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

Effective Period: 1/1/2018 - 6/30/2018

Wage Rate per Hour: **\$57.17**

Supplemental Benefit Rate per Hour: **\$43.62**

Supplemental Note: For time and one half overtime - \$64.81 For double overtime - \$86.00



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 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

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$55.10

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: **\$31.20**

**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: 7/1/2017 - 6/30/2018

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$52.63

Supplemental Benefit Rate per Hour: \$49.66

**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 - HIGH RISE CONCRETE FORMS**  
(Excludes Engineering Structures and Building Foundations)

**Carpenter High Rise A**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$50.78**

Supplemental Benefit Rate per Hour: **\$41.49**

**Carpenter High Rise B**

Carpenter High Rise B worker is excluded from high risk operations such as erection decking, perimeter debris netting, leading edge work, self-climbing form systems, and the installation of cocoon systems unless directly supervised by a Carpenter High Rise A worker.

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$39.07**

Supplemental Benefit Rate per Hour: **\$16.65**

**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**

Time and one half 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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Presidential Election Day  
Thanksgiving Day  
Christmas Day

**Paid Holidays**

None

**Shift Rates**

The second shift wage rate shall be 113% of the straight time hourly wage rate. There must be a first shift in order to work a second shift.

(Carpenters District Council)

---

---

**CARPENTER - SIDEWALK SHED, SCAFFOLD AND HOIST**

**Carpenter - Hod Hoist**

(Assisted by Mason Tender)

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$50.50**

Supplemental Benefit Rate per Hour: **\$39.46**

**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.

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

## 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)

---

---

## CEMENT & CONCRETE WORKER

### Cement & Concrete Worker

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$42.48**

Supplemental Benefit Rate per Hour: **\$26.00**

Supplemental Note: **\$29.50 on Saturdays; \$33.00 on Sundays & Holidays**

### Cement & Concrete Worker - (Hired after 2/6/2016)

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$32.00**

Supplemental Benefit Rate per Hour: **\$18.00**

Supplemental Note: **\$19.50 on Saturdays; \$21.00 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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

1/2 day before Christmas Day  
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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$42.62**

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)

---

## **CORE DRILLER**

### **Core Driller**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$38.82**

Supplemental Benefit Rate per Hour: **\$24.66**

### **Core Driller Helper**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$30.96**

Supplemental Benefit Rate per Hour: **\$24.66**

### **Core Driller Helper(Third year in the industry)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$27.86**

Supplemental Benefit Rate per Hour: **\$24.66**

### **Core Driller Helper (Second year in the industry)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$24.77**

Supplemental Benefit Rate per Hour: **\$24.66**

### **Core Driller Helper (First year in the industry)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$21.67**

Supplemental Benefit Rate per Hour: **\$24.66**

### **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



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Labor Day  
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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$46.86**

Supplemental Benefit Rate per Hour: **\$51.40**

Supplemental Note: The above supplemental rate applies for work performed in Manhattan, Bronx, Brooklyn and Queens. \$52.82 - For work performed in Staten Island.

### Derrick Person & Rigger - Site Work

Assists the Stone Mason-Setter in the setting of stone

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$40.29**

Supplemental Benefit Rate per Hour: **\$39.23**

### 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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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)

---

---

**DIVER**

**Diver (Marine)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$66.66

Supplemental Benefit Rate per Hour: \$49.66

**Diver Tender (Marine)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$47.34

Supplemental Benefit Rate per Hour: \$49.66

**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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

**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)

---

---

**DOCKBUILDER - PILE DRIVER**

**Dockbuilder - Pile Driver**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$52.63**

Supplemental Benefit Rate per Hour: **\$49.66**

**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)

---

---

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

## **DRIVER: TRUCK (TEAMSTER)**

### **Driver - Dump Truck**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$41.18**

Supplemental Benefit Rate per Hour: **\$44.79**

Supplemental Note: Over 40 hours worked: at time and one half rate - \$19.94; at double time rate - \$26.58

### **Driver - Tractor Trailer**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$42.22**

Supplemental Benefit Rate per Hour: **\$45.40**

Supplemental Note: Over 40 hours worked: at time and one half rate - \$17.55; at double time rate - \$23.40

### **Driver - Euclid & Turnapull Operator**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$42.78**

Supplemental Benefit Rate per Hour: **\$45.40**

Supplemental Note: Over 40 hours worked: at time and one half rate - \$17.55 at double time rate - \$23.40

## **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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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.

---

### Driver Redi-Mix (Sand & Gravel)

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$38.40**

Supplemental Benefit Rate per Hour: **\$42.12**

Supplemental Note: Over 40 hours worked: time and one half rate \$15.99, double time rate \$21.33

### 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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Election Day  
Thanksgiving Day  
Christmas Day

(Local #282)

---

---

## **ELECTRICIAN**

(Including all low voltage cabling carrying data; video; and voice in combination with data and or video.)

### **Electrician "A" (Regular Day / Day Shift)**

Effective Period: 7/1/2017 - 5/9/2018

Wage Rate per Hour: **\$56.00**

Supplemental Benefit Rate per Hour: **\$54.35**

Effective Period: 5/10/2018 - 6/30/2018

Wage Rate per Hour: **\$56.00**

Supplemental Benefit Rate per Hour: **\$55.72**

### **Electrician "A" (Regular Day Overtime after 7 hrs / Day Shift Overtime after 8 hrs)**

Effective Period: 7/1/2017 - 5/9/2018

Wage Rate per Hour: **\$84.00**

Supplemental Benefit Rate per Hour: **\$57.86**

Effective Period: 5/10/2018 - 6/30/2018

Wage Rate per Hour: **\$84.00**

Supplemental Benefit Rate per Hour: **\$59.23**

### **Electrician "A" (Swing Shift)**

Effective Period: 7/1/2017 - 5/9/2018

Wage Rate per Hour: **\$65.71**

Supplemental Benefit Rate per Hour: **\$61.94**

Effective Period: 5/10/2018 - 6/30/2018

Wage Rate per Hour: **\$65.71**

Supplemental Benefit Rate per Hour: **\$63.52**

### **Electrician "A" (Swing Shift Overtime After 7.5 hours)**

Effective Period: 7/1/2017 - 5/9/2018

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$98.57**  
Supplemental Benefit Rate per Hour: **\$66.05**

Effective Period: 5/10/2018 - 6/30/2018  
Wage Rate per Hour: **\$98.57**  
Supplemental Benefit Rate per Hour: **\$67.64**

**Electrician "A" (Graveyard Shift)**

Effective Period: 7/1/2017 - 5/9/2018  
Wage Rate per Hour: **\$73.60**  
Supplemental Benefit Rate per Hour: **\$68.33**

Effective Period: 5/10/2018 - 6/30/2018  
Wage Rate per Hour: **\$73.60**  
Supplemental Benefit Rate per Hour: **\$70.09**

**Electrician "A" (Graveyard Shift Overtime After 7 hours)**

Effective Period: 7/1/2017 - 5/9/2018  
Wage Rate per Hour: **\$110.40**  
Supplemental Benefit Rate per Hour: **\$72.95**

Effective Period: 5/10/2018 - 6/30/2018  
Wage Rate per Hour: **\$110.40**  
Supplemental Benefit Rate per Hour: **\$74.70**

**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  
Columbus Day  
Veteran's 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**

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 \$25.67 and effective 5/10/18 \$25.92.

---

**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: 7/1/2017 - 5/9/2018

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**

Effective Period: 5/10/2018 - 6/30/2018

Wage Rate per Hour: **\$29.00**

Supplemental Benefit Rate per Hour: **\$22.65**

First and Second Year "M" Wage Rate Per Hour: **\$24.50**

First and Second Year "M" Supplemental Rate: **\$20.30**

**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: 7/1/2017 - 5/9/2018

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**

Effective Period: 5/10/2018 - 6/30/2018

Wage Rate per Hour: **\$43.50**

Supplemental Benefit Rate per Hour: **\$24.47**

First and Second Year "M" Wage Rate Per Hour: **\$36.75**

First and Second Year "M" Supplemental Rate: **\$21.84**

**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.



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

**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

**Paid 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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$32.40**

Supplemental Benefit Rate per Hour: **\$16.10**

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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: 7/1/2017 - 5/15/2018

Wage Rate per Hour: \$56.00

Supplemental Benefit Rate per Hour: \$56.26

Effective Period: 5/16/2018 - 6/30/2018

Wage Rate per Hour: \$56.00

Supplemental Benefit Rate per Hour: \$57.63

**Electrician - Electro Pole Foundation Installer**

Effective Period: 7/1/2017 - 5/15/2018

Wage Rate per Hour: \$41.54

Supplemental Benefit Rate per Hour: \$41.02

Effective Period: 5/16/2018 - 6/30/2018

Wage Rate per Hour: \$42.16

Supplemental Benefit Rate per Hour: \$42.19

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

**Electrician - Electro Pole Maintainer**

Effective Period: 7/1/2017 - 5/16/2018

Wage Rate per Hour: **\$35.58**

Supplemental Benefit Rate per Hour: **\$36.89**

Effective Period: 5/17/2018 - 6/30/2018

Wage Rate per Hour: **\$36.11**

Supplemental Benefit Rate per Hour: **\$37.93**

**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

**Paid Holidays**

None

(Local #3)

---

---

**ELEVATOR CONSTRUCTOR**

**Elevator Constructor**

Effective Period: 7/1/2017 - 3/16/2018

Wage Rate per Hour: **\$62.64**

Supplemental Benefit Rate per Hour: **\$34.25**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
\$220 PREVAILING WAGE SCHEDULE

Effective Period: 3/17/2018 - 6/30/2018

Wage Rate per Hour: **\$64.48**

Supplemental Benefit Rate per Hour: **\$35.85**

### **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)

---

---

## **ELEVATOR REPAIR & MAINTENANCE**

### **Elevator Service/Modernization Mechanic**

Effective Period: 7/1/2017 - 3/16/2018

Wage Rate per Hour: **\$49.14**

Supplemental Benefit Rate per Hour: **\$34.11**

Effective Period: 3/17/2018 - 6/30/2018

Wage Rate per Hour: **\$50.49**

Supplemental Benefit Rate per Hour: **\$35.71**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

## 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.

## 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

## 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)

---

---

# ENGINEER

## Engineer - Heavy Construction Operating Engineer I

Cherry pickers 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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$67.32**

Supplemental Benefit Rate per Hour: **\$36.87**

Supplemental Note: \$66.34 on overtime

Shift Wage Rate: **\$107.71**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

**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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$65.31**

Supplemental Benefit Rate per Hour: **\$36.87**

Supplemental Note: **\$66.34** on overtime

Shift Wage Rate: **\$104.50**

**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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$61.93**

Supplemental Benefit Rate per Hour: **\$36.87**

Supplemental Note: **\$66.34** on overtime

Shift Wage Rate: **\$99.09**

**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 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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$65.00**

Supplemental Benefit Rate per Hour: **\$36.87**

Supplemental Note: **\$66.34** on overtime

Shift Wage Rate: **\$104.00**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

**Engineer - Heavy Construction Maintenance Engineer II**

On Base Mounted Tower Cranes

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$85.53**

Supplemental Benefit Rate per Hour: **\$36.87**

Supplemental Note: \$66.34 on overtime

Shift Wage Rate: **\$136.85**

**Engineer - Heavy Construction Maintenance Engineer III**

On Generators, Light Towers

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$42.73**

Supplemental Benefit Rate per Hour: **\$36.87**

Supplemental Note: \$66.34 on overtime

Shift Wage Rate: **\$68.37**

**Engineer - Heavy Construction Maintenance Engineer IV**

On Pumps and Mixers including mud sucking

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$43.86**

Supplemental Benefit Rate per Hour: **\$36.87**

Supplemental Note: \$66.34 on overtime

Shift Wage Rate: **\$70.18**

**Engineer - Heavy Construction Oilers I**

Gradalls, Cold Planer Grader, Concrete Pumps, Driving Truck Cranes, Driving and Operating Fuel and Grease Trucks.

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$58.57**

Supplemental Benefit Rate per Hour: **\$36.87**

Supplemental Note: \$66.34 on overtime

Shift Wage Rate: **\$93.71**

**Engineer - Heavy Construction Oilers II**

All gasoline, electric, diesel or air operated Shovels, Draglines, Backhoes, Keystones, Pavers, Gunite Machines, Battery of Compressors, Crawler Cranes, two-person Trenching Machines.

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$40.36**

Supplemental Benefit Rate per Hour: **\$36.87**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Supplemental Note: \$66.34 on overtime  
Shift Wage Rate: \$64.58

**Engineer - Steel Erection Maintenance Engineers**

Derrick, Travelers, Tower, Crawler Tower and Climbing Cranes

Effective Period: 7/1/2017 - 6/30/2018  
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: 7/1/2017 - 6/30/2018  
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: 7/1/2017 - 6/30/2018  
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.

**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



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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: 7/1/2017 - 6/30/2018

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: 7/1/2017 - 6/30/2018

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 Cranes: Driving and Operating Fuel and Grease Trucks, Cherrypickers (hydraulic cranes) over 70,000 GVW, and machines of a similar nature.

Effective Period: 7/1/2017 - 6/30/2018

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: 7/1/2017 - 6/30/2018

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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**

### **Party Chief**

Effective Period: 7/1/2017 - 6/30/2018

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$31.47**

Supplemental Benefit Rate per Hour: **\$20.15**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Supplemental Note: Overtime Benefit Rate - \$27.65 per hour (time & one half) \$35.15 per hour (double time).

**Rodperson**

Effective Period: 7/1/2017 - 6/30/2018

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.)

**Field Engineer - BC Party Chief**

Effective Period: 7/1/2017 - 6/30/2018

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$46.69**

Supplemental Benefit Rate per Hour: **\$32.15**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Supplemental Note: Overtime Benefit Rate - \$44.90 per hour (time & one half) \$57.65 per hour (double time).

**Field Engineer - BC Rodperson**

Effective Period: 7/1/2017 - 6/30/2018

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.)

**Field Engineer - HC Party Chief**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$70.25

Supplemental Benefit Rate per Hour: \$34.18

Supplemental Note: Overtime benefit rate - \$47.82 per hour (time & one half), \$61.46 per hour (double time).

**Field Engineer - HC Instrument Person**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$51.64

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: **\$34.18**

Supplemental Note: Overtime benefit rate - \$47.82 per hour (time & one half), \$61.46 per hour (double time).

**Field Engineer - HC Rodperson**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$43.37**

Supplemental Benefit Rate per Hour: **\$34.18**

Supplemental Note: Overtime benefit rate - \$47.82 per hour (time & one half), \$61.46 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**

Effective Period: 7/1/2017 - 6/30/2018

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: 7/1/2017 - 6/30/2018

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).

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

**Field Engineer - Steel Erection Rodperson**

Effective Period: 7/1/2017 - 6/30/2018

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**

Back Filling Machines, Cranes, Mucking Machines and Dual Drum Paver.

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$76.60**

Supplemental Benefit Rate per Hour: **\$31.10**

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: **\$122.56**

**Operating Engineer - Road & Heavy Construction II**

Backhoes, Power Shovels, Hydraulic Clam Shells, Steel Erection, Moles and machines of a similar nature.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$79.28

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: \$126.85

**Operating Engineer - Road & Heavy Construction III**

Mine Hoists, Cranes, etc. (Used as Mine Hoists)

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$81.80

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: \$130.88

**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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$79.85

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: \$127.76

**Operating Engineer - Road & Heavy Construction V**

Pile Drivers & Rigs (employing Dock Builder foreperson): Derrick Boats, Tunnel Shovels.

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$78.29

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: \$125.26

**Operating Engineer - Road & Heavy Construction VI**

Mixers (Concrete with loading attachment), Concrete Pavers, Cableways, Land Derricks, Power Houses (Low Air Pressure Units).

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$74.42

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: \$119.07

**Operating Engineer - Road & Heavy Construction VII**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

**Barrier Movers , Barrier Transport and Machines of a Similar Nature.**

**Effective Period: 7/1/2017 - 6/30/2018**

**Wage Rate per Hour: \$60.22**

**Supplemental Benefit Rate per Hour: \$31.10**

**Supplemental Note: \$56.50 overtime hours**

**Shift Wage Rate: \$96.35**

**Operating Engineer - Road & Heavy Construction VIII**

**Utility Compressors**

**Effective Period: 7/1/2017 - 6/30/2018**

**Wage Rate per Hour: \$46.88**

**Supplemental Benefit Rate per Hour: \$31.10**

**Supplemental Note: \$56.50 overtime hours**

**Shift Wage Rate: \$58.92**

**Operating Engineer - Road & Heavy Construction IX**

**Horizontal Boring Rig**

**Effective Period: 7/1/2017 - 6/30/2018**

**Wage Rate per Hour: \$70.79**

**Supplemental Benefit Rate per Hour: \$31.10**

**Supplemental Note: \$56.50 overtime hours**

**Shift Wage Rate: \$113.26**

**Operating Engineer - Road & Heavy Construction X**

**Elevators (manually operated as personnel hoist).**

**Effective Period: 7/1/2017 - 6/30/2018**

**Wage Rate per Hour: \$65.12**

**Supplemental Benefit Rate per Hour: \$31.10**

**Supplemental Note: \$56.50 overtime hours**

**Shift Wage Rate: \$104.19**

**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: 7/1/2017 - 6/30/2018**

**Wage Rate per Hour: \$50.73**

**Supplemental Benefit Rate per Hour: \$31.10**

**Supplemental Note: \$56.50 overtime hours**

**Shift Wage Rate: \$81.17**



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

**Operating Engineer - Road & Heavy Construction XII**

All Drills and Machines of a similar nature.

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$75.19

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: \$120.30

**Operating Engineer - Road & Heavy Construction XIII**

Concrete Pumps, Concrete Plant, Stone Crushers, Double Drum Hoist, Power Houses (other than above).

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$72.84

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: \$116.54

**Operating Engineer - Road & Heavy Construction XIV**

Concrete Mixer

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$69.67

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: \$111.47

**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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$47.18

Supplemental Benefit Rate per Hour: \$31.10

Supplemental Note: \$56.50 overtime hours

Shift Wage Rate: \$75.49

**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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$66.56

Supplemental Benefit Rate per Hour: \$31.10

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
\$220 PREVAILING WAGE SCHEDULE

Supplemental Note: \$56.50 overtime hours  
Shift Wage Rate: \$106.50

**Operating Engineer - Road & Heavy Construction XVII**

On-Site concrete plant engineer, On-site Asphalt Plant Engineer, and Vibratory console.

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$67.07  
Supplemental Benefit Rate per Hour: \$31.10  
Supplemental Note: \$56.50 overtime hours  
Shift Wage Rate: \$107.31

**Operating Engineer - Road & Heavy Construction XVIII**

Tower Crane

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$95.98  
Supplemental Benefit Rate per Hour: \$31.10  
Supplemental Note: \$56.50 overtime hours  
Shift Wage Rate: \$153.57

**Operating Engineer - Paving I**

Asphalt Spreaders, Autogrades (C.M.I.), Roto/Mil

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$74.42  
Supplemental Benefit Rate per Hour: \$31.10  
Supplemental Note: \$56.50 overtime hours  
Shift Wage Rate: \$119.07

**Operating Engineer - Paving II**

Asphalt Roller

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$72.50  
Supplemental Benefit Rate per Hour: \$31.10  
Supplemental Note: \$56.50 overtime hours  
Shift Wage Rate: \$116.00

**Operating Engineer - Paving III**

Asphalt Plants

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$61.43

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: **\$98.29**

**Operating Engineer - Concrete I**

Cranes

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$79.50**  
Supplemental Benefit Rate per Hour: **\$31.10**  
Supplemental Note: \$56.50 overtime hours

**Operating Engineer - Concrete II**

Compressors

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$47.54**  
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: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$63.66**  
Supplemental Benefit Rate per Hour: **\$31.10**  
Supplemental Note: \$56.50 overtime hours

**Operating Engineer - Steel Erection I**

Three Drum Derricks

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$82.23**  
Supplemental Benefit Rate per Hour: **\$31.10**  
Supplemental Note: \$56.50 overtime hours  
Shift Wage Rate: **\$131.57**

**Operating Engineer - Steel Erection II**

Cranes, 2 Drum Derricks, Hydraulic Cranes, Fork Lifts and Boom Trucks.

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$79.04**  
Supplemental Benefit Rate per Hour: **\$31.10**  
Supplemental Note: \$56.50 overtime hours  
Shift Wage Rate: **\$126.46**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
\$220 PREVAILING WAGE SCHEDULE

**Operating Engineer - Steel Erection III**

Compressors, Welding Machines.

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$47.14**

Supplemental Benefit Rate per Hour: **\$31.10**

Supplemental Note: **\$56.50** overtime hours

Shift Wage Rate: **\$75.42**

**Operating Engineer - Steel Erection IV**

Compressors - Not Combined with Welding Machine.

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$44.91**

Supplemental Benefit Rate per Hour: **\$31.10**

Supplemental Note: **\$56.50** overtime hours

Shift Wage Rate: **\$71.86**

**Operating Engineer - Building Work I**

Forklifts, Plaster (Platform machine), Plaster Bucket, Concrete Pump and all other equipment used for hoisting material.

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$62.87**

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$47.01**

Supplemental Benefit Rate per Hour: **\$31.10**

Supplemental Note: **\$56.50** overtime hours

**Operating Engineer - Building Work III**

Double Drum

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$71.60**

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

**Operating Engineer - Building Work IV**

Stone Derrick, Cranes, Hydraulic Cranes Boom Trucks.

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$75.87**

Supplemental Benefit Rate per Hour: **\$31.10**

Supplemental Note: **\$56.50** overtime hours

**Operating Engineer - Building Work V**

Dismantling and Erection of Cranes, Relief Engineer.

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$69.88**

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$69.14**

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$54.92**

Supplemental Benefit Rate per Hour: **\$31.10**

Supplemental Note: **\$56.50** overtime hours

For New House Car projects Wage Rate per Hour **\$43.77**

**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.

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).

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  
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: 7/1/2017 - 6/30/2018

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.

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$44.70**

Supplemental Benefit Rate per Hour: **\$40.99**

Supplemental Note: Supplemental Benefit Overtime Rate: **\$50.09**

### **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.

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

Thanksgiving Day

Day after Thanksgiving

Christmas Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

**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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$24.13

Supplemental Benefit Rate per Hour: \$21.12

**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

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

(Local #1281)

---



## HEAT AND FROST INSULATOR

### Heat & Frost Insulator

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$58.38**

Supplemental Benefit Rate per Hour: **\$39.46**

### Overtime Description

Double time shall be paid for supplemental benefits during overtime work.  
8th 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

### Shift Rates

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$36.33**

Supplemental Benefit Rate per Hour: **\$29.22**

### **House Wrecker - Tier B**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$25.56**

Supplemental Benefit Rate per Hour: **\$21.63**

### **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

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

### **Paid Holidays**

None

(Mason Tenders District Council)

---

## **IRON WORKER - ORNAMENTAL**

### **Iron Worker - Ornamental**

Effective Period: 7/1/2017 - 6/30/2018

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$44.20**

Supplemental Benefit Rate per Hour: **\$51.57**

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)

---

---

## IRON WORKER - STRUCTURAL

### Iron Worker - Structural

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$50.05**

Supplemental Benefit Rate per Hour: **\$72.53**

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

### Overtime Description

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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)**

### **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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$41.50**

Supplemental Benefit Rate per Hour: **\$40.63**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

**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.)

**Landscaper (Above 6 years experience)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$28.75  
Supplemental Benefit Rate per Hour: \$15.55

**Landscaper (3 - 6 years experience)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$27.75  
Supplemental Benefit Rate per Hour: \$15.55

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

**Landscaper (up to 3 years experience)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$25.25

Supplemental Benefit Rate per Hour: \$15.55

**Groundperson**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$25.25

Supplemental Benefit Rate per Hour: \$15.55

**Tree Remover / Pruner**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$33.75

Supplemental Benefit Rate per Hour: \$15.55

**Landscaper Sprayer (Pesticide Applicator)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$23.75

Supplemental Benefit Rate per Hour: \$15.55

**Watering - Plant Maintainer**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$18.72

Supplemental Benefit Rate per Hour: \$15.55

**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.

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**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$52.74**

Supplemental Benefit Rate per Hour: **\$38.67**

### **Marble Finisher**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$41.46**

Supplemental Benefit Rate per Hour: **\$36.64**

### **Marble Polisher**

Effective Period: 7/1/2017 - 6/30/2018

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Christmas Day

**Paid Holidays**

None

(Local #7)

---

---

**MASON TENDER**

**Mason Tender**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$37.90

Supplemental Benefit Rate per Hour: \$30.59

**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.

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)

---

---



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

## **MASON TENDER (INTERIOR DEMOLITION WORKER)**

### **Mason Tender Tier A**

Tier A Interior Demolition Worker performs all burning, chopping, and other technically skilled tasks related to interior demolition work.

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$36.19**

Supplemental Benefit Rate per Hour: **\$24.25**

### **Mason Tender Tier B**

Tier B Interior Demolition Worker performs manual work and work incidental to demolition work, such as loading and carting of debris from the work site to an area where it can be loaded in to bins/trucks for removal. Also performs clean-up of the site when demolition is completed.

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$25.38**

Supplemental Benefit Rate per Hour: **\$18.57**

### **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: 7/1/2017 - 6/30/2018

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$46.28**

Supplemental Benefit Rate per Hour: **\$42.92**

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

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: 7/1/2017 - 6/30/2018

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.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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.

### 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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$46.86**

Supplemental Benefit Rate per Hour: **\$40.65**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$51.67 per hour.

### Mosaic Mechanic - Mosaic & Terrazzo Finisher

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$45.26**

Supplemental Benefit Rate per Hour: **\$40.63**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$51.65 per hour.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
\$220 PREVAILING WAGE SCHEDULE

**Mosaic Mechanic - Machine Operator Grinder**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$45.26**

Supplemental Benefit Rate per Hour: **\$40.63**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$51.65 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

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

**Paid Holidays**

None

(Local #7)

---

---

**PAINTER**

**Painter - Brush & Roller**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$42.50**

Supplemental Benefit Rate per Hour: **\$28.62**

Supplemental Note: \$ 33.25 on overtime

**Spray & Scaffold / Decorative / Sandblast**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$45.50**

Supplemental Benefit Rate per Hour: **\$28.62**

Supplemental Note: \$ 33.25 on overtime

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.

**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  
Thanksgiving Day  
Christmas Day

**Paid Holidays**

None

(District Council of Painters #9)

---

---

**PAINTER - METAL POLISHER**

**METAL POLISHER**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$29.73  
Supplemental Benefit Rate per Hour: \$7.06

**METAL POLISHER - NEW CONSTRUCTION**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$30.68  
Supplemental Benefit Rate per Hour: \$7.06

**METAL POLISHER - SCAFFOLD OVER 34 FEET**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$33.23  
Supplemental Benefit Rate per Hour: \$7.06

**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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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).

### 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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$35.00**

Supplemental Benefit Rate per Hour: **\$12.37**

Supplemental Note: Overtime Supplemental Benefit rate - \$8.02; New Hire Rate (0-3 months) - \$0.00

### Lineperson (thermoplastic)

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$39.00**

Supplemental Benefit Rate per Hour: **\$12.37**

Supplemental Note: Overtime Supplemental Benefit rate - \$8.02; New Hire Rate (0-3 months) - \$0.00

### Overtime

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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  
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: 7/1/2017 - 9/30/2017

Wage Rate per Hour: **\$49.50**

Supplemental Benefit Rate per Hour: **\$37.08**

Effective Period: 10/1/2017 - 6/30/2018

Wage Rate per Hour: **\$50.00**

Supplemental Benefit Rate per Hour: **\$38.33**

### **Painter - Power Tool**

Effective Period: 7/1/2017 - 9/30/2017

Wage Rate per Hour: **\$55.50**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: **\$37.08**

Overtime Wage Rate: \$6.00 above the "Painters on Structural Steel" overtime rate.

Effective Period: 10/1/2017 - 6/30/2018

Wage Rate per Hour: **\$56.00**

Supplemental Benefit Rate per Hour: **\$38.33**

Overtime Wage Rate: \$6.00 above the "Painters on Structural Steel" overtime rate.

## 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

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$44.89**

Supplemental Benefit Rate per Hour: **\$31.13**

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.



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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 time and one half the regular base rate of pay.

(District Council of Painters #9)

---

---

## PAVER AND ROADBUILDER

### Paver & Roadbuilder - Formsetter

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$45.85**

Supplemental Benefit Rate per Hour: **\$40.98**

### 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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$41.98**

Supplemental Benefit Rate per Hour: **\$40.98**

### Production Paver & Roadbuilder - Screed Person

**OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE**

(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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$46.45**

Supplemental Benefit Rate per Hour: **\$40.98**

**Production Paver & Roadbuilder - Raker**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$45.85**

Supplemental Benefit Rate per Hour: **\$40.98**

**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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$42.37**

Supplemental Benefit Rate per Hour: **\$40.98**

**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.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

(Local #1010)

---

---

## PLASTERER

### Plasterer

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$44.93**

Supplemental Benefit Rate per Hour: **\$25.15**

### 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

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)

---

---

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

## **PLASTERER - TENDER**

### **Plasterer - Tender**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$37.90**

Supplemental Benefit Rate per Hour: **\$30.59**

### **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.

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

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$67.25**

Supplemental Benefit Rate per Hour: **\$31.80**

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

### **Plumber - Temporary Services**

**OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE**

**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:** 7/1/2017 - 6/30/2018

**Wage Rate per Hour:** \$53.88

**Supplemental Benefit Rate per Hour:** \$25.36

### **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.

### **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**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$41.20**

Supplemental Benefit Rate per Hour: **\$15.41**

### **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

Day after Thanksgiving

Christmas Day

### **Paid Holidays**

None

(Plumbers Local # 1)

---

---

## **PLUMBER (RESIDENTIAL RATES FOR 1, 2 AND 3 FAMILY HOME CONSTRUCTION)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$46.66**

Supplemental Benefit Rate per Hour: **\$22.95**

### **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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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)

---

---

**PLUMBER: PUMP & TANK**  
**Oil Trades (Installation and Maintenance)**

**Plumber - Pump & Tank**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$64.22**

Supplemental Benefit Rate per Hour: **\$23.21**

**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**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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)**

**Journeyperson**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$52.57**

Supplemental Benefit Rate per Hour: **\$25.80**

**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**

None

**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)

---



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

---

## ROOFER

### Roofer

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$41.50**

Supplemental Benefit Rate per Hour: **\$32.27**

### 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

Memorial Day

Independence Day

Labor 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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$48.90**

Supplemental Benefit Rate per Hour: **\$48.00**

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.)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$39.12**

Supplemental Benefit Rate per Hour: **\$48.00**

**Sheet Metal Worker - Duct Cleaner**

Effective Period: 7/1/2017 - 6/30/2018

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.

**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 for each shift, including nights, Saturdays, Sundays, and holidays.

(Local #28)

---

---

**SHEET METAL WORKER - SPECIALTY  
(Decking & Siding)**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

**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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$44.57**

Supplemental Benefit Rate per Hour: **\$25.02**

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

**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

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$28.12**

Supplemental Benefit Rate per Hour: **\$3.03**

**Shipyard Mechanic - Second Class**

Effective Period: 7/1/2017 - 6/30/2018

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
\$220 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$23.35**  
Supplemental Benefit Rate per Hour: **\$2.85**

**Shipyard Laborer - First Class**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$20.96**  
Supplemental Benefit Rate per Hour: **\$2.76**

**Shipyard Laborer - Second Class**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$15.24**  
Supplemental Benefit Rate per Hour: **\$2.54**

**Shipyard Dockhand - First Class**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$22.89**  
Supplemental Benefit Rate per Hour: **\$2.83**

**Shipyard Dockhand - Second Class**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$16.51**  
Supplemental Benefit Rate per Hour: **\$2.58**

**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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

---

---

**SIGN ERECTOR**  
(Sheet Metal, Plastic, Electric, and Neon)

**Sign Erector**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$47.67**  
Supplemental Benefit Rate per Hour: **\$50.67**

**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: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$55.50**  
Supplemental Benefit Rate per Hour: **\$55.29**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Supplemental Note: Overtime supplemental benefit rate: \$109.84

**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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$42.18**

Supplemental Benefit Rate per Hour: **\$44.84**

**Overtime**

Double time the regular rate after a 7 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**

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$55.50**

Supplemental Benefit Rate per Hour: **\$55.29**

Supplemental Note: Overtime supplemental benefit rate: \$109.84

**Steamfitter -Temporary Services**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$42.18

Supplemental Benefit Rate per Hour: \$44.84

### 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

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$39.50**  
Supplemental Benefit Rate per Hour: **\$15.81**

**Refrigeration and Air Conditioner Service Person V**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$32.46**  
Supplemental Benefit Rate per Hour: **\$14.16**

**Refrigeration and Air Conditioner Service Person IV**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$26.89**  
Supplemental Benefit Rate per Hour: **\$12.80**

**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: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$23.08**  
Supplemental Benefit Rate per Hour: **\$11.79**

**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: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$19.14**  
Supplemental Benefit Rate per Hour: **\$10.85**

**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: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$14.00**  
Supplemental Benefit Rate per Hour: **\$9.76**

**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  
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**

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 - Setter**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$53.62

Supplemental Benefit Rate per Hour: \$41.65

**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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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)

---

---

## **TAPER**

### **Drywall Taper**

Effective Period: 7/1/2017 - 6/30/2018

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.

(Local #1974)

## **TELECOMMUNICATION WORKER** **(Voice Installation Only)**

### **Telecommunication Worker**

**Effective Period: 7/1/2017 - 6/30/2018**

**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**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

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.

(C.W.A.)

---

---

**TILE FINISHER**

**Tile Finisher**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$41.13  
Supplemental Benefit Rate per Hour: \$31.18

**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)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

---

---

## **TILE LAYER - SETTER**

### **Tile Layer - Setter**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$53.19**

Supplemental Benefit Rate per Hour: **\$35.35**

### **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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$48.00**

Supplemental Benefit Rate per Hour: **\$49.16**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

**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.

**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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$62.37

Supplemental Benefit Rate per Hour: \$52.39

**Tunnel Workers (Compressed Air Rates)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$60.21

Supplemental Benefit Rate per Hour: \$50.65

**Top Nipper (Compressed Air Rates)**

Effective Period: 7/1/2017 - 6/30/2018

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: \$59.11  
Supplemental Benefit Rate per Hour: \$49.74

**Outside Lock Tender, Outside Gauge Tender, Muck Lock Tender (Compressed Air Rates)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$58.04  
Supplemental Benefit Rate per Hour: \$48.81

**Bottom Bell & Top Bell Signal Person: Shaft Person (Compressed Air Rates)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$58.04  
Supplemental Benefit Rate per Hour: \$48.81

**Changehouse Attendant: Powder Watchperson (Compressed Air Rates)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$50.87  
Supplemental Benefit Rate per Hour: \$46.11

**Blasters (Free Air Rates)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$59.52  
Supplemental Benefit Rate per Hour: \$50.03

**Tunnel Workers (Free Air Rates)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$56.97  
Supplemental Benefit Rate per Hour: \$47.89

**All Others (Free Air Rates)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$52.63  
Supplemental Benefit Rate per Hour: \$44.29

**Microtunneling (Free Air Rates)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$45.58  
Supplemental Benefit Rate per Hour: \$38.31

**Overtime Description**

**OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 PREVAILING WAGE SCHEDULE**

**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).**

**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 JOURNEYPEPERSON IN THE TRADE  
PERFORMING THE WORK.**



**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.

## TABLE OF CONTENTS

<u>CLASSIFICATION</u>	<u>PAGE</u>
ASBESTOS HANDLER .....	3
BOILERMAKER.....	3
BRICKLAYER.....	4
CARPENTER.....	5
CARPENTER - HIGH RISE CONCRETE FORMS .....	6
CEMENT MASON.....	7
CEMENT AND CONCRETE WORKER.....	7
DERRICKPERSON & RIGGER (STONE).....	8
DOCKBUILDER/PILE DRIVER.....	9
ELECTRICIAN .....	10
ELEVATOR CONSTRUCTOR .....	12
ELEVATOR REPAIR & MAINTENANCE.....	13
ENGINEER .....	14
ENGINEER - OPERATING .....	15
FLOOR COVERER .....	16
GLAZIER .....	16
HEAT & FROST INSULATOR .....	17
HOUSE WRECKER .....	18
IRON WORKER - ORNAMENTAL.....	18
IRON WORKER - STRUCTURAL.....	19
LABORER (FOUNDATION, CONCRETE, EXCAVATING, STREET PIPE LAYER & COMMON).....	20
MARBLE MECHANICS .....	21
MASON TENDER .....	22
METALLIC LATHER.....	23
MILLWRIGHT .....	23
PAVER AND ROADBUILDER.....	24
PAINTER .....	24
PAINTER - METAL POLISHER.....	25
PAINTER - STRUCTURAL STEEL.....	26
PLASTERER .....	26
PLASTERER - TENDER.....	27
PLUMBER .....	28
POINTER, WATERPROOFER, CAULKER, SANDBLASTER, STEAMBLASTER .....	29
ROOFER.....	30
SHEET METAL WORKER.....	30
SIGN ERECTOR.....	32
STEAMFITTER .....	33
STONE MASON - SETTER.....	34
TAPER.....	35
TILE LAYER - SETTER .....	35
TIMBERPERSON .....	36

## **ASBESTOS HANDLER**

**(Ratio of Apprentice Journeyman: 1 to 1, 1 to 3)**

### **Asbestos Handler (First 1000 Hours)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 78% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$14.25

### **Asbestos Handler (Second 1000 Hours)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 80% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$14.25

### **Asbestos Handler (Third 1000 Hours)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 83% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$14.25

### **Asbestos Handler (Fourth 1000 Hours)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 89% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$14.25

(Local #78)

---

---

## **BOILERMAKER**

**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)**

### **Boilermaker (First Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 65% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$30.84

Effective 1/1/2018 - Supplemental Benefit Rate Per Hour: \$31.26

### **Boilermaker (Second Year: 1st Six Months)**

Effective Period: 7/1/2017 - 6/30/2018

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Wage Rate Per Hour: 70% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$32.57  
Effective 1/1/2018 - Supplemental Benefit Rate Per Hour: \$33.02

**Boilermaker (Second Year: 2nd Six Months)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 75% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$34.29  
Effective 1/1/2018 - Supplemental Benefit Rate Per Hour: \$34.78

**Boilermaker (Third Year: 1st Six Months)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 80% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$36.03  
Effective 1/1/2018 - Supplemental Benefit Rate Per Hour: \$36.56

**Boilermaker (Third Year: 2nd Six Months)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 85% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$37.76  
Effective 1/1/2018 - Supplemental Benefit Rate Per Hour: \$38.32

**Boilermaker (Fourth Year: 1st Six Months)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 90% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$39.51  
Effective 1/1/2018 - Supplemental Benefit Rate Per Hour: \$40.09

**Boilermaker (Fourth Year: 2nd Six Months)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 95% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$41.22  
Effective 1/1/2018 - Supplemental Benefit Rate Per Hour: \$41.84

(Local #5)

---

---

**BRICKLAYER**

(Ratio of Apprentice to Journeyman: 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: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 50% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$18.80

**Bricklayer (Second 750 Hours)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 60% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$18.80

**Bricklayer (Third 750 Hours)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 70% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$18.80

**Bricklayer (Fourth 750 Hours)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 80% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$18.80

**Bricklayer (Fifth 750 Hours)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 90% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$18.80

**Bricklayer (Sixth 750 Hours)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 95% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$18.80

(Bricklayer District Council)

---

---

**CARPENTER**  
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

**Carpenter (First Year)**

Effective Period: 7/1/2017 - 6/30/2018  
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: \$33.03

**Carpenter (Second Year)**

Effective Period: 7/1/2017 - 6/30/2018

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: \$33.03

**Carpenter (Third Year)**

Effective Period: 7/1/2017 - 6/30/2018

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: \$33.03

**Carpenter (Fourth Year)**

Effective Period: 7/1/2017 - 6/30/2018

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: \$33.03

(Carpenters District Council)

---

---

**CARPENTER - HIGH RISE CONCRETE FORMS**

(Ratio of Apprentice to Journeyman: 1 to 1, 2 to 5)

**Carpenter - High Rise (First Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$16.86

Supplemental Benefit Rate per Hour: \$16.20

**Carpenter - High Rise (Second Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$23.16

Supplemental Benefit Rate per Hour: \$16.33

**Carpenter - High Rise (Third Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$29.61

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: \$16.46

**Carpenter - High Rise (Fourth Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$37.07

Supplemental Benefit Rate per Hour: \$16.61

(Carpenters District Council)

---

---

**CEMENT MASON**

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

**Cement Mason (First Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 50% of Journeyman's Rate

**Cement Mason (Second Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 60% of Journeyman's Rate

**Cement Mason (Third Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 70% of Journeyman's Rate

(Local #780)

---

---

**CEMENT AND CONCRETE WORKER**

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

**Cement & Concrete Worker (First 1333 hours)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$17.75

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

**Cement & Concrete Worker (Second 1333 hours)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 65% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$23.03

**Cement & Concrete Worker (Last 1334 hours)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 80% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$24.30

**Cement & Concrete Worker (Hired after 2/6/2016 - First 1334 hours)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: \$16.96  
Supplemental Benefit Rate Per Hour: \$11.80

**Cement & Concrete Worker (Hired after 2/6/2016 - Second 1334 hours)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: \$22.08  
Supplemental Benefit Rate Per Hour: \$16.49

**Cement & Concrete Worker (Hired after 2/6/2016 - Last 1334 hours)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: \$27.20  
Supplemental Benefit Rate Per Hour: \$17.33

(Cement Concrete Workers District Council)

---

---

**DERRICKPERSON & RIGGER (STONE)**  
**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)**

**Derrickperson & Rigger (stone) - First Year**

Effective Period: 7/1/2017 - 6/30/2018  
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: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 70% of Journeyman's rate



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate Per Hour: 75% of Journeyperson's rate

**Derrickperson & Rigger (stone) - Second Year: 2nd Six Months**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 80% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: 75% of Journeyperson's rate

**Derrickperson & Rigger (stone) - Third Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 90% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: 75% of Journeyperson's rate

(Local #197)

---

---

**DOCKBUILDER/PILE DRIVER**

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 6)

**Dockbuilder/Pile Driver (First Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 40% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$33.03

**Dockbuilder/Pile Driver (Second Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 50% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$33.03

**Dockbuilder/Pile Driver (Third Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$33.03

**Dockbuilder/Pile Driver (Fourth Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 80% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$33.03

(Carpenters District Council)

## **ELECTRICIAN**

**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)**

### **Electrician (First Term: 0-6 Months)**

Effective Period: 7/1/2017 - 5/9/2018

Wage Rate per Hour: **\$14.00**

Supplemental Benefit Rate per Hour: **\$12.37**

Overtime Supplemental Rate Per Hour: **\$13.29**

Effective Period: 5/10/2018 - 6/30/2018

Wage Rate per Hour: **\$14.50**

Supplemental Benefit Rate per Hour: **\$12.63**

Overtime Supplemental Rate Per Hour: **\$13.58**

### **Electrician (First Term: 7-12 Months)**

Effective Period: 7/1/2017 - 5/9/2018

Wage Rate per Hour: **\$15.00**

Supplemental Benefit Rate per Hour: **\$12.88**

Overtime Supplemental Rate Per Hour: **\$13.87**

Effective Period: 5/10/2018 - 6/30/2018

Wage Rate per Hour: **\$15.50**

Supplemental Benefit Rate per Hour: **\$13.14**

Overtime Supplemental Rate Per Hour: **\$14.16**

### **Electrician (Second Term: 0-6 Months)**

Effective Period: 7/1/2017 - 5/9/2018

Wage Rate per Hour: **\$16.00**

Supplemental Benefit Rate per Hour: **\$13.39**

Overtime Supplemental Rate Per Hour: **\$14.44**

Effective Period: 5/10/2018 - 6/30/2018

Wage Rate per Hour: **\$16.50**

Supplemental Benefit Rate per Hour: **\$13.64**

Overtime Supplemental Rate Per Hour: **\$14.73**

### **Electrician (Second Term: 7-12 Months)**

Effective Period: 7/1/2017 - 5/9/2018

Wage Rate per Hour: **\$17.00**

Supplemental Benefit Rate per Hour: **\$13.90**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Overtime Supplemental Rate Per Hour: \$15.02

Effective Period: 5/10/2018 - 6/30/2018

Wage Rate per Hour: \$17.50

Supplemental Benefit Rate per Hour: \$14.15

Overtime Supplemental Rate Per Hour: \$15.31

**Electrician (Third Term: 0-6 Months)**

Effective Period: 7/1/2017 - 5/9/2018

Wage Rate per Hour: \$18.00

Supplemental Benefit Rate per Hour: \$14.41

Overtime Supplemental Rate Per Hour: \$15.59

Effective Period: 5/10/2018 - 6/30/2018

Wage Rate per Hour: \$18.50

Supplemental Benefit Rate per Hour: \$14.66

Overtime Supplemental Rate Per Hour: \$15.88

**Electrician (Third Term: 7-12 Months)**

Effective Period: 7/1/2017 - 5/9/2018

Wage Rate per Hour: \$19.00

Supplemental Benefit Rate per Hour: \$14.92

Overtime Supplemental Rate Per Hour: \$16.17

Effective Period: 5/10/2018 - 6/30/2018

Wage Rate per Hour: \$19.50

Supplemental Benefit Rate per Hour: \$15.17

Overtime Supplemental Rate Per Hour: \$16.45

**Electrician (Fourth Term: 0-6 Months)**

Effective Period: 7/1/2017 - 5/9/2018

Wage Rate per Hour: \$20.00

Supplemental Benefit Rate per Hour: \$15.43

Overtime Supplemental Rate Per Hour: \$16.74

Effective Period: 5/10/2018 - 6/30/2018

Wage Rate per Hour: \$20.50

Supplemental Benefit Rate per Hour: \$15.68

Overtime Supplemental Rate Per Hour: \$17.03

**Electrician (Fourth Term: 7-12 Months)**

Effective Period: 7/1/2017 - 5/9/2018

Wage Rate per Hour: \$22.00

Supplemental Benefit Rate per Hour: \$16.44

Overtime Supplemental Rate Per Hour: \$17.89

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 5/10/2018 - 6/30/2018  
Wage Rate per Hour: \$22.50  
Supplemental Benefit Rate per Hour: \$16.70  
Overtime Supplemental Rate Per Hour: \$18.18

**Electrician (Fifth Term: 0-12 Months)**

Effective Period: 7/1/2017 - 5/9/2018  
Wage Rate per Hour: \$24.00  
Supplemental Benefit Rate per Hour: \$19.80  
Overtime Supplemental Rate Per Hour: \$21.30

Effective Period: 5/10/2018 - 6/30/2018  
Wage Rate per Hour: \$24.50  
Supplemental Benefit Rate per Hour: \$20.30  
Overtime Supplemental Rate Per Hour: \$21.84

**Electrician (Fifth Term: 13-18 Months)**

Effective Period: 7/1/2017 - 5/9/2018  
Wage Rate per Hour: \$28.50  
Supplemental Benefit Rate per Hour: \$22.10  
Overtime Supplemental Rate Per Hour: \$23.89

Effective Period: 5/10/2018 - 6/30/2018  
Wage Rate per Hour: \$29.00  
Supplemental Benefit Rate per Hour: \$22.65  
Overtime Supplemental Rate Per Hour: \$24.47

**Overtime Description**

Overtime Wage paid at time and one half the regular rate

(Local #3)

---

---

**ELEVATOR CONSTRUCTOR**

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 2)

**Elevator (Constructor) - First Year**

Effective Period: 7/1/2017 - 3/16/2018  
Wage Rate Per Hour: 50% of Journeyperson's rate  
Supplemental Rate Per Hour: \$29.88

Effective Period: 3/17/2018 - 6/30/2018

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Wage Rate Per Hour: 50% of Journeyperson's rate  
Supplemental Rate Per Hour: \$31.35

**Elevator (Constructor) - Second Year**

Effective Period: 7/1/2017 - 3/16/2018  
Wage Rate Per Hour: 55% of Journeyperson's rate  
Supplemental Rate Per Hour: \$30.31

Effective Period: 3/17/2018 - 6/30/2018  
Wage Rate Per Hour: 55% of Journeyperson's rate  
Supplemental Rate Per Hour: \$31.80

**Elevator (Constructor) - Third Year**

Effective Period: 7/1/2017 - 3/16/2018  
Wage Rate Per Hour: 65% of Journeyperson's rate  
Supplemental Rate Per Hour: \$31.19

Effective Period: 3/17/2018 - 6/30/2018  
Wage Rate Per Hour: 65% of Journeyperson's rate  
Supplemental Rate Per Hour: \$32.70

**Elevator (Constructor) - Fourth Year**

Effective Period: 7/1/2017 - 3/16/2018  
Wage Rate Per Hour: 75% of Journeyperson's rate  
Supplemental Rate Per Hour: \$32.07

Effective Period: 3/17/2018 - 6/30/2018  
Wage Rate Per Hour: 75% of Journeyperson's rate  
Supplemental Rate Per Hour: \$33.60

(Local #1)

---

---

**ELEVATOR REPAIR & MAINTENANCE**  
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 2)

**Elevator Service/Modernization Mechanic (First Year)**

Effective Period: 7/1/2017 - 3/16/2018  
Wage Rate Per Hour: 50% of Journeyperson's rate  
Supplemental Benefit Per Hour: \$29.80

Effective Period: 3/17/2018 - 6/30/2018  
Wage Rate Per Hour: 50% of Journeyperson's rate

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Supplemental Benefit Per Hour: \$31.28

**Elevator Service/Modernization Mechanic (Second Year)**

Effective Period: 7/1/2017 - 3/16/2018  
Wage Rate Per Hour: 55% of Journeyperson's rate  
Supplemental Benefit Per Hour: \$30.23

Effective Period: 3/17/2018 - 6/30/2018  
Wage Rate Per Hour: 55% of Journeyperson's rate  
Supplemental Benefit Per Hour: \$31.72

**Elevator Service/Modernization Mechanic (Third Year)**

Effective Period: 7/1/2017 - 3/16/2018  
Wage Rate Per Hour: 65% of Journeyperson's rate  
Supplemental Benefit Per Hour: \$31.09

Effective Period: 3/17/2018 - 6/30/2018  
Wage Rate Per Hour: 65% of Journeyperson's rate  
Supplemental Benefit Per Hour: \$32.60

**Elevator Service/Modernization Mechanic (Fourth Year)**

Effective Period: 7/1/2017 - 3/16/2018  
Wage Rate Per Hour: 75% of Journeyperson's rate  
Supplemental Benefit Per Hour: \$31.95

Effective Period: 3/17/2018 - 6/30/2018  
Wage Rate Per Hour: 75% of Journeyperson's rate  
Supplemental Benefit Per Hour: \$33.49

(Local #1)

---

---

**ENGINEER**

**(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 5)**

**Engineer - First Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$24.77  
Supplemental Benefit Rate per Hour: \$24.62

**Engineer - Second Year**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$30.97**  
Supplemental Benefit Rate per Hour: **\$24.62**

**Engineer - Third Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$34.06**  
Supplemental Benefit Rate per Hour: **\$24.62**

**Engineer - Fourth Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$37.16**  
Supplemental Benefit Rate per Hour: **\$24.62**

(Local #15)

---

---

**ENGINEER - OPERATING**

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 5)

**Operating Engineer - First Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour 40% of Journeyperson's Rate  
Supplemental Benefit Per Hour: **\$20.85**

**Operating Engineer - Second Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 50% of Journeyperson's Rate  
Supplemental Benefit Per Hour: **\$20.85**

**Operating Engineer - Third Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 60% of Journeyperson'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: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 40% of Journeyman's rate

Supplemental Rate Per Hour: \$31.14

### **Floor Coverer (Second Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Rate Per Hour: \$31.14

### **Floor Coverer (Third Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 65% of Journeyman's rate

Supplemental Rate Per Hour: \$31.14

### **Floor Coverer (Fourth Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 80% of Journeyman's rate

Supplemental Rate Per Hour: \$31.14

(Carpenters District Council)

---

---

## **GLAZIER**

**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)**

### **Glazier (First Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 40% of Journeyman's rate

Supplemental Rate Per Hour: \$15.26

### **Glazier (Second Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 50% of Journeyman's rate



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Supplemental Rate Per Hour: \$25.36

**Glazier (Third Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 60% of Journeyman's rate

Supplemental Rate Per Hour: \$28.62

**Glazier (Fourth Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 80% of Journeyman's rate

Supplemental Rate Per Hour: \$34.67

(Local #1281)

---

---

**HEAT & FROST INSULATOR**

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

**Heat & Frost Insulator (First Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 40% of Journeyman's rate

**Heat & Frost Insulator (Second Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 60% of Journeyman's rate

**Heat & Frost Insulator (Third Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 70% of Journeyman's rate

**Heat & Frost Insulator (Fourth Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 80% of Journeyman's rate

(Local #12)

---

---

**HOUSE WRECKER**  
**(TOTAL DEMOLITION)**  
**(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)**

**House Wrecker - First Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$21.17  
Supplemental Benefit Rate per Hour: \$18.54

**House Wrecker - Second Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$22.32  
Supplemental Benefit Rate per Hour: \$18.54

**House Wrecker - Third Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$23.97  
Supplemental Benefit Rate per Hour: \$18.54

**House Wrecker - Fourth Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$26.53  
Supplemental Benefit Rate per Hour: \$18.54

(Mason Tenders District Council)

---

**IRON WORKER - ORNAMENTAL**  
**(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)**

**Iron Worker (Ornamental) - 1st Ten Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 50% of Journeyperson's rate  
Supplemental Rate Per Hour: \$39.40

**Iron Worker (Ornamental) - 11 -16 Months**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 55% of Journeyman's rate  
Supplemental Rate Per Hour: \$40.62

**Iron Worker (Ornamental) - 17 - 22 Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 60% of Journeyman's rate  
Supplemental Rate Per Hour: \$41.83

**Iron Worker (Ornamental) - 23 - 28 Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 70% of Journeyman's rate  
Supplemental Rate Per Hour: \$44.27

**Iron Worker (Ornamental) - 29 - 36 Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 80% of Journeyman's rate  
Supplemental Rate Per Hour: \$46.70

(Local #580)

---

---

**IRON WORKER - STRUCTURAL**

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 6)

**Iron Worker (Structural) - 1st Six Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$26.12  
Supplemental Benefit Rate per Hour: \$50.22

**Iron Worker (Structural) - 7- 18 Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$26.72  
Supplemental Benefit Rate per Hour: \$50.22

**Iron Worker (Structural) - 19 - 36 months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$27.32

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: \$50.22

(Local #40 and #361)

---

---

**LABORER (FOUNDATION, CONCRETE, EXCAVATING, STREET PIPE  
LAYER & COMMON)**

(Ratio Apprentice to Journeyman: 1 to 1, 1 to 3)

**Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - First  
1000 hours**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 50% of Journeyman's rate  
Supplemental Rate Per Hour: \$40.63

**Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) -  
Second 1000 hours**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 60% of Journeyman's rate  
Supplemental Rate Per Hour: \$40.63

**Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) -  
Third 1000 hours**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 75% of Journeyman's rate  
Supplemental Rate Per Hour: \$40.63

**Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) -  
Fourth 1000 hours**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 90% of Journeyman's rate  
Supplemental Rate Per Hour: \$40.63

(Local #731)

---

---

## **MARBLE MECHANICS**

**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)**

### **Cutters & Setters - First 750 Hours**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

**NO BENEFITS PAID DURING THE FIRST TWO MONTHS (PROBATIONARY PERIOD)**

### **Cutters & Setters - Second 750 Hours**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 55% of Journeyman's rate

### **Cutters & Setters - Third 750 Hours**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 65% of Journeyman's rate

### **Cutters & Setters - Fourth 750 Hours**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 75% of Journeyman's rate

### **Cutters & Setters - Fifth 750 Hours**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 85% of Journeyman's rate

### **Cutters & Setters - Sixth 750 Hours**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 95% of Journeyman's rate

### **Polishers & Finishers - First 750 Hours**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

**NO BENEFITS PAID DURING THE FIRST TWO MONTHS (PROBATIONARY PERIOD)**

### **Polishers & Finishers - Second 750 Hours**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 60% of Journeyman's rate

### **Polishers & Finishers - Third 750 Hours**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

**Polishers & Finishers - Fourth 750 Hours**

Effective Period: 7/1/2017 - 6/30/2018

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: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$21.39

Supplemental Benefit Rate per Hour: \$19.65

**Mason Tender - Second Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$22.54

Supplemental Benefit Rate per Hour: \$19.65

**Mason Tender - Third Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$24.29

Supplemental Benefit Rate per Hour: \$19.70

**Mason Tender - Fourth Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$26.95

Supplemental Benefit Rate per Hour: \$19.70

(Local #79)

---

---

## **METALLIC LATHER**

**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)**

### **Metallic Lather (First Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$28.38**

Supplemental Benefit Rate per Hour: **\$10.96**

### **Metallic Lather (Second Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$32.38**

Supplemental Benefit Rate per Hour: **\$12.96**

### **Metallic Lather (Third Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$35.38**

Supplemental Benefit Rate per Hour: **\$17.12**

### **Metallic Lather (Fourth Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$37.38**

Supplemental Benefit Rate per Hour: **\$17.92**

(Local #46)

---

---

## **MILLWRIGHT**

**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)**

### **Millwright (First Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$28.33**

Supplemental Benefit Rate per Hour: **\$34.28**

### **Millwright (Second Year)**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$33.48**  
Supplemental Benefit Rate per Hour: **\$37.88**

**Millwright (Third Year)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$38.63**  
Supplemental Benefit Rate per Hour: **\$42.13**

**Millwright (Fourth Year)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$48.93**  
Supplemental Benefit Rate per Hour: **\$48.69**

(Local #740)

---

**PAVER AND ROADBUILDER**  
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

**Paver and Roadbuilder - First Year (Minimum 1000 hours)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$27.86**  
Supplemental Benefit Rate per Hour: **\$19.25**

**Paver and Roadbuilder - Second Year (Minimum 1000 hours)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: **\$29.50**  
Supplemental Benefit Rate per Hour: **\$19.25**

(Local #1010)

---

**PAINTER**  
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

**Painter - Brush & Roller - First Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$17.00  
Supplemental Benefit Rate per Hour: \$13.42

**Painter - Brush & Roller - Second Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$21.25  
Supplemental Benefit Rate per Hour: \$17.43

**Painter - Brush & Roller - Third Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$25.50  
Supplemental Benefit Rate per Hour: \$20.50

**Painter - Brush & Roller - Fourth Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$34.00  
Supplemental Benefit Rate per Hour: \$26.20

(District Council of Painters)

---

---

**PAINTER - METAL POLISHER**

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

**Metal Polisher (First Year)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$11.75  
Supplemental Benefit Rate per Hour: \$5.13

**Metal Polisher (Second Year)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$13.00  
Supplemental Benefit Rate per Hour: \$5.13

**Metal Polisher (Third Year)**

Effective Period: 7/1/2017 - 6/30/2018

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: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 40% of Journeyman's rate

**Painters - Structural Steel (Second Year)**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 60% of Journeyman's rate

**Painters - Structural Steel (Third Year)**

Effective Period: 7/1/2017 - 6/30/2018

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: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 40% of Journeyman's rate

Supplemental Rate Per Hour: \$13.59

**Plasterer - First Year: 2nd Six Months**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 45% of Journeyman's rate  
Supplemental Rate Per Hour: \$14.07

**Plasterer - Second Year: 1st Six Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 55% of Journeyman's rate  
Supplemental Rate Per Hour: \$16.04

**Plasterer - Second Year: 2nd Six Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 60% of Journeyman's rate  
Supplemental Rate Per Hour: \$17.12

**Plasterer - Third Year: 1st Six Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 70% of Journeyman's rate  
Supplemental Rate Per Hour: \$19.29

**Plasterer - Third Year: 2nd Six Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 75% of Journeyman's rate  
Supplemental Rate Per Hour: \$20.37

(Local #530)

---

---

**PLASTERER - TENDER**

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

**Plasterer Tender - First Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$21.39  
Supplemental Benefit Rate per Hour: \$19.65

**Plasterer Tender - Second Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$22.54

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: **\$19.65**

**Plasterer Tender - Third Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$24.29**

Supplemental Benefit Rate per Hour: **\$19.70**

**Plasterer Tender - Fourth Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$26.95**

Supplemental Benefit Rate per Hour: **\$19.70**

(Local #79)

---

---

**PLUMBER**

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

**Plumber - First Year: 1st Six Months**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$16.28**

Supplemental Benefit Rate per Hour: **\$5.43**

**Plumber - First Year: 2nd Six Months**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$19.28**

Supplemental Benefit Rate per Hour: **\$6.43**

**Plumber - Second Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$26.35**

Supplemental Benefit Rate per Hour: **\$17.10**

**Plumber - Third Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: **\$28.45**

Supplemental Benefit Rate per Hour: **\$17.10**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

**Plumber - Fourth Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$31.30  
Supplemental Benefit Rate per Hour: \$17.10

**Plumber - Fifth Year: 1st Six Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$32.70  
Supplemental Benefit Rate per Hour: \$17.10

**Plumber - Fifth Year: 2nd Six Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$44.77  
Supplemental Benefit Rate per Hour: \$17.10

(Plumbers Local #1)

---

---

**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: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$25.89  
Supplemental Benefit Rate per Hour: \$13.64

**Pointer, Waterproofer, Caulker, Sandblaster, Steamblaster - Second Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$28.97  
Supplemental Benefit Rate per Hour: \$18.15

**Pointer, Waterproofer, Caulker, Sandblaster, Steamblaster - Third Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate per Hour: \$34.12  
Supplemental Benefit Rate per Hour: \$20.90

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

**Pointer, Waterproofer, Caulker, Sandblaster, Steamblaster - Fourth Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate per Hour: \$41.33

Supplemental Benefit Rate per Hour: \$21.60

(Bricklayer District Council)

---

---

**ROOFER**

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 2)

**Roofers - First Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 35% of Journeyman's Rate

**Roofers - Second Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 50% of Journeyman's Rate

**Roofers - Third Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 60% of Journeyman's Rate

**Roofers - Fourth Year**

Effective Period: 7/1/2017 - 6/30/2018

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)**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 25% of Journeyperson's rate  
Supplemental Rate Per Hour: \$6.35

**Sheet Metal Worker (7-18 Months)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 35% of Journeyperson's rate  
Supplemental Rate Per Hour: \$17.12

**Sheet Metal Worker (19-30 Months)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 45% of Journeyperson's rate  
Supplemental Rate Per Hour: \$23.54

**Sheet Metal Worker (31-36 Months)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 55% of Journeyperson's rate  
Supplemental Rate Per Hour: \$27.70

**Sheet Metal Worker (37-42 Months)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 60% of Journeyperson's rate  
Supplemental Rate Per Hour: \$29.11

**Sheet Metal Worker (43-48 Months)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 70% of Journeyperson's rate  
Supplemental Rate Per Hour: \$33.96

**Sheet Metal Worker (49-54 Months)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 75% of Journeyperson's rate  
Supplemental Rate Per Hour: \$36.07

**Sheet Metal Worker (55-60 Months)**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 80% of Journeyperson'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: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 35% of Journeyman's rate  
Supplemental Rate Per Hour: \$14.72

### **Sign Erector - First Year: 2nd Six Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 40% of Journeyman's rate  
Supplemental Rate Per Hour: \$16.71

### **Sign Erector - Second Year: 1st Six Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 45% of Journeyman's rate  
Supplemental Rate Per Hour: \$18.68

### **Sign Erector - Second Year: 2nd Six Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 50% of Journeyman's rate  
Supplemental Rate Per Hour: \$20.68

### **Sign Erector - Third Year: 1st Six Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 55% of Journeyman's rate  
Supplemental Rate Per Hour: \$27.72

### **Sign Erector - Third Year: 2nd Six Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 60% of Journeyman's rate  
Supplemental Rate Per Hour: \$30.57

### **Sign Erector - Fourth Year: 1st Six Months**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 65% of Journeyman's rate  
Supplemental Rate Per Hour: \$33.31

### **Sign Erector - Fourth Year: 2nd Six Months**



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 70% of Journeyperson's rate  
Supplemental Rate Per Hour: \$35.83

**Sign Erector - Fifth Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 75% of Journeyperson's rate  
Supplemental Rate Per Hour: \$38.32

**Sign Erector - Sixth Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 80% of Journeyperson's rate  
Supplemental Rate Per Hour: \$40.81

(Local #137)

---

---

**STEAMFITTER**

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

**Steamfitter - First Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate and Supplemental Per Hour: 40% of Journeyperson's rate

**Steamfitter - Second Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate and Supplemental Rate Per Hour: 50% of Journeyperson's rate.

**Steamfitter - Third Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate and Supplemental Rate per Hour: 65% of Journeyperson's rate.

**Steamfitter - Fourth Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate and Supplemental Rate Per Hour: 80% of Journeyperson's rate.

**Steamfitter - Fifth Year**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate and Supplemental Rate Per Hour: 85% of Journeyperson's rate.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

(Local #638)

---

---

**STONE MASON - SETTER**  
(Ratio Apprentice of Journeyman: 1 to 1, 1 to 2)

**Stone Mason - Setters - First 750 Hours**

Effective Period: 7/1/2017 - 6/30/2018  
Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

**Stone Mason - Setters - Second 750 Hours**

Effective Period: 7/1/2017 - 6/30/2018  
Wage Rate Per Hour: 60% of Journeyman's rate  
Supplemental Rate Per Hour: 50% of Journeyman's rate

**Stone Mason - Setters - Third 750 Hours**

Effective Period: 7/1/2017 - 6/30/2018  
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: 7/1/2017 - 6/30/2018  
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: 7/1/2017 - 6/30/2018  
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: 7/1/2017 - 6/30/2018  
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: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 40% of Journeyman's rate

### **Drywall Taper - Second Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 60% of Journeyman's rate

### **Drywall Taper - Third Year**

Effective Period: 7/1/2017 - 6/30/2018

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: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

### **Tile Layer - Setter - Second 750 Hours**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 55% of Journeyman's rate

### **Tile Layer - Setter - Third 750 Hours**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 65% of Journeyman's rate

### **Tile Layer - Setter - Fourth 750 Hours**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

**Tile Layer - Setter - Fifth 750 Hours**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 85% of Journeyperson's rate

**Tile Layer - Setter - Sixth 750 Hours**

Effective Period: 7/1/2017 - 6/30/2018

Wage and Supplemental Rate Per Hour: 95% of Journeyperson's rate

(Local #7)

---

---

**TIMBERPERSON**

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 6)

**Timberperson - First Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 40% of Journeyperson's rate

Supplemental Rate Per Hour: \$32.79

**Timberperson - Second Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 50% of Journeyperson's rate

Supplemental Rate Per Hour: \$32.79

**Timberperson - Third Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Rate Per Hour: \$32.79

**Timberperson - Fourth Year**

Effective Period: 7/1/2017 - 6/30/2018

Wage Rate Per Hour: 80% of Journeyperson's rate

Supplemental Rate Per Hour: \$32.79

(Local #1536)

**(NO TEXT THIS PAGE)**



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) 669-8499

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**







**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: HWKKP005

RECONSTRUCTION OF  
DUMBO D.M.A. / VINEGAR HILL AREA

MAIN STREET FROM FRONT STREET TO PLYMOUTH STREET  
ADAMS STREET FROM FRONT STREET TO JOHN STREET  
PEARL STREET FROM FRONT STREET TO JOHN STREET  
JAY STREET FROM WATER STREET TO JOHN STREET  
GOLD STREET FROM FRONT STREET TO WATER STREET  
FRONT STREET FROM MAIN STREET TO PEARL STREET  
WATER STREET FROM PEARL STREET TO HUDSON AVENUE  
PLYMOUTH STREET FROM MAIN STREET TO JAY STREET  
JOHN STREET FROM ADAMS STREET TO JAY STREET  
ANCHORAGE PLACE FROM FRONT STREET TO PLYMOUTH STREET

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

Together With All Work Incidental Thereto

BOROUGH OF BROOKLYN  
CITY OF NEW YORK

\_\_\_\_\_  
*Contractor.*

Dated \_\_\_\_\_, 20\_\_\_\_

APPROVED AS TO FORM  
CERTIFIED AS TO LEGAL AUTHORITY

Acting Corporation Counsel

*Handwritten initials and date: 2/15/08*

Dated February 15, 2008



**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](http://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: HWKKP005**

**RECONSTRUCTION OF  
DUMBO D.M.A. / VINEGAR HILL AREA**

**MAIN STREET FROM FRONT STREET TO PLYMOUTH STREET  
ADAMS STREET FROM FRONT STREET TO JOHN STREET  
PEARL STREET FROM FRONT STREET TO JOHN STREET  
JAY STREET FROM WATER STREET TO JOHN STREET  
GOLD STREET FROM FRONT STREET TO WATER STREET  
FRONT STREET FROM MAIN STREET TO PEARL STREET  
WATER STREET FROM PEARL STREET TO HUDSON AVENUE  
PLYMOUTH STREET FROM MAIN STREET TO JAY STREET  
JOHN STREET FROM ADAMS STREET TO JAY STREET  
ANCHORAGE PLACE FROM FRONT STREET TO PLYMOUTH STREET**

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

Together With All Work Incidental Thereto

**BOROUGH OF BROOKLYN  
CITY OF NEW YORK**

FOR THE DEPARTMENT OF TRANSPORTATION  
PREPARED BY

*AECOM*

**OCTOBER 10, 2017**





## 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](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

# VOLUME 3 OF 3

## TABLE OF CONTENTS

<u>SECTION</u>	<u>DESCRIPTION</u>	<u>PAGES</u>
SCHEDULE A	GENERAL CONDITIONS TO CONSTRUCTION CONTRACT	SA-1 to SA-12
R - PAGES	REVISIONS TO THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION STANDARD HIGHWAY SPECIFICATIONS	R-1 to R-2
I - PAGES	NEW SECTIONS	I-1 to I-123
S - PAGES	SPECIAL PROVISIONS	S-1 to S-26
SW - PAGES	SEWER AND WATER MAIN SPECIFICATIONS	SW-1 to SW-11
FEMA-PAGES	FEDERAL EMERGENCY MANAGEMENT AGENCY PROJECTS	FEMA1
EP7 - PAGES	GAS COST SHARING (EP-7) STANDARD SPECIFICATIONS	EP7-1 to EP7-28C
HAZ - PAGES	SPECIFICATIONS FOR HANDLING, TRANSPORTATION AND DISPOSAL OF NONHAZARDOUS AND POTENTIALLY HAZARDOUS CONTAMINATED MATERIALS	HAZ-1 to HAZ-139
ACM	SPECIFICATIONS FOR ABATMENT OF ASBESTOS-CONTAINING MATERIALS ASSOCIATED WITH VAULT PROGRAM	ACM-1 to ACM112
BMP-PAGES	SPECIFICATION FOR CONSTRUCTION OF BEST MANAGEMENT PRACTICE (BMP) AND MITIGATION AREA	BMP-1 to BMP-92
EL-PAGES	SPECIFICATIONS FOR THE SPECIALTY ELECTRICAL WORKS	EL-1 to EL-53
JB - PAGES (3.0)	JOINT BID	JB-1 to JB-160



(NO TEXT ON THIS PAGE)

**SCHEDULE A****(GENERAL CONDITIONS TO CONSTRUCTION CONTRACT  
(INCLUDING GENERAL CONDITIONS RELATED TO ARTICLE 22 – INSURANCE)****PART I. REQUIRED INFORMATION**

<p align="center"><b><u>INFORMATION FOR BIDDERS SECTION 26 BID SECURITY</u></b></p> <p>The <b>Contractor</b> 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: 2% of Bid Amount or Bond: 10% of Bid Amount</p>
<p align="center"><b><u>INFORMATION FOR BIDDERS SECTION 26 PERFORMANCE AND PAYMENT BONDS</u></b></p> <p>The <b>Contractor</b> 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 align="center"><b><u>INFORMATION FOR BIDDERS DEPARTMENT OF DESIGN AND CONSTRUCTION SAFETY REQUIREMENTS</u></b></p> <p>The <b>Contractor</b> shall provide the safety personnel as indicated to the right.</p>	<ul style="list-style-type: none"> <li>■ Project Safety Representative</li> <li>■ Dedicated, full-time Project Safety Manager</li> </ul>
<p align="center"><b><u>CONTRACT ARTICLE 14 DATE FOR SUBSTANTIAL COMPLETION</u></b></p> <p>The <b>Contractor</b> shall substantially complete the <b>Work</b> in the number of calendar days indicated to the right.</p>	<p>See Page SA-4</p>
<p align="center"><b><u>CONTRACT ARTICLE 15 LIQUIDATED DAMAGES</u></b></p> <p>If the <b>Contractor</b> fails to substantially complete the <b>Work</b> within the time fixed for substantial completion plus authorized time extensions or if the <b>Contractor</b>, in the sole determination of the <b>Commissioner</b>, has abandoned the <b>Work</b>, the <b>Contractor</b> shall pay to the <b>City</b> the amount indicated to the right.</p>	<p>\$<u>7,000.</u> for each consecutive calendar day over substantial completion time</p>
<p align="center"><b><u>CONTRACT ARTICLE 17. SUB-CONTRACTOR</u></b></p> <p>The <b>Contractor</b> shall not make subcontracts totaling an amount more than the percentage of the total <b>Contract</b> price indicated to the right.</p>	<p>Not to exceed <u>49</u> % of the <b>Contract</b> price</p>

<p align="center"><b><u>CONTRACT ARTICLE 21.</u></b> <b><u>RETAINAGE</u></b></p> <p>The <b>Commissioner</b> shall deduct and retain until the substantial completion of the <b>Work</b> the percent value of the <b>Work</b> indicated to the right.</p>	<p><u>5 %</u> of the value of the <b>Work</b></p>
<p align="center"><b><u>CONTRACT ARTICLE 22.</u></b> <b><u>(Per Directions Below)</u></b></p>	<p>See pages SA-5 through SA-12</p>
<p align="center"><b><u>CONTRACT ARTICLE 24.</u></b> <b><u>DEPOSIT GUARANTEE</u></b></p> <p>As security for the faithful performance of its obligations, the <b>Contractor</b>, upon filing its requisition for payment on <b>Substantial Completion</b>, shall deposit with the <b>Commissioner</b> a sum equal to the percentage of the <b>Contract</b> price indicated to the right.</p>	<p>1% of <b>Contract</b> price</p>
<p align="center"><b><u>CONTRACT ARTICLE 24.</u></b> <b><u>PERIOD OF GUARANTEE</u></b></p> <p>Periods of maintenance and guarantee other than the period set forth in Article 24.1 are indicated to the right.</p>	<p>Eighteen (18) Months, excluding Trees</p> <p>Twenty-four (24) Months for Tree Planting</p>
<p align="center"><b><u>CONTRACT ARTICLE 74.</u></b> <b><u>STATEMENT OF WORK</u></b></p> <p>The <b>Contractor</b> shall furnish all labor and materials and perform all <b>Work</b> in strict accordance with the <b>Contract Drawings, Specifications</b>, and all <b>Addenda</b> thereto, as shown in the column to the right.</p>	<p><b>Addenda</b>, numbered:</p> <p>_____</p>
<p align="center"><b><u>CONTRACT ARTICLE 75.</u></b> <b><u>COMPENSATION TO BE PAID TO CONTRACTOR</u></b></p> <p>The <b>City</b> shall pay and the <b>Contractor</b> shall accept in full consideration for the performance of the <b>Contract</b>, subject to additions and deductions as provided herein, the total sum <b>shown in the column to the right</b>, being the amount at which the <b>Contract</b> was awarded to the <b>Contractor</b> at a public letting thereof, based upon the <b>Contractor's</b> bid for the <b>Contract</b>.</p>	<p>Amount for which the <b>Contract</b> was Awarded:</p> <p>_____ Dollars</p> <p>(\$ _____)</p>
<p align="center"><b><u>CONTRACT ARTICLE 79.</u></b> <b><u>PARTICIPATION BY MINORITY-OWNED AND WOMEN-OWNED BUSINESS ENTERPRISES IN CITY PROCUREMENT</u></b></p>	<p>See M/WBE Utilization Plan in the Bid Booklet</p>

<p style="text-align: center;"><b><u>STANDARD HIGHWAY SPECIFICATIONS</u></b> <b><u>SECTION 6.40</u></b> <b><u>LIQUIDATED DAMAGES FOR ENGINEER'S FIELD OFFICE</u></b></p> <p>If the Contractor fails to satisfactorily provide the field office and all equipment specified in <b>Section 6.40 - Engineer's Field Office</b>, 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 <b>Section 6.40.5</b>, is not corrected.</p>	<p>\$ <u>500.00</u> for each calendar day of deficiency</p>
<p style="text-align: center;"><b><u>STANDARD HIGHWAY SPECIFICATIONS</u></b> <b><u>SECTION 6.70</u></b> <b><u>LIQUIDATED DAMAGES FOR MAINTENANCE AND PROTECTION OF TRAFFIC</u></b></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 style="text-align: center;"><b><u>STANDARD HIGHWAY SPECIFICATIONS</u></b> <b><u>SECTION 7.13</u></b> <b><u>LIQUIDATED DAMAGES FOR MAINTENANCE OF SITE</u></b></p> <p>If the Contractor fails to comply, within three (3) consecutive hours after written notice from the Engineer, with the requirements of <b>Section 7.13 - Maintenance of Site</b>, 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 1826 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.

<b>Month of Substantial Completion based on the Base Contract Duration</b>	<b>Number of Days of adjustment</b>
<b>January</b>	150
<b>February</b>	120
<b>March</b>	90
<b>April</b>	60
<b>May</b>	30
<b>June</b>	0
<b>July</b>	0
<b>August</b>	0
<b>September</b>	0
<b>October</b>	0
<b>November –December 15</b>	0
<b>December 16 – December 31</b>	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 <b>Contract</b>.</p> <p>■ Additional Insureds:</p> <ol style="list-style-type: none"> <li>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,</li> <li>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),</li> <li>3. Federal Emergency Management Agency (FEMA), including its officials and employees.</li> <li>4. <u>The New York City Transit Authority (NYCTA), Manhattan and Bronx Surface Transit Operation Authority (MaBSTOA), Staten Island Rapid Transit Operation Authority (SIRTOA), Metropolitan Transportation Authority (MTA), its subsidiaries and affiliated companies.</u> The Contractor shall furnish two (2) certificates of insurance to and the policy shall be endorsed to provide thirty (30) days advance notice to the Director, Risk Management, MTA Risk and Insurance Management Standards, Enforcement and Claims Unit, 2 Broadway, 21<sup>st</sup> Floor, New York, NY 10004, of any material change and/or cancellation</li> <li>5. National Grid</li> </ol>

<ul style="list-style-type: none"> <li>■ Workers' Compensation Art. 22.1.2</li> <li>■ Disability Benefits Insurance Art. 22.1.2</li> <li>■ Employers' Liability Art. 22.1.2</li> <li>■ Jones Act Art. 22.1.3</li> <li>■ U.S. Longshoremen's and Harbor Workers Compensation Act Art. 22.1.3</li> </ul>	<p>Workers' Compensation, Employers' Liability, and Disability Benefits Insurance: Statutory per New York State law without regard to jurisdiction.</p> <p><b>Note:</b> 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.</p> <p>Jones Act and U.S. Longshoremen's and Harbor Workers' Compensation Act: Statutory per U.S. Law.</p> <p>■ Additional Requirements:          (1) Two (2) certificates of such insurance or authority for self-insurance shall be furnished to the Director, Risk Management, MTA Risk and Insurance Management Standards, Enforcement and Claims Unit, 2 Broadway, 21<sup>st</sup> Floor, New York, NY 10004</p>
<ul style="list-style-type: none"> <li>□ Builders' Risk Art. 22.1.4</li> </ul>	<ul style="list-style-type: none"> <li>□ Required: 100% of total bid amount</li> <li>□ Required: 100 % of total bid amount for Item(s):</li> </ul> <p><b>Contractor</b> the Named Insured; the <b>City</b> both an Additional Insured and one of the loss payees as its interests may appear.</p> <p>If the <b>Work</b> does not involve construction of a new building or gut renovation work, the <b>Contractor</b> may provide an installation floater in lieu of Builders Risk insurance.</p> <p>Note: Builders Risk Insurance may terminate upon <b>Substantial Completion</b> of the <b>Work</b> in its entirety.</p>

<p><input checked="" type="checkbox"/> Commercial Auto Liability      Art. 22.1.5</p>	<p>\$ <u>2,000,000</u> per accident combined single limit                  If vehicles are used for transporting hazardous materials, the <b>Contractor</b> shall provide pollution liability broadened coverage for covered vehicles (endorsement CA 99 48) as well as proof of MCS 90</p> <p><input checked="" type="checkbox"/> Additional Insureds:</p> <ol style="list-style-type: none"> <li>1. City of New York, including its officials and employees, and</li> <li>2. Federal Emergency Management Agency (FEMA), including its officials and employees.</li> <li>3. The New York City Transit Authority (NYCTA), Manhattan and Bronx Surface Transit Operation Authority (MaBSTOA), Staten Island Rapid Transit Operation Authority (SIRTOA), Metropolitan Transportation Authority (MTA), its subsidiaries and affiliated companies</li> </ol>
<p><input type="checkbox"/> Contractors Pollution Liability      Art. 22.1.6</p>	<p>\$ <u>5,000,000</u> per occurrence                  \$ <u>5,000,000</u> aggregate</p> <p>Additional Insureds:</p> <ol style="list-style-type: none"> <li>1. City of New York, including its officials and employees, and</li> <li>2. _____</li> <li>3. _____</li> </ol>
<p><input type="checkbox"/> Marine Protection and Indemnity Art. 22.1.7(a)</p>	<p>\$ _____ each occurrence                  \$ _____ aggregate</p> <p>Additional Insureds:</p> <ol style="list-style-type: none"> <li>1. City of New York, including its officials and employees, and</li> <li>2. _____</li> <li>3. _____</li> </ol>
<p><input type="checkbox"/> Hull and Machinery Insurance      Art. 22.1.7(b)</p>	<p>\$ _____ per occurrence                  \$ _____ aggregate</p> <p>Additional Insureds:</p> <ol style="list-style-type: none"> <li>1. City of New York, including its officials and employees, and</li> <li>2. _____</li> <li>3. _____</li> </ol>



<input type="checkbox"/> Marine Pollution Liability                      Art. 22.1.7(c)	<p>\$ <u>1,000,000</u> per occurrence</p> <p>\$ <u>1,000,000</u> aggregate</p> <p>Additional Insureds:</p> <p>1. City of New York, including its officials and employees, and</p> <p>2. _____</p> <p>3. _____</p>
<p>[OTHER]    Art. 22.1.8</p> <p><input type="checkbox"/> Railroad Protection Liability Policy</p> <p>(ISO-RIMA or equivalent form) approved by Permitter 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:</p> <ul style="list-style-type: none"> <li>• Policy Endorsement CG 28 31 - Pollution Exclusion Amendment is required to be endorsed onto the policy when environmental-related work and/or exposures exist.</li> <li>• 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.</li> <li>• Evidence of Railroad Protective Liability Insurance, must be provided in the form of the <u>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.</u></li> </ul>	<p>\$ <u>2,000,000</u> per occurrence</p> <p>\$ <u>6,000,000</u> annual aggregate</p> <p>Named Insureds:</p> <p>1. 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.</p>

<p>[OTHER] <span style="float: right;">Art. 22.1.8</span></p> <p>■ Professional Liability</p> <p>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.</p> <p>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.</p>	
<p>[OTHER] <span style="float: right;">Art. 22.1.8</span></p> <p>■ Engineer's Field Office</p> <p><b>Section 6.40, Standard Highway Specifications</b></p>	<p>Fire insurance, extended coverage and vandalism, malicious mischief and burglary, and theft insurance coverage in the amount of <u>\$40,000</u></p>
<p>[OTHER] <span style="float: right;">Art. 22.1.8</span></p> <p><input type="checkbox"/> The Following Additional Insurance Must Be Provided:</p> <p><b>Umbrella/Excess Liability Insurance</b> - 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.</p>	

**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.

**CITY OF NEW YORK**  
**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.

\_\_\_\_\_  
[Name of broker or agent (typewritten)]

\_\_\_\_\_  
[Address of broker or agent (typewritten)]

\_\_\_\_\_  
[Email address of broker or agent (typewritten)]

\_\_\_\_\_  
[Phone number/Fax number of broker or agent (typewritten)]

\_\_\_\_\_  
[Signature of authorized official, broker, or agent]

\_\_\_\_\_  
[Name and title of authorized official, broker, or agent (typewritten)]

State of .....)

) ss.:

County of .....)

Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC FOR THE STATE OF \_\_\_\_\_

**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

(NO FURTHER TEXT ON THIS PAGE)

**REVISIONS TO STANDARD SPECIFICATIONS****NOTICE**

The Specification Bulletin(s) ("SB(s)") referenced 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) apply to 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
- SB 17-007 – MOBILIZATION
- SB 17-008 – QUALIFICATION CARDS
- SB 17-009 – SALVAGEABLE MATERIALS
- SB 17-010 – MILLED ASPHALTIC CONCRETE AGGREGATE
- SB 17-011 – DETECTABLE WARNING UNIT COLOR

- SB 17-012 – TEMPORARY HOUSE CONNECTION MATERIAL

The SB(s) are available online at:

<http://www1.nyc.gov/site/ddc/resources/specification-bulletins.page> or for pickup between 8:00 AM and 4:00 PM at 30-30 Thomson Avenue, 3<sup>rd</sup> Floor, Division of Infrastructure, Long Island City, NY 11101. Contacts:

- Mr. Richard Jones, (718) 391-1417
- Mr. Salman Macktoom, (718) 391-2041

**(NO FURTHER TEXT THIS PAGE)**

**I - Pages**

**SPECIFICATIONS FOR THE SPECIALTY  
HIGHWAY WORKS**

---

**NOTICE**

THE PAGES CONTAINED IN THIS SECTION ARE ISSUED FOR THE PURPOSE OF AMENDING THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND HEREBY MADE PART OF SAID CONTRACT DOCUMENTS TO THE SAME EXTENT AS IF IT WAS ORIGINALLY INCLUDED HEREIN.



(NO TEXT ON THIS PAGE)

## TABLE OF CONTENTS

<u>SECTION NO.</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
4.12 GR	REMOVE, STORE AND RESET EXISTING GRANITE HEADER	I-1
4.14 E	EPOXY COATED STEEL REINFORCEMENT REINFORCING BARS	I-2
6.03 SEPS	STRIPPING EXISTING PAVEMENT SURFACES	I-4
6.04 G	GRANITE BLOCK PAVEMENT AND HEADER	I-8
6.04 NGP	NEW GRANITE PAVER WEARING COURSE	I-13
6.04 NGS	GRANITE SLAB PAVEMENT	I-20
6.05 DP	RESTORATION OF DISTINCTIVE PAVEMENTS	I-24
6.34 A	TEMPORARY CHAIN LINK FENCE, 8'-0" HIGH	I-26
6.34 D	DECORATIVE STEEL FENCE AND GATES	I-27
6.74 PR	PAVER RESTRAINT SYSTEM	I-35
6.74 SWPB	STEEL AND WOOD PLANTER BENCH	I-37
6.77 SP	SOLAR POWERED TRASH COMPACTOR WITH OR WITHOUT INTEGRATED RECYCLING UNITS	I-43
6.79 B	DUCTILE IRON PIPE CONNECTION DRAIN	I-46
7.07 RR	REMOVE AND RESET METAL BOLLARD	I-50
7.30 RSR	REMOVE, STORE AND INSTALL RAIL TRACKS	I-52
7.50 SF-DO	MOVABLE AND FIXED SITE FURNISHINGS	I-56
7.50 SWBS	STEEL AND WOOD BLEACHER SEATING	I-60
7.57 DGRA	DRILL AND GROUT REINFORCEMENT BARS	I-67
8.06	SHEET MEMBRANE WATERPROOFING	I-70
8.15 DUMBO	OUTDOOR BOTTLE FILLER WITH DRINKING FOUNTAIN	I-74
8.32	BARK CHIP MULCH	I-76
8.52 DUMBO	STRUCTURAL STEEL FOR SPECIALTY LIGHTING SUPPORT	I-77
8.52 FP	STEEL FOUNDATION PLATE	I-84
8.52 PT	PAVING TRAY	I-85
8.52 WSF	WAYFINDING SIGN FOOTING	I-87
9.00 B	DRILLING PILOT HOLES	I-89
9.06 HW	ALLOWANCE FOR DECORATIVE MESH FABRIC	I-91
9.10 WSS	TEMPORARY WALL SUPPORT SYSTEM	I-92
9.13 HD	HIGH-DENSITY POLYETHELENE DRAINAGE PIPE	I-96
DUMBO-STO	STORAGE FACILITY	I-98
HW-91X	ALLOWANCE FOR RAMP TO BUILDING ENTRANCE	I-100
HW-900-AVW	ALLOWANCE FOR ADDITIONAL VAULT RELATED WORK	I-102

HW-908	ALLOWANCE FOR EXTRA WORK DUE ARCHAEOLOGICAL DISCOVERIES	I-104
HW-914	ALLOWANCE FOR WAYFINDING TOTEMS	I-105
PK-12D	WATER TAP, 2" DIAMETER	I-106
PK-13	TYPE "K" COPPER TUBING	I-107
PK-14D	CURB GATE VALVE	I-109
PK-17	CAST IRON VALVE BOX, 5-1/4 "DIAMETER	I-110
PK-184-GH1	GROUND HYDRANT -1" DIAMETER	I-112
PK-143	RPZ & WATER METER WITH REMOTE & STRUCTURE - 2" DIA	I-115
NYC-665.16000011	FURNISH AND INSTALL BOLLARDS	I-123

**SECTION 4.12 GR  
REMOVE, STORE AND RESET EXISTING GRANITE HEADER**

4.12GR.1. Description. Under this section, the Contractor must remove, store and reset existing Granite Header in accordance with the Contract Drawings, specifications, and directions of the Engineer.

4.12GR.2. Material. All materials shall comply with the requirements of Sub-Section 4.12.3. (B) of the Standard Highway Specifications.

4.12GR.3. Methods. Construction methods for setting the existing granite header on a concrete cradle shall comply with the requirements of Sub-Section 4.12.4 of the Standard Highway Specifications, with the following modifications and additions:

Existing granite headers, where directed, shall be carefully removed, cleaned of all adherent material to the satisfaction of the Engineer, and stored in a safe place as approved by the Engineer. Prior to removal, the Contractor must temporarily number each piece of header and paver with an approved removable non-staining marker such that its can be reset in its original position when directed by the Engineer.

The cost of any temporary or permanent roadway restoration required due to the removal of header shall be deemed included in the price bid for this item.

All edges shall butt flush with not more than 1/8" gap per joint.

4.12GR12.4. MEASUREMENT. The quantity to be measured for payment shall be the length of granite header, reset, complete in place, as required, measured along the top of the exposed face of header, and adjusted in accordance with **Section 5.04** of the Standard Highway Specifications.

4.12GR12.5. PRICE TO COVER. The contract price per linear foot shall cover the cost of all labor, materials, equipment, insurance, and incidentals required to Remove, Store, Clean and Reset Existing Granite Header, complete in place, in full compliance with the requirements of the specifications, and to maintain the header in good condition as specified in **Section 5.05** of the Standard Highway Specifications. The work shall also include, but not be limited to, the restoration of all removed pavement and pavers in full compliance with the applicable sections of the Standard Highway Specifications and the Contract Drawings.

Restoration of pavement and pavers removed beyond the above defined limits shall be done by the Contractor at no additional cost to The City.

If the Contractor damages any existing header during removal, resetting, handling, and storage, it shall be replaced, in kind, at no additional cost to the City.

*Payment will be made under:*

Item No.	Description	Pay Unit
4.12 GR6	REMOVE, STORE AND RESET EXISTING GRANITE HEADER 6" WIDE	L.F.

**Section 4.14 E**  
**Epoxy Coated Steel Reinforcement Bars**

4.14E.1. DESCRIPTION. The Contractor must 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 and paid in accordance with the requirement of Item No. 4.14 in Section 4.14 in the 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 plans. 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 must 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 6.03 SEPS**  
**STRIPPING EXISTING PAVEMENT SURFACES**

**6.03.1. INTENT.** This section describes the stripping of existing pavement surfaces, salvaging of existing granite blocks and discarding of other stripped materials within the project limits.

**6.03.2. DESCRIPTION.** The Contractor must strip asphalt pavement, granite block pavement and asphalt covered granite block pavement from existing concrete base pavement in areas shown on the Contract Documents, and as directed by the Engineer. The Contractor must be required to carefully remove all granite blocks from the existing pavement section, remove all adhering materials, and must store all the blocks at an approved storage site. No stripped granite blocks are to remain at the site. Asphalt pavements stripped shall be removed and legally disposed off-site in accordance with the Standard Specifications.

If a shortage of granite blocks needed to complete the pavement reconstruction within the project limits is the result of the Contractor's stripping operation, loss of stripped and salvaged blocks, or blocks damaged before being re-laid as determined by the Engineer, the Contractor must supply and deliver the needed granite blocks at the Contractor's own expense and at no additional cost to the City. See Section 6.04 G, Granite Block Pavement and Header of these I-Pages for granite block material requirements.

**6.03.3. SUBMITTALS**

- (A) **STORAGE FACILITY FOR SALVAGED GRANITE BLOCK:** The storage facility for salvaged granite blocks is covered under Item No. DUMBO-STO.
- (B) **QUALIFICATIONS.** The Contractor (or its subcontractor performing the work of this section), shall have completed at least two (2) projects in the past five (5) years where the reclamation of street pavers was the primary scope of work. The Contractor must submit evidence of experience in the granite block removal methods; have available specialized equipment for granite block removal; handle and sort granite block pavement from streets in a manner that minimizes damage to the granite blocks.
- (C) **MEANS AND METHODS:** Prior to the start of work the Contractor must provide the means and methods to identify and clearly mark the pavement areas that include exposed or asphalt covered granite blocks, and identify and mark those pavement sections without granite blocks and consisting of asphalt or other pavement materials. The contractor may use any suitable stripping method to remove the pavements without granite blocks as specified herein and to the limits indicated on the Contract Documents.

For the exposed and asphalt covered granite block pavement areas the Contractor must submit detailed descriptions of the proposed means and methods to remove, evaluate, handle, sort, transport, and store existing granite block pavements for reinstallation. In addition, the Contractor must demonstrate adherence to the approved means and methods for each procedure as described herein:

1. **Removal Method:** The Contractor must submit the proposed equipment, tools, and the removal method for approval by the Engineer. The approved method and equipment shall be carried forward in all areas where existing granite block shall be removed for reinstallation.
2. **Sorting, Transporting and Storing Procedures:** The submitted procedure shall include a description of how the granite block once removed will be labeled, its location identified for reinstallation, and the pattern from which it was removed. The procedure shall include a description of the method proposed to transport and store the labeled blocks at the approved storage facility.

3. Demonstration of Means and Methods: Upon approval of the submitted means and methods of removing, evaluating, handling, sorting, transporting, and storing the existing granite block pavement, and before pavement removal operations begin, the Contractor must demonstrate to the Engineer each of the approved procedures at a street or streets to be reconstructed as selected by the Engineer. Each approved procedure shall be video-recorded and used as the basis for all granite block pavement work in the contract. The pavement removal work shall not proceed until all field-demonstrated procedures have been witnessed and approved by the Engineer.

(D) PHOTOGRAPHS: The requirements of Section 6.43 D of the New York City Department of Transportation Standard Highway Specifications, latest edition are to be followed in conjunction with the requirements of this sub section 6.03 (D) of this section. The Contractor must be paid under Item No. 6.43 D

1. Provide photographs of all granite pavement within the project limits and indicating the following:
  - a. Existing granite pavement patterns on each street.
  - b. Photographs of representative individual granite blocks from each street showing shape, color and sizes by ruler, documenting material conditions.
2. Provide digital images, suitable for printing at minimum 8"x10" size at 600dpi.
3. Provide hardcopy images on photographic paper, minimum 1 view each for conditions 1a, and 1b above for each salvaged street. Images to be forwarded by the Engineer.
4. For item 1a above, images to be photo rectified images to accurately represent element markings and configuration. Include reference dimensional markings in each photograph.

(E) INITIAL MATERIALS REVIEW, SALVAGE AND SORTING OF EXISTING GRANITE BLOCKS AND QUANTITIES:

1. Prior to stripping and removals, review the site with the Engineer to identify typical representative examples for granite block size and pattern and grouping.
2. Following stripping, provide a written schedule of material quantities removed, sorted quantities, and projected coverage areas.

**6.03.4. EQUIPMENT.** Material and equipment, used in stripping and removal operations shall be in satisfactory working condition at all times during the work.

**6.03.5. METHODS.**

**6.03.5.1 REMOVAL, STORAGE, AND/OR DISPOSAL OF EXISTING GRANITE BLOCKS**

(A) REMOVAL

The existing granite block pavement surface, including binder, mortar bed, asphalt covering layers, or any other materials of whatever nature encountered, regardless of thickness, shall be carefully stripped from the block substrate material where directed. Care shall be taken not to damage the granite blocks or to extend the stripping beyond the limits designated.

When the drawings indicate the existing foundations are to remain in place, the foundation shall be cleaned of all foreign matter and thoroughly broomed or flushed in a satisfactory manner.



**(B) DUST CONTROL**

The Contractor must comply with the relevant provisions of SECTION 1.06 - General Conditions and Local Laws to keep the site clean and free from dust pollution. Additionally during the progress of the work, the Contractor must carry on the work in such a manner as to prevent the creation of a dust nuisance to the local residents and general public. At all times during the prosecution of the work, the Contractor must employ such dust allaying materials or methods as will keep the dust nuisance at a minimum, to the satisfaction of the Engineer.

**(C) SEPARATING, EVALUATING AND HANDLING**

Removed granite block shall be evaluated for salvage by the Contractor subject to approval of the Engineer. Removed granite blocks shall be evaluated as either Substandard (Disposed off-site) or Standard (Salvageable for relaying) and sorted as follows:

1. Substandard: Extremely irregular in shape or surface; unsuitable for reinstallation.
2. Standard: Regular in shape and size. Length 4" to 12"; Width 4" to 5"; Depth 4" minimum. Surfaces similar to or smoother than a split face stone.

Salvageable granite blocks shall be sorted, delivered to the approved storage facility, and clearly labeled with the location by roadway block and/or intersection as follows:

“GRANITE BLOCK REMOVED FROM INTERSECTION OF \_\_\_\_\_ AND \_\_\_\_\_”

or

“GRANITE BLOCK REMOVED FROM \_\_\_\_\_ STREET BETWEEN \_\_\_\_\_ STREET AND \_\_\_\_\_ STREET”

Salvaged granite blocks shall remain in sorted clearly labeled piles or bins throughout removal, transport, storage, and relaying. Granite blocks shall be delivered, piled and laid separately in different sections of the work, as required. They shall be handled with care to prevent the chipping and breaking of edges and corners.

**(D) STORAGE**

The Contractor must furnish all labor, material, equipment, insurance, and incidentals necessary to provide a safe and secure storage facility for the salvaged granite blocks to be installed. Clearly mark all stored materials "PROPERTY OF THE CITY OF NEW YORK" upon arrival to the storage facility. The Contractor must not at any time move any of said materials to another off-site place of storage without prior written consent of the Engineer. Once placed in storage, materials may not be relocated until the Contractor is prepared to incorporate them in the work, and the Engineer has issued a written approval to proceed.

Contractor must be under an absolute obligation to protect the stored materials against any damage, loss, theft and/or vandalism consistent with Article 7 of the Standard Construction Contract. In the event that the whole or any part of these materials is lost, damaged or destroyed in advance of their satisfactory incorporation in the work, the Contractor at its own cost shall replace such lost, damaged or destroyed materials with materials of the same character and quality.

(E) DISPOSAL

Non-salvageable stripped materials and excess salvaged granite blocks that will not be re-laid in the pavement or on the sidewalks are the responsibility of the Contractor and shall be disposed of by the Contractor outside the limits of the contract. All the applicable provisions of NYCDOT Standard Highway Specifications, **Subsection 6.02.3(A)** shall be deemed included hereunder.

(F) DAMAGE BY THE CONTRACTOR

Concrete base for pavement and granite block pavements intended to remain that are damaged as a result of stripping operations, shall be removed, disposed of and replaced, at no additional cost to The City. Surface materials, stripped beyond the limits designated, shall be removed, disposed of and replaced by the Contractor at his own expense.

**6.03.6. MEASUREMENT.**

(A) STRIPPING OF PAVEMENT SURFACES

The quantity to be measured for payment shall be the number of square yards of all surface materials stripped to the existing concrete base or other subbase material as specified and as directed by the Engineer. In addition to granite block, stripped materials shall include asphalt pavement and asphalt covered granite blocks.

(B) REMOVAL OF EXISTING BASE

Existing concrete base, removed in compliance with the provisions of NYCDOT Standard Highway Specifications **Section 6.02 AAN**, will be measured and paid for under the scheduled item at the contract price per cubic yard bid thereof.

(C) DEDUCTIONS FOR ROADWAY HEADS, ETC.

In determining the area of stripping and the area and volume of concrete base removed, the areas occupied by rails, bases of columns, manhole heads, gate boxes, road boxes and similar structures will be deducted when they measure more than one (1) square foot and will not be deducted when they measure one (1) square foot or less.

**6.03.7. PRICES TO COVER.**

The contract prices per square yard bid for Stripping of Existing Pavement Surfaces shall cover the cost of all labor, materials, equipment, insurance, and incidentals required to complete the work, together with submittals, video recording of stripping demonstrations, sorting and transporting salvaged blocks and disposal of unused blocks, non-standard blocks, any other pavement materials removed, and necessary incidentals, in accordance with the Contract Drawings, the specifications and the directions of the Engineer. The cost of photographs specified in this section shall be paid for under Item 6.43 D Photographs. The cost of a storage facility for salvaged blocks shall be paid for under Item DUMBO-STO. There shall be no separate payment for the disposal of excess or non-salvageable granite blocks or other stripped materials.

Payment will be made under:

Item No.	Description	Pay Unit
6.03 SEPS	STRIPPING EXISTING PAVEMENT SURFACES	S.Y.

**SECTION 6.04 G**  
**GRANITE BLOCK PAVEMENT AND HEADER**

- 6.04G.1. INTENT.** This section describes the construction of Granite Block Pavement and Granite Headers.
- 6.04G.2. DESCRIPTION.**
- (A) Granite Block Pavement. Where shown on the Contract Plans and as directed by the Engineer, granite blocks stripped from existing pavements, salvaged and stored under Item No. 6.03 SEPS shall be cleaned and delivered to the project site, and installed to the grades shown on the Contract Drawings, or as directed by the Engineer. Additional "used" granite blocks purchased at the direction of the Engineer shall be delivered to the project site, cleaned and installed as directed by the Engineer.
  - (B) If a shortage of granite blocks needed to complete the pavement reconstruction is determined by the Engineer to be caused by the operations of the contractor, or salvaged blocks lost or mishandled by the contractor, the Contractor must furnish and install additional approved "used" granite blocks as required to complete the project at the Contractor's own expense at no additional cost to the City.
  - (C) Granite Block Header Course. Headers shall match the existing granite blocks in color and texture. Headers shall be set in a concrete cradle on a mortar bed with cement-grout joints as indicated on the Contract Documents.
- 6.04G.3. MATERIALS.** Materials shall comply with the following requirements of the NYCDOT Standard Highway Specifications, current edition.
- (A) Cement-grout Joint Filler--**Section 3.06**, Type 2
  - (B) Mortar Bed and Mortar--**Sections 3.03 and 3.07**, Type 2
  - (C) Preformed Expansion Joint Filler--**Section 2.15**, Type as specified
  - (D) Sand--**Section 2.21**, Type 1A or 2A conforming to ASTM C144
  - (E) Granite Block -**Section 2.06**, except for the following:
    1. Granite blocks to be installed shall be those salvaged under Item No. 6.03 SEPS herein, and those "used" granite blocks purchased as authorized and as determined by the Engineer.
    2. Select granite blocks to be installed within crosswalks and at defined locations on sidewalks, as indicated on the plans, shall be very regular in shape and size, and have smooth surfaces, and have no surface or perimeter depressions greater than 1/8". These Select granite blocks shall be suitable for installation with tight and regular joint spacing, 1/8" to 1/4" wide. All Select granite blocks shall be physically examined and approved by the Engineer prior to being laid. See required application of a thermal finish once laid in Section 6.04.G.5 (F) of these I-Pages.
  - (F) Additional Granite Block supplied by the Contractor as directed by the Engineer must comply with **Section 2.06** and must be "used" rectangular granite blocks matching in shape, size (length, width, and depth), color, grain size, and texture of the in situ blocks salvaged from the specific locations under Item No. 6.03 SEPS herein. The source of the "used" granite blocks shall be submitted and approved by the Engineer prior to furnishing the blocks.

- (G) New Granite Headers -**Section 2.06**, except that headers shall be rectangular granite blocks, of the dimensions shown on the plans. The top face of headers shall be furnished with a split face finish. The headers shall be of "Deer Isle" granite as supplied by one of the following:
1. New England Stone Industries Inc., 15 Branch Pike, Esmond, Rhode Island 02917;
  2. Fletcher Granite Co., Chelmsford, Mass., Telephone No. (800) 253-8168;
  3. North Carolina Granite Co., Mt. Eire, North Carolina, Telephone No. (800) 227-6242;
  4. or approved equivalent.

**6.04G.4. SUBMITTALS.** The following shall be submitted in accordance with the conditions of the Contract Drawings and Specifications.

- (A) "USED" GRANITE BLOCKS. Submit for approval the source of the "used" granite blocks, the performance data as listed in (B) GRANITE HEADERS below and the grade, strength certification, length, width and depth of the proposed "used" granite blocks, as specified in **Section 2.06** of the Standard Specifications and as directed by the Engineer. The range of colors for the proposed granite blocks shall be included in the submittal to ensure the colors of the "used" granite blocks match the existing salvaged blocks as determined by the Engineer.
- (B) GRANITE HEADERS: Physical properties of the new granite headers shall have been derived from tests by an independent engineering laboratory acceptable to the Engineer, and shall be furnished by the Contractor to the Engineer for the stone selected. This performance data shall include:
1. ASTM C 97 - Absorption and Bulk Specific Gravity
  2. ASTM C 880 - Flexural Strength
  3. ASTM C 170 - Compressive Strength
  4. ASTM C 99 - Modulus of Rupture
  5. ASTM C 241 - Abrasion Resistance
- (C) SAMPLES:
1. When the contractor is authorized by the Engineer to purchase "used" granite block, submit to the Engineer for approval prior to furnishing blocks, three (3) representative samples of the proposed "used" granite blocks for each of the insitu locations where the "used" granite blocks will be installed.
  2. Granite Block Headers: Provide three (3) samples to Engineer for approval prior to furnishing blocks at job site.
- (D) QUALIFICATION OF THE GRANITE INSTALLER: Prior to starting any granite work the Contractor must submit for the Engineer's review and approval, proof that the Contractor/Subcontractor installing the granite has satisfactorily completed two (2) similar or large exterior granite block paving installations in the New York City region within the past five (5) years. Project references and the location of each installation for each of the three projects are to be submitted in writing to the Engineer for approval.
- (E) SHOP DRAWINGS: Coordinate all shop drawings with work of adjacent trades, materials and specified items included in the work. Submit shop drawings for granite block and header installation, noting installation areas in plan view with corresponding area take-offs and totals. Installation to include installations of both existing and new block, coordinated with quantity take-offs from Item No. 6.03 SEPS. Minimum drawing scale shall be 1" = 30'.

- (F) **CLEANING MATERIALS AND METHODS:** The Contractor must submit the proposed cleaning materials and methods for approval. Once approved, the cleaning materials and cleaning method shall be used throughout the project without exception.
- (G) **MOCKUP:** Complete a mockup installation on site for each Granite Block Pattern shown on the plans. The installation is to be reviewed and approved by the Engineer before proceeding with the work. Issues for review will include setting and finishes, coursing alignments and surface regularity, and transitions between granite block types. The mockups may be incorporated into the final work with approval of the Engineer.

**6.04G.5. METHODS.** The Company performing this work shall have installation of natural stone pavements represent a substantial proportion, if not a majority, of its regular work.

- (A) **CONCRETE BASE**  
The existing concrete base shall be removed as specified for Item No. 6.02AAN. New Concrete Base for Pavement in roadways shall be provided as specified for Item No. 4.04HC.
- (B) **PREPARATION OF BASE SURFACES**  
Before operations begin, the flexible base shall be fully and properly compacted, and at the correct elevations. The concrete base, if freshly placed, shall be thoroughly cured. The concrete base shall be swept and cleaned of all dirt, loose and foreign matter, and be free of standing water. No block shall be laid unless the flexible and concrete base surfaces on which granite block is to be laid is in a condition acceptable to the Engineer.
- (C) **CLEANING EXISTING BLOCKS BEFORE RELAYING**  
Existing granite blocks salvaged at the site for relaying under Item No. 6.03 SEPS or "used" granite block furnished by the Contractor must be cleaned of all adherent materials by the Contractor following the approved procedures and to the satisfaction of the Engineer. If upon examination by the Engineer and he deems it necessary, granite blocks shall be re-cleaned of all adherent materials by the Contractor to the satisfaction of the Engineer before incorporation into the work at no additional cost.
- (D) **SEPARATING AND HANDLING**  
Granite blocks shall be delivered to the site from the approved storage facility and shall be laid separately in different sections of the work, as directed by the Engineer. They shall be handled with care to prevent the chipping and breaking of edges and corners.
- (E) **SPREADING AND SHAPING OF THE BED**  
The specified setting bed for granite block shall be spread on the concrete base to a depth of one (1) to one and one-half (1-1/2") inches, be shaped by approved methods to a surface approximately parallel to and to the required grade, and shall not be disturbed after shaping prior to the laying of the blocks.
- (F) **LAYING**  
Block shall be laid on the bed before it has set, in straight courses at right angles to the line of the street or at such other angles as may be directed, with top surfaces conforming to the crown of the street.

The direction of coursing, patterning and positions of block shall be set in patterns as indicated on the approved shop drawings.

Blocks shall be laid as closely together as possible, in courses of uniform width, with joints broken by a lap of at least three (3") inches, and not more than twenty-five (25') feet in advance of the ramming. The maximum width of joints shall be one-half (1/2") inch as measured between the edges of the top surfaces of the blocks. The blocks shall be laid to

guide blocks or head stones at such intervals as directed.

The Contractor must perform all necessary field cutting and dressing to have stones fit the required patterns and street hardware.

At crosswalks and designated sidewalk locations, only Select blocks as indicated in Section 6.04.G.3 (E) above shall be laid. After these granite blocks are laid, the Contractor must heat the surface of the blocks with approved equipment to remove any smooth polished surfaces and give the blocks a thermal finish.

(G) **RAMMING GRANITE BLOCK**

Blocks shall have no sand or gravel placed in the joints and shall be rammed to a solid bearing with a rammer weighing not less than thirty (30) pounds handled by a skilled rammersman. Not less than one (1) rammersman shall be employed to three (3) pavers. Blocks that are found low shall be raised to a true and even surface by adding to the bed. Those found broken or otherwise unsatisfactory shall be removed by tongs and replaced by approved blocks. Pinch bars shall not be used in removing blocks.

(H) **CEMENT-GROUT JOINT FILLER**

The granite block pavement shall be sprinkled with clean water as directed. The cement-grout joint filler shall be flushed on the surface and worked into the joints with brooms, rubber edged squeegees or other approved appliances. The joints shall be re-poured, if necessary, before initial set has taken place until they are filled flush with the surface of the pavement.

Cement-grout used for joints shall be colored with mineral oxide pigments to match the granite. Furnish color samples to the Engineer for approval prior to proceeding with jointing work. The amount of filler left on the surface of the pavement shall be as little as possible and all surplus filler shall be removed to the satisfaction of the Engineer.

(I) **JOINT FILLING IN COLD OR WET WEATHER**

When air temperature is below 38 degrees F. in the shade, cement-grouting may be done only if permitted by the Engineer.

(J) **TESTING SURFACE**

After the granite block pavement has been laid, the surface shall be tested with an approved straight edge ten (10') feet long or with an approved surface testing machine laid parallel with the center line of the roadway or paved surface and any irregularity in the alignment of the granite block pavement, exclusive of depressions in individual blocks, exceeding one-quarter (1/4) inch tolerance shall be immediately corrected to the satisfaction of the Engineer at the Contractor's own expense.

(K) **TRAFFIC**

No traffic of any kind will be allowed on the granite block pavement until permitted by the Engineer.

(L) **DEFECTIVE PAVEMENT**

Portions of the completed pavement that are defective in finish, compression, composition, or that do not comply with the requirements of these specifications, shall be taken up, removed and replaced with suitable materials, properly laid in accordance with these specifications at the Contractor's own expense.

**6.04G.5. MEASUREMENT.**

- (A) The quantity to be measured for payment for Item No. 6.04 GB – INSTALL GRANITE BLOCK PAVEMENT shall be the number of square yards of salvaged granite blocks delivered to the project site from the designated storage facility, cleaned and installed, in place, to the satisfaction of the Engineer.
- (B) The quantity to be measured for payment for Item 6.04 UGB FURNISH AND INSTALL USED GRANITE BLOCK PAVEMENT shall be the number of square yards of Engineer directed and contractor purchased approved “used” granite blocks delivered to the project site, cleaned and installed in place to the satisfaction of the Engineer.
- (C) In determining the area of blocks to be paid for under Item Nos. 6.04 GB and 6.04 UGB, the areas occupied by rail heads, bases of columns, manhole heads, gate boxes, road boxes and similar structures will be deducted when their superficial areas measure more than one (1) square foot and will not be deducted when they measure one (1) square foot or less.
- (D) The quantity to be measured for payment for Item No. 6.04 GH – FURNISH AND INSTALL GRANITE BLOCK HEADER COURSE shall be the number of linear feet of header actually furnished and installed, measured in place, to the satisfaction of the Engineer.

**6.04G.6. PRICES TO COVER.**

- (A) The contract price per square yard for Item No. 6.04 GB – INSTALL GRANITE BLOCK PAVEMENT shall cover the cost of all labor, materials, including but not limited to equipment, insurance, and incidentals required to deliver to the project site, and install, cleaned salvaged granite block pavement, complete, in place, in full compliance with the Contract Drawings, the specifications, approved shop drawings and the directions of the Engineer. The price bid shall include the cost of providing Select granite block as specified herein and as directed by the Engineer.
- (B) The contract price per square yard for Item No. 6.04 UGB – FURNISH AND INSTALL USED GRANITE BLOCK PAVEMENT shall cover the cost of cost of purchasing approved “used” granite blocks and all labor, materials equipment, insurance, and incidentals required to deliver to the project site, and install, cleaned “used” granite block pavement, complete, in place, in full compliance with the Contract Drawings, the specifications, approved shop drawings and the directions of the Engineer.
- (C) The contract price per linear foot for Item No. 6.04 GH – FURNISH AND INSTALL GRANITE BLOCK HEADER COURSE shall cover the cost of all labor, materials, insurance, and equipment required to furnish and install new granite headers, complete with surface finishes as required by the plans, in place, in full compliance with the requirements of the specifications.

Payment will be made under:

Item No.	Item	Pay Unit
6.04 GB	INSTALL GRANITE BLOCK PAVEMENT	S.Y.
6.04 GH	FURNISH AND INSTALL GRANITE BLOCK HEADER COURSE	L.F.
6.04 UGB	FURNISH AND INSTALL USED GRANITE BLOCK PAVEMENT	S.Y.

**SECTION 6.04 NGP  
NEW GRANITE PAVER WEARING COURSE**

6.04 NGP.1. DESCRIPTION:

This section describes the construction of New Granite Paver Wearing Course in the new Plaza to be furnished and installed on a Concrete Base in mortar setting bed. All work shall be in accordance with these specifications and in reasonable close conformity with the lines and grades shown on the plans or established by the Engineer. Existing granite blocks that shall be re-laid between rails in the plaza are covered under Item No. 6.04 GB

6.04 NGP.2. RELATED SPECIFICATION SECTIONS:

- (A) 4.04 Concrete Base for Pavement (NYSDOT Standard Highway Specifications)
- (B) 6.04 G Granite Block Pavement and Header (these I-Pages)
- (C) 7.30 RSR - Remove, Store And Install Rail Tracks (these I-Pages)

6.04 NGP.3. REFERENCES

- (A) American Society of Testing and Materials (ASTM)
  - 1. ASTM C 615 - Standard Specification for Granite Dimension Stone
  - 2. ASTM C 1028 – Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method
  - 3. ASTM D 1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types)
  - 4. ASTM D 2028 - Standard Specification for Cutback Asphalt (Rapid-Curing Type)
  - 5. ASTM D 3381 - Standard Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction
- (B) New York City Department of Transportation (NYCDOT)
  - 1. Standard Highway Specifications, latest edition.

6.04 NGP.4 SUBMITTALS:

- (A) Product Data: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.
  - 1. Granite pavers
  - 2. Mortar and grout materials
  - 3. Expansion joint materials
- (B) Shop Drawings: Submit manufacturer's shop drawings, including plans and sections, indicating overall color patterns and dimensions of granite units and setting details for approval by the Engineer.
  - 1. Shop drawings shall show all bedding, bonding, jointing and anchoring details, and the dimensions and identifying number of each piece of granite. No final sizing or finishing shall be done until the shop drawings for that part of the work have been approved.



- (C) Samples: Submit manufacturer's samples of each stone type for approval by the Engineer.
1. Sufficient samples of granite shall be submitted to the Engineer to show the surface grain, texture, finish, and anticipated range of color to be supplied for each stone type. Stones outside of the accepted range shall be subject to rejection.
- (D) Qualifications: Prior to Commencement of Work, the Contractor must submit the name of the granite slab installer the Contractor proposes to use and upon which the Contractor's bid is based. The submittal shall include the installer's respective work history experience.
- (E) Test Reports:
1. Stone: Submit test reports indicating each stone type meets requirements as indicated herein.
  2. Slip Resistance: Submit test reports indicating compliance of coefficient of friction as indicated herein for each stone type.

6.04 NGP.5. QUALITY ASSURANCE:

- (A) Qualifications: The installer shall have satisfactorily completed two (2) similar or large exterior granite block paving installations in the New York City region within the past five (5) years. Source Limitations: Obtain each type of unit paver, joint material, and setting material from one source with resources to provide materials and products of consistent quality in appearance and physical properties.
- (B) Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
1. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

6.04 NGP.6. DELIVERY, STORAGE, AND HANDLING:

- (A) Store pavers on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied.
- (B) Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- (C) Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- (D) Store liquids in tightly closed containers protected from freezing.
- (E) Handling: Protect materials and finish during handling and installation to prevent damage.

6.04 NGP.7. PROJECT CONDITIONS:

- (A) Cold-Weather Protection: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Remove and replace unit paver work damaged by frost or freezing.
- (B) Weather Limitations for Mortar and Grout:

1. Cold-Weather Requirements: Protect unit paver work against freezing when ambient temperature is 40 deg F and falling. Heat materials to provide mortar and grout temperatures between 40 and 120 deg F. Provide the following protection for completed portions of work for 24 hours after installation when the mean daily air temperature is as indicated: below 40 deg F, cover with weather-resistant membrane; below 25 deg F, cover with insulating blankets; below 20 deg F, provide enclosure and temporary heat to maintain temperature above 32 deg F.
2. Hot-Weather Requirements: Protect unit paver work when temperature and humidity conditions produce excessive evaporation of setting beds and grout. Provide artificial shade and windbreaks and use cooled materials as required. Do not apply mortar to substrates with temperatures of 100 deg F and higher.
  - a. When ambient temperature exceeds 100 deg F, or when wind velocity exceeds 8 mph and ambient temperature exceeds 90 deg F, set pavers within 1 minute of spreading setting-bed mortar.

6.04 NGP.8. MATERIALS:

(A) Granite:

1. Granite: Rectangular paving stones, of the size and shapes indicated on the Drawings with sawn exposed face with thermal-finished, sawn sides and bottoms, made from granite complying with ASTM C 615. Granite shall be of fine or medium grained granite showing an even distribution of constituent minerals. They shall be of uniform quality and texture throughout, and free from seams or disintegrated materials.
  - a. Varieties and Sources: Subject to compliance with requirements, provide the following:
    - 1) Plaza Area Pavers: Provide an equal mix of:
      - a. Type 1: Virginia Mist, as manufactured by North Carolina Granite Corp., Mt. Airy, NC. (800)227-6242.
      - b. Type 2: St. John's Black, as manufactured by North Carolina Granite Corp., Mt. Airy, NC. (800)227-6242.
      - c. Type 3: Impala Black, as manufactured by North Carolina Granite Corp., Mt. Airy, NC. (800)227-6242.
2. Subject to meeting approval, pavers are available from the following suppliers:
  - a. Supplier 1: North Carolina Granite Corp., Mt. Airy, NC. (800)227-6242.
  - b. Supplier 2: Michael Angelo Marble and Stone, LLC, Long Island City, NY (718) 433-4429
  - c. Supplier 3: Superior Selected Stone, Long Island City, NY (718) 728-8977
  - d. Approved Equivalent.
3. Fabrication: Fabricate the pavers in the sizes and shapes indicated on the Drawings and further specified herein. Paver sizes shall be minimum 4 inches for shortest dimension, and minimum 4-inch thickness. No drill holes or bull wedge marks will be permitted in the wearing surfaces of the granite slabs.

- a. Slip Resistance: Thermal finish of exposed paver faces shall meet a minimum 0.60 coefficient of friction when wet as determined by ASTM C 1028 – Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method.
- b. Dimensional Tolerances: +/-1/16” variation from dimensions indicated on Drawings.
- c. Flatness Tolerances: 3/16” variation from true plane or flat surface

## (B) Mortar Setting Bed Materials:

- 1. Extra Strength Air-Entrained Portland Cement-Mortar conforming to the requirements of **Section 3.07**, Type 2, of the NYCDOT Standard Highway Specifications.

## (C) Grout Materials:

- 1. Extra Strength Air –Entrained Portland Cement Grout complying with **Section 3.06**, Type 2 of the NYCDOT Standard Highway Specifications.
- 2. Coloring material shall be non-fading mineral oxide pigments manufactured for concrete coloring. Color shall be selected by the Engineer from manufacturer’s standard color range.

## (D) Expansion Joint Materials:

- 1. Joint Filler: Type IV Asphalt impregnated fiber board, ASTM D 1751 as specified in NYCDOT Standard Highway Specifications Section 2.15 – Filler Expansion Joint, Pre-formed.
- 2. Backer Rod: Non-staining & compatible with joint fillers. Backing must be approved by sealant manufacturer. Cylindrical foam sealant backing, ASTM C 1330 1/8” larger than joint size.
- 3. Sealant: Type 2 Cold-application sealer as specified in NYCDOT Standard Highway Specifications Section 2.22 – Sealer, Concrete Expansion Joint, Elastic Type.

## (E) Geocomposite Bond Breaker:

- 1. 0.4-inch-thick drainage core formed from polypropylene sheet cusped to form high flow drainage core that is bonded to a needle punched nonwoven geotextile fabric.

## (F) Water: Potable

6.04 NGP.9. CONSTRUCTION METHODS:

- (A) General: Granite slab paver installation shall conform to the applicable requirements of NYCDOT Standard Highway Specifications, Subsection 6.06.4 unless otherwise modified herein.
- (B) Concrete base pavement for granite slab pavers shall be furnished and placed under Item No. 4.04 HC – Concrete Base for Pavement, 8” Thick (High Early Strength)
- (C) Examination: Examine areas indicated to receive paving with paver Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.

1. Proceed with installation only after unsatisfactory conditions have been corrected.
- (D) Preparation of Surface. Before operations begin, the concrete base shall be thoroughly set if freshly poured. The concrete base shall be swept and cleaned of all dirt, loose and foreign matter, and be free of standing water. No granite slab pavers shall be laid unless the surface on which it is to be laid is in a condition acceptable to the Engineer. No granite slab pavers shall be laid or grouted in freezing weather. The concrete base shall be moistened with water immediately before placing mortar but do not allow puddles of water.
- (E) Installation, General:
1. New granite pavers from quarries shall be delivered, piled, and laid as required. They shall be handled with care to prevent the chipping and breaking of edges and corners.
  2. Do not use granite pavers with chips, cracks, voids, discolorations, and other defects that might be visible in finished work.
  3. Mix granite pavers from several pallets or cubes, as they are placed, to produce uniform blend of colors and textures, unless otherwise indicated.
  4. Cut granite pavers with motor-driven masonry saw equipment to provide clean, sharp, unchipped edges. Cut units to provide pattern indicated and to fit adjoining work neatly. Use full units without cutting where possible. Hammer cutting is not acceptable.
  5. Joint Pattern: As indicated on Drawings.
  6. Tolerances: Do not exceed 1/32-inch unit-to-unit offset from flush (lippage) nor 1/4 inch in 10 feet from level, or indicated slope, for finished surface of paving.
  7. Expansion and Control Joints: Provide joint filler at locations and of widths indicated. Install joint filler before setting pavers. Make top of joint filler flush with top of pavers.
- (F) Mortar Setting Bed Applications:
1. Install geocomposite bond breaker over substrate. Overlap bond breaker at joints by 6 inch minimum.
  2. Spreading and Shaping of the Bed. The mortar setting bed shall be spread on the geocomposite bond breaker to a depth of one (1) to one and one-half (1-1/2) inches, be shaped by approved methods to a surface approximately parallel to and depth of the granite slab below the finished surface, and shall not be disturbed after shaping prior to the laying of the slabs.
  3. Laying Granite Pavers. The foundation shall be brought to the required grade and the pavers shall be cut and laid on a mortar bed in the patterns shown on the plans to provide a uniform surface. Carefully place granite pavers by hand in straight courses with hand tight joints not exceeding 1/4" but not less than 1/8", and with uniform top surfaces conforming to the patterns shown on the plans. Pavers shall be laid on the bed before it has set, and then carefully lifted and any non-bearing surface filled with mortar to provide a full surface contact between the mortar and the bottom of the paver. Each slab shall be thoroughly rammed and adjusted, and re-rammed if required until it is thoroughly and satisfactorily bedded to the proper grade and

crown. No air pockets in the mortar bed will be allowed. The Contractor must perform all necessary field cutting and dressing to have stones fit the required patterns and street hardware.

4. **Ramming Granite Pavers.** Pavers shall have no sand or gravel placed in the joints and shall be rammed to a solid bearing with a rammer weighing not less than thirty (30) pounds handled by a skilled rammersman. Not less than one (1) rammersman shall be employed to three (3) pavers. Pavers that are found low shall be raised to a true and even surface by adding to the bed. Those found broken or otherwise unsatisfactory shall be removed by tongs and replaced by approved pavers. Pinch bars shall not be used in removing pavers.
5. **Extra Strength Air-Entrained Portland Cement-grout Joint Filler.** The wearing course of slabs shall be sprinkled with clean water as directed. The joint filler shall be flushed on the surface and worked into the joints with brooms, rubber edged squeegees, or other approved appliances. Joints shall be re-poured, if necessary, before initial set has taken place until they are filled flush with the surface of the wearing course. Cement-grout used for joints shall be colored with mineral oxide pigments to match the granite. The amount of filler left on the surface of the wearing course shall be as little as possible and all surplus filler shall be satisfactorily removed.
6. **Sufficiency of Apparatus.** The apparatus agitating the filler shall, in number and efficiency, be sufficient to permit the filler gang to closely follow the pavers or rammers, as the case may be, and in no case shall a wearing course be left overnight or when work is stopped without the joint filling being completed.
7. **Joint Filling in Cold or Wet Weather.** During air temperature below 38-degrees Fahrenheit, in the shade, cement-grouting may be done only if permitted by the Engineer. In case of rain the wearing course shall be protected by covering with plastic sheeting as required and directed by the Engineer.
8. **Testing Surface.** After the granite pavers been laid, the surface shall be tested with an approved straight edge ten (10) feet long or with an approved surface testing machine laid parallel with the center line of the plaza and any irregularity in the alignment of granite paver pavement, exclusive of depressions in individual slabs, exceeding one-quarter (1/4) inch shall be immediately corrected to the satisfaction of the Engineer.

(G) **Repairing, Pointing and Cleaning:**

1. Remove and replace granite pavers that are loose, chipped, broken stained or otherwise damaged that do not match adjoining units. Provide new units to match adjoining units and install in same manner as original units, with same joint treatment with no evidence of replacement.
  - a. **Defective Wearing Course.** Such portions of the completed wearing courses as are defective in finish, compression, composition, or do not comply with the requirements of these specifications, shall be taken up, removed, and replaced with suitable materials properly laid in accordance with these specifications at the Contractor's own expense.
  - b. **Allowable Patching:** Any piece of granite showing flaws or imperfections upon receipt at the building site shall be referred to the Engineer for determination as to whether it shall be rejected, patched or redressed for use. Repairs or patches shall be approved by the Engineer and shall only be

allowed providing the patch matches the color and finish of the natural stone so that the patch does not detract from the appearance.

2. Pointing: During tooling of mortar joints, enlarge voids or holes and completely fill with grout. Point up joints to provide neat, uniform appearance.
3. Cleaning: Remove excess mortar and grout from exposed paver surfaces; wash and scrub clean.

(H) Traffic Protection. No traffic of any kind will be allowed on the granite pavement until permitted by the Engineer.

6.04 NGP.10. MEASUREMENT:

The quantity of New Granite Paver Wearing Course, Furnished and Installed to be measured for payment shall be the number of square yards of granite pavers actually installed to the lines, grades and patterns shown on the plans, measured in place, to the satisfaction of the Engineer.

In determining the area of New Granite Paver Wearing Course, Furnished and Installed to be paid for, areas occupied by bases of columns, manhole heads, gate boxes, road boxes and similar structures will be deducted when their superficial areas measure more than one (1) square foot and will not be deducted when they measure one (1) square foot or less.

6.04 NGP.11. PRICE TO COVER:

The unit price bid per square yard for Item No. 6.04 NGP - NEW GRANITE PAVER WEARING COURSE FURNISHED AND INSTALLED, shall cover the cost of all labor, materials, equipment and incidentals necessary to furnish and lay granite pavers on the indicated setting bed with indicated joint types, scoring of pavers, complete, in place, in accordance with the Drawings, approved Shop Drawings, the specifications, and the directions of the Engineer. The cost of necessary excavation and concrete base pavement will be paid for under their appropriate items.

Payment will be made under:

Item No.	Item	Pay Unit
6.04 NGP	NEW GRANITE PAVER WEARING COURSE FURNISH AND INSTALLED	SY

**SECTION 6.04 NGS  
GRANITE SLAB PAVEMENT**

6.04 NGS.1. Description. This work shall consist of the construction of Granite Slab Pavement for intersections, crosswalks, bike lanes, and sidewalks. It also includes salvaging and reinstalling historic granite slab pavement. All work shall be in accordance with these specifications and in conformity with the lines and grades shown on the plans or established by the Engineer.

6.04 NGS.2. Materials.

- (A) Granite slab for use hereunder shall meet the requirements for granite under **Section 2.06** of the NYCDOT Standard Highway Specifications, except for sizes. Granite slabs for intersections, crosswalks and bike lanes shall be 6" deep, and 4" deep for sidewalks. Granite slabs shall have the length and width sizes as shown on the plans for their various uses. Granite slabs shall have sawed tops and sides and have a thermal finish on the top face, and no depressions exceeding 3/16-inch on the top face when measured with a straight edge laid in any direction. The bottom face may be sawn or quarry split. No drill holes or bull wedge marks will be permitted in the pavement surfaces of the granite slabs.

Thermal finish of exposed granite slab faces shall meet a minimum 0.60 coefficient of friction when wet as determined by ASTM C 1028 – Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method.

Physical properties of the new granite slabs shall have been derived from tests by an independent engineering laboratory acceptable to the Engineer, and shall be furnished by the Contractor to the Engineer for the stone selected. This performance data shall include:

- |    |            |   |                                      |
|----|------------|---|--------------------------------------|
| 1. | ASTM C 97  | - | Absorption and Bulk Specific Gravity |
| 2. | ASTM C 880 | - | Flexural Strength                    |
| 3. | ASTM C 170 | - | Compressive Strength                 |
| 4. | ASTM C 99  | - | Modulus of Rupture                   |
| 5. | ASTM C 241 | - | Abrasion Resistance                  |

All granite slabs which do not comply with these specifications will be rejected. Granite slabs shall be from the same quarry as the samples furnished for approval. Colors for each specified location shall be "Jet Mist", except at locations indicated on the plans where the color of the new granite slabs shall match the color of existing historic granite slabs. Samples showing the color match shall be submitted to the Engineer for approval before ordering. Where new granite slabs are to be installed adjacent to existing historic granite slabs they shall be of the same color and dimension as the existing, as determined by the Engineer. If any existing historic granite slabs to be reset are damaged or broken, they shall be replaced with a granite slab of the same color and dimension as the existing as approved by the Engineer.

Approved suppliers include:

1. Architectural Craft Stone Source, Inc. P.O. Box 575108, NY, 11357-5108, (718) 352-8883;
2. Ottavino Corp, Jamaica, NY 11417, (718) 848-9404;
3. New England Stone, North Kingstown, RI, (800) 232-2043;
4. Granite Importers, 16 South Vine St., Barrie, Vermont 05641, (800) 476-5812; or, an approved equivalent.

- (B) Mortar Bed and Mortar: shall conform to the requirements of **Sections 3.03 and 3.07**, Type 2 of the NYCDOT Standard Highway Specifications.

- (C) Sand--**Section 2.21**, Type 1A or 2A of the Standard Highway Specifications.

- (D) Extra Strength Air-Entrained Portland Cement-grout joint filler shall conform to the requirements of Section 3.06, Type 2, of the NYCDOT Standard Highway Specifications.
- (E) Coloring material shall be non-fading mineral oxide pigments manufactured for concrete coloring.

#### 6.04 NGS.3. Quality Assurance

- (A) Prior to Commencement of Work, the Contractor must submit the name of the granite slab installer the Contractor proposes to use and upon which the Contractor's bid is based, along with their respective work history experience, and at least one sample of each different granite slab which the Contractor will use in the project. The installer shall have satisfactorily completed two (2) similar large exterior granite slab pavement installations in the New York City region within the past five (5) years.

6.04 NGS.4. Construction Methods. Granite slab pavement installation shall conform to the applicable requirements of Subsection 6.04.5 of the NYCDOT Standard Highway Specifications, unless otherwise modified herein.

- (A) Concrete base for pavement for granite slabs shall be furnished and placed under Item 4.04 HC. Where granite slabs are to be placed on an existing concrete base, the existing concrete base shall be examined by the Engineer and approved for granite slab placement prior to laying any granite slabs. Where new granite slabs or existing historic granite slabs are shown on the plans to be installed on a flexible base, the base materials shall be examined and approved by the Engineer prior to placing the granite slabs.
- (B) Preparation of Surface. Before operations begin, the concrete base (Item No. 4.04 HC) shall be thoroughly set and cured if freshly poured. The concrete base shall be swept and cleaned of all dirt, loose and foreign matter, and be free of standing water. No granite slabs shall be laid unless the surface on which it is to be laid is in a condition acceptable to the Engineer. No granite slabs shall be laid or grouted in freezing weather. The concrete base shall be moistened with water immediately before placing mortar but do not allow puddles of water.
- (C) Handling. New granite slabs from quarries shall be delivered, piled, and laid as required. They shall be handled with care to prevent the chipping and breaking of edges and corners.
- (D) Spreading and Shaping of the Bed. The mortar setting bed shall be spread on the concrete base to a depth of one (1) to one and one-half (1-1/2) inches, be shaped by approved methods to a surface approximately parallel to and depth of the granite slab below the finished surface, and shall not be disturbed after shaping prior to the laying of the slabs.
- (E) Laying Granite Slabs. The foundation shall be brought to the required grade and the slabs shall be cut and laid on a mortar bed in the patterns shown on the plans to provide a uniform surface. Carefully place granite slabs by hand in straight courses with hand tight joints and with uniform top surfaces conforming to the patterns shown on the plans. Slabs shall be laid on the bed before it has set, and then carefully lifted and any non-bearing surface filled with mortar to provide a full surface contact between the mortar and the bottom of the slab. Each slab shall be thoroughly rammed and adjusted, and re-rammed if required until it is thoroughly and satisfactorily bedded to the proper grade and crown. No air pockets in the mortar bed will be allowed. The maximum width of joints shall be one-half (1/2") inch as measured between the edges of the top surfaces of the slabs. The Contractor must perform all necessary field cutting and dressing to have stones fit the required patterns and street hardware.
- (F) Ramming Granite Slabs. Slabs shall have no sand or gravel placed in the joints and shall be rammed to a solid bearing with a rammer weighing not less than thirty (30) pounds handled by a skilled



rammersman. Not less than one (1) rammersman shall be employed to three (3) slabs. Slabs that are found low shall be raised to a true and even surface by adding to the bed. Those found broken or otherwise unsatisfactory shall be removed by tongs and replaced by approved slabs. Pinch bars shall not be used in removing slabs.

- (G) Extra Strength Air-Entrained Portland Cement-Grout Joint Filler. The pavement slabs shall be sprinkled with clean water as directed. The joint filler shall be flushed on the surface and worked into the joints with brooms, rubber edged squeegees, or other approved appliances. Joints shall be re-poured, if necessary, before initial set has taken place until they are filled flush with the surface of the pavement. Cement-grout used for joints shall be colored with mineral oxide pigments to match the granite. The amount of filler left on the surface of the pavement shall be as little as possible and all surplus filler shall be satisfactorily removed.
- (H) Sufficiency of Apparatus. The apparatus agitating the filler shall, in number and efficiency, be sufficient to permit the filler gang to closely follow the slabs or rammers, as the case may be, and in no case shall a pavement be left overnight or when work is stopped without the joint filling being completed.
- (I) Joint Filling in Cold or Wet Weather. During air temperature below 38-degrees Fahrenheit, in the shade, cement-grouting may be done only if permitted by the Engineer. In case of rain the pavement shall be protected by covering with plastic sheeting as required and directed by the Engineer.
- (J) Testing Surface. After the granite slabs have been laid, the surface shall be tested with an approved straight edge ten (10) feet long or with an approved surface testing machine laid parallel with the center line of the roadway and any irregularity in the alignment of granite slab pavement, exclusive of depressions in individual slabs, exceeding one-quarter (1/4) inch shall be immediately corrected to the satisfaction of the Engineer.
- (K) Traffic. No traffic of any kind will be allowed on the granite pavement until permitted by the Engineer.
- (L) Defective Granite Slab Pavement. Such portions of the completed granite slab pavement that are defective in finish, compression, composition, or portions that do not comply with the requirements of these specifications, shall be taken up, removed, and replaced with suitable materials properly laid in accordance with these specifications at the Contractor's own expense.

#### 6.04 NGS.5. Measurement.

- (A) The quantity of New Granite Slab Pavement, Furnished and Installed, in Bike Lanes, Intersections, Crosswalks and Sidewalks to be measured for payment shall be the number of square yards of granite slabs actually installed in the bike lanes, intersections, sidewalks and crosswalks to the lines, grades and patterns shown on the plans, measured in pace to the satisfaction of the Engineer.

In determining the area of New Granite Slab Pavement, Furnished and Installed to be paid for, areas occupied by bases of columns, manhole heads, gate boxes, road boxes, and similar structures will be deducted when their superficial areas measure more than one (1) square foot and will not be deducted when they measure one (1) square foot or less.

- (B) The quantity of Salvage Historic Granite Slab Pavement shall be the number of square yards of granite slab pavement actually furnished or salvaged, to the satisfaction of the Engineer. In determining the area of slabs to be paid for, the areas occupied by rail heads, bases of columns, manhole heads, gate boxes, road boxes and similar structures will be deducted when their superficial areas measure more than one (1) square foot and will not be deducted when they measure one (1) square foot or less.

- (C) The quantity of Reinstalled Historic Granite Slab Pavement to be measured for payment shall be the number of square yards of granite slabs actually installed, in place, to the satisfaction of the Engineer. Generally the quantity of furnished granite slabs shall equal the quantity of installed slabs. In determining the area of slabs to be paid for, the areas occupied by rail heads, bases of columns, manhole heads, gate boxes, road boxes and similar structures will be deducted when their superficial areas measure more than one (1) square foot and will not be deducted when they measure one (1) square foot or less.

6.04 NGS.6 Price To Cover. The unit price bid per square yard for the below listed items shall cover the cost of all labor, materials, insurance, equipment and incidentals necessary to salvage historic granite slab pavements, furnish and install new or historic granite slab pavements on mortar setting bed with extra strength cement grout joints, complete, in place, in accordance with the plans, the specifications, and the directions of the Engineer. However, the cost of flexible base or concrete base for pavement will be paid for under their appropriate items

*Payment will be made under:*

Item No.	Description	Pay Unit
6.04 DX	Reinstall Historic Granite Slab Pavement	S.Y.
6.04 NGSB	New Granite Slab Pavement Furnished and Installed In Bike Lanes	S.Y.
6.04 NGS I	New Granite Slab Pavement Furnished and Installed In Intersections	S.Y.
6.04 NGSS	New Granite Slab Pavement Furnished and Installed In Sidewalks	S.Y.
6.04 NGSX	New Granite Slab Pavement Furnished and Installed In Crosswalks	S.Y.
6.04 SHG	Salvage Historic Granite Slab Pavement	S.Y.

**SECTION 6.05 DP****RESTORATION OF DISTINCTIVE PAVEMENTS**

**6.05 DP.01 INTENT.** This section describes the restoration of distinctive pavement which shall be defined as any non-standard paving material including non-standard concrete sidewalk and all types of brick, block, asphalt, and stone pavers and slabs.

**6.05 DP.02 MATERIAL.**

A. All material shall be in accordance with the latest edition of the NYC Department of Transportation Standard Highway Specifications:

- a. Concrete base for pavers, **Section 4.04**
- b. Granite block and concrete paver sidewalk, **Section 6.06**
- c. Bluestone flags, **Section 6.07**
- d. Interlocking Concrete Pavers, **Section 6.47**
- e. Asphalt Block Pavers, **Section 6.60**
- f. Brick Pavers, **Section 6.66**
- g. Pigmented Concrete Sidewalk, **Section 4.13**

**6.05 DP.03 SUBMITTALS.**

Where salvaged material cannot be re-used, as directed by the Engineer, the Contractor shall provide shop drawings for replacement materials that match the existing and meet or exceed the NYC Department of Transportation Standard Highway Specifications requirements for review and approval.

**6.05 DP.04 METHODS.** The Contractor is not to proceed with any distinctive pavement construction unless ordered to do so by the Engineer

A. All installation methods shall be in accordance with latest edition of the

NYC Department of Transportation Standard Highway Specifications:

- a. Concrete base for pavers, **Section 4.04**
- b. Granite block and concrete paver sidewalk, **Section 6.06**
- c. Bluestone and Fieldstone, **Section 6.07**
- d. Interlocking Concrete Pavers, **Section 6.47**
- e. Asphalt Block Pavers, **Section 6.60**
- d. Brick Pavers, **Section 6.66**

g. Pigmented Concrete Sidewalk, **Section 4.13**

B. Preparation of base to receive paving material shall be in accordance with requirements of the latest edition of the NYC Department of Transportation Standard Highway Specifications to match the surrounding base material, as directed by the Engineer.

**6.05 DP.05 MEASUREMENT.** The area of sidewalk reconstructed shall be measured in square feet, within saw cut limits as shown on contract drawings or as directed by Engineer.

For concrete sidewalk: the amount to be paid for shall be determined by cores as provided in NYC Department of Transportation Standard Highway Specifications, Section 5.04. The Contractor is not to proceed with any distinctive pavement construction unless ordered to do so by the Engineer.

**6.05 DP.06 PRICE TO COVER.** The contract price per square foot for restoration of distinctive pavement of any type shall cover the cost of all labor, materials, equipment, insurance, and necessary incidentals as required to construct the distinctive pavement complete with foundation materials, in place, in full compliance with the contract specifications and plans, including but not limited to, pigment when required to match existing, silicon carbide when required to match existing, curing, excavation (other than rock excavation) and backfilling; new pavers or slabs of any type delivered to site when required; furnishing additional blocks as replacements for blocks which are broken or damaged as a result of the Contractor's operations; cleaning, redressing, cutting and incorporating block into the work; furnishing and placing sand and/or grout for joints to match existing; furnishing shop drawings and samples for testing; all in accordance with the contract drawings, the specifications and directions of the Engineer.

*Payment will be made under:*

Item No.	Description	Pay Unit
6.05 DP	RESTORATION OF DISTINCTIVE PAVEMENTS	S.F.

**SECTION 6.34 A  
TEMPORARY CHAIN LINK FENCE, 8'-0" HIGH**

**6.34A.1. DESCRIPTION**

Under this section, the Contractor must furnish, erect, maintain, and remove, when directed, Temporary Chain Link Fence as shown on the Contract Drawings and directed by the Engineer.

**6.34A.2. MATERIALS AND METHODS**

All materials and methods shall be as specified in Section 6.34 of the NYCDOT Standard Highway Specifications, with the following modifications and additions:

Temporary Chain Link Fence to be furnished under Item No. 6.34 ADTP, shall consist of chain link fence fabric, top and bottom rails for mounting a decorative mesh (to be furnished under Item No. 9.06 HW), gates, posts with steel plate footings, sand bags to hold fence in place, and all necessary incidental in accordance with the Contract Drawings and the directions of the Engineer.

When directed by the Engineer, the Contractor must remove and dispose of the temporary chain link fence to the satisfaction of the Engineer. The Contractor must then fill any holes left in the pavement with compacted clean sand to grade.

**6.34A.3. MEASUREMENT**

The quantity of Temporary Chain Link Fence to be measured for payment shall be the number of linear feet satisfactorily installed, complete, measured in place, from center to center of end posts.

**6.34A.4. PRICE TO COVER**

The price bid for Temporary Chain Link Fence shall be a unit price per linear foot and shall cover the cost of all labor, materials, plant, equipment, insurance, and necessary incidentals required to furnish, install, maintain, and remove temporary chain link fence; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer. Temporary chain link fence shall also include, but not limited to, any gates as may be required.

*Payment will be made under:*

Item No.	Description	Pay Unit
6.34 ADTP	TEMPORARY CHAIN LINK FENCE, 8'-0" HIGH, (WITH TOP AND BOTTOM RAILS AND POSTS MOUNTED ON STEEL PLATES)	LF

**SECTION 6.34 D**  
**DECORATIVE STEEL FENCE AND GATES**

6.34 D.1. DESCRIPTION:

This work shall consist of furnishing and installing Ornamental Picket Fence with Solid Steel Pickets and Gates as shown on the Contract Plans, as directed by the Engineer and in accordance with the specifications.

6.34 D.2. RELATED SECTIONS:

- (A) 4.06 - Concrete in Structure
- (B) 4.14 E - Epoxy Coated Steel Reinforcement Bars
- (C) E 260526 Grounding and Bonding for Electrical Systems

6.34 D.3. SUBMITTALS:

- (A) Product Data: For each type of product indicated.
  - 1. Provide finish paint sample colors from manufacturer's full range of standard and custom colors for selection by Engineer.
- (B) Shop Drawings: For fence and gates. Include plans, elevations, sections, details, including details of all connections, and gate attachments to other work.
- (C) Samples: For each fence material and for each color specified.
  - 1. Provide Samples 12 inches in length for linear materials, with selected finish paint color for approval by Engineer.
  - 2. Provide Samples 3" x 6" in size on metal surface of selected finish paint color for approval by Engineer.
- (D) Certificates
  - 1. Welder qualifications.
  - 2. Material certificates indicating steel strength.

6.34 D.4. QUALITY ASSURANCE:

- (A) Fabricator Qualifications: The fabricator of decorative fencing shall have recent successful experience with projects that include fabrication of similar fence and gate structures. Prior to commencement of work and ordering any material, the Contractor must submit to the Engineer for approval, the proposed fence and gate fabricator including their respective work history and experience in fabricating similar products to the specified items of this project.
  - 1. Include qualifications of fabricator completing the galvanizing and painting work of this section.
- (B) Welding Qualifications: Qualify procedures and personnel according to the American Welding Society (AWS) D1.1/D1.1M, "Structural Welding Code - Steel."

6.34 D.5. DELIVERY, STORAGE, AND HANDLING:

- (A) Fence and gate materials shall be carefully packed to prevent damages during shipping and unapproved product shall be removed at the Contractor's expense
- (B) Store fence and gate materials on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied.
- (C) Store sealant and grout materials on elevated platforms, under cover, and in a dry location. Do not use grout materials that have become damp.
- (D) Handling: Protect materials and finish during handling and installation to prevent damage.

6.34 D.6. COORDINATION:

- (A) Coordinate the work of this section with concrete foundations and curbs indicated on the Drawings.
- (B) Coordinate the work of this section with general electrical requirements and electrical work to be mounted on the fence as indicated on the Drawings.

6.34 D.7. MATERIALS:

- (A) Fence and Gate Materials: Fence and gate components including shall be made from steel tubing bars, and shapes, hot dip galvanized of the sizes and strengths shown on the Contract Drawings.
  1. All material shall conform to Specification C1015 of the American Iron and Steel Institute (A.I.S.I), unless otherwise specified.
  2. Materials shall conform to the following requirements.
    - a. Plates, Shapes, and Bars: ASTM A 36/A 36M.
    - b. Bars (Pickets): Hot-rolled, carbon steel complying with ASTM A 29/A 29M, Grade 1010.
    - c. Tubing: ASTM A 500, steel tubing Grade B with minimum yield strength of 46 ksi.
    - d. Castings: Either gray or malleable iron unless otherwise indicated.
      - 1) Gray Iron: ASTM A 48/A 48M, Class 30.
      - 2) Malleable Iron: ASTM A 47/A 47M.
    - e. Fasteners: Stainless-steel carriage bolts and tamperproof nuts.
- (B) Accessories:
  1. Post Caps: Formed steel or cast of malleable iron, weather tight closure cap. Provide one standard style (see Drawings) post cap for each post.
  2. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
  3. Hardware: Latches permitting operation from both sides of gate, hinges, and keepers for each gate leaf. Fabricate latches with integral eye openings for padlocking; padlock accessible from both sides of gate.
    - a. Padlocks and Chain: Where gates are specified, furnish one (1) padlock for each leaf of a double leaf gate. All padlocks shall be keyed alike with a

master key, with two (2) inch width by three-quarter (3/4) inch thick brass body, maximum security, five (5) pin tumblers with hardened alloy steel chrome plated shackle no less than three-eighths (3/8) inch diameter and two (2) inches clearance (elongated shackle). A galvanized steel chain, nine (9) inches long shall be fastened to the gate and the body of the lock. The chain shall be five-sixteenths (5/16) inch by one and three-eighths (1-3/8) inch. The Contractor must furnish two (2) keys for each padlock.

4. Hinges: Builders Hardware Manufacturers Association (B HMA) A156.1, Grade 1, suitable for exterior use. **Provide shop drawings and signed and sealed calculations** demonstrating sufficient size and number of hinges to support 150% of the gate leaf weight, as approved by the Engineer.
    - a. Function: 39 - Full surface, triple weight, antifriction bearing.
    - b. Material: Wrought steel, forged steel, cast steel, or malleable iron.
  5. Cane Bolts: Provide for inactive leaf of pairs of gates. Fabricated from 3/4-inch-diameter, round steel bars, hot-dip galvanized after fabrication. Finish shall match gates. Provide in-pavement mounted galvanized-steel pipe strikes to receive cane bolts in **both open and closed positions**.
- (C) Grout: Grout for fence posts shall be non-shrink, non-metallic, cement based grout, conforming to ASTM C 1107. Acceptable manufacturers include:
1. Sonneborn 10K Grout as manufactured by BASF Building Systems, Inc., Shakopee, MN
  2. SikaGrout 212 as manufactured by Sika Corporation, Lyndhurst, NY
  3. Five Star High Strength Grout as manufactured by Five Star Products, Inc., Fairfield, CT
  4. Or approved equivalent.
- (D) Sealant: Sealant around fence post shall be one part polyurethane, elastomeric adhesive conforming to ASTM C 920, Type M, Class 25, Grade NS. Acceptable manufacturers include the following:
1. Sonneborn's Ultra Sealant, as manufactured by BASF Building Systems, Inc., Shakopee, MN
  2. Sikaflex-1a as manufactured by Manufactured by Sika Corporation, Lyndhurst, NY
  3. DynaTred as Manufactured by Pecora Corporation, Harleysville, PA
  4. Or approved equivalent.
- (E) Grounding Materials:
1. Grounding Conductors: Bare, solid wire for No. 6 AWG and smaller; stranded wire for No. 4 AWG and larger.
    - a. Material above Finished Grade: Copper
    - b. Material on or below Finished Grade: Copper.
    - c. Bonding Jumpers: Braided copper tape, 1 inch wide, woven of No. 30 AWG bare copper wire, terminated with copper ferrules.



2. Grounding Connectors and Grounding Rods: Comply with UL 467.
  - a. Grounding Rods: Copper-clad steel.
    - 1) Size: 5/8 by 96 inches

(F) High Performance Coating:

1. Basis for Design shall be a custom color, as manufactured by Sherwin Williams, or approved equal.
  - a. First Coat: Primer is a fast drying, 53% + 2% weight solids, VOC compliant, corrosion resistant with a dry film thickness of 2-4 mils. Verify required drying time before recoating (with alkyds) with manufacturer. Performance shall meet or exceed the standards of Federal Specification TT-P-86H, Type III and IV, and TT-P-664D.  
Acceptable manufacturers include the following:
    - 1) Sherwin Williams # Pro-Cryl® Universal Primer, B66-310, Red Oxide, acrylic primer for galvanized surfaces as manufactured by Sherwin Williams Company, Woodside, NY
    - 2) Galoseal WB as manufactured by Carboline Company, St. Louis, MO.
    - 3) Mercury Series 2100 Mercrylic Primer, as manufactured by Mercury Paint Corporation, Brooklyn, NY.
    - 4) Or approved equal.
  - b. Second Coat and Third Coat: Acrylic coating having a dry film thickness of 2.5-4 mils requires 5 hours drying time @ 77 F; 8 hours @ 50 F, before recoating (verify required drying time with manufacturer).  
Acceptable manufacturers include the following:
    - 1) Sher-Cryl HPA, B66-350, Black, as manufactured by Sherwin Williams Company, Woodside, NY
    - 2) Carbocrylic 3359 DTM as manufactured by Carboline Company, St. Louis, MO.
    - 3) Mercury Series 2150 Black, as manufactured by Mercury Paint Corporation, Brooklyn, NY.
    - 4) Or approved equal.

6.34 D.8. FENCE AND GATE FABRICATION:

- (A) General: No fabrication work is to be performed until shop drawings are approved by the Engineer. Fences, complete with gates where required shall be fabricated in strict accordance with Contract Drawings and approved Shop Drawings. Posts and rails shall be formed into panels of the shapes shown on the Drawings and joints completely welded with welds of proper size and shape or bolted all as directed or shown on the Drawings. Connections shall be provided as indicated on the Contract Drawings. Welds and weldments shall conform to the requirements of the American Welding Society.
  1. Posts and pickets at flush panels shall in all cases be truly vertical; pickets at extruded panels shall align flush with truly vertical at top and bottom of pickets; rails shall be parallel to grade as shown on the Contract Drawings.
- (B) Fabrication: Assemble fences into sections by welding pickets to rails.
  1. Fabricate sections with clips welded to rails or posts for fastening to posts in field.
  2. Drill posts and clips for fasteners before finishing to maximum extent possible.

3. Drill posts, clips, and bar grating for fasteners before finishing to maximum extent possible.
- (C) Welds: Finish exposed welds to comply with National Ornamental and Miscellaneous Metals Association, (NOMMA) Guideline 1, Finish #4 - good-quality, uniform undressed weld with minimal splatter.
- (D) Galvanizing: For items other than hardware that are indicated to be galvanized, hot-dip galvanizing to comply with ASTM A 123/A 123M. For hardware items, hot-dip galvanizing to comply with ASTM A 153/A 153M. **Do not quench steel following galvanizing to avoid surface contaminants from depositing on the steel and to ensure compatibility with the high-performance coating.**
1. Hot-dip galvanize posts and rails.
  2. Hot-dip galvanize rail and picket assemblies after fabrication.
- (E) Steel Finishes:
1. Surface Preparation: Clean surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants.
  2. After cleaning, profile steel surface by applying a zinc-phosphate conversion coating suited to the organic coating to be applied over it.
  3. Clean welds, mechanical connections, and abraded areas and repair galvanizing to comply with ASTM A 780.
  4. High-Performance Coating: Immediately after cleaning, apply three coat system to prepared surfaces. Comply with coating manufacturer's written instructions and with requirements in Society for Protective Coatings, SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting. Apply at spreading rates recommended by coating manufacturer. High performance coating shall be shop applied only.
  5. Match approved Samples for color, texture, and coverage. Remove and refinish, or recoat work that does not comply with specified requirements.

#### 6.34 D.9. CONSTRUCTION METHODS:

- (A) Examination: Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, construction layout, and other conditions affecting performance of the Work.
1. Do not begin installation before final grading is completed unless otherwise permitted by Engineer.
  2. Proceed with installation only after unsatisfactory conditions have been corrected.
- (B) Preparation: Mark locations of fence lines, gates, and terminal posts and coordinate with concrete foundation and sleeve construction. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, underground structures, benchmarks, and property monuments.

- (C) Inspection of Steel Fence Components on Delivery: Prior to installation, the Decorative Steel Fence and Gates shall be inspected for damage, bends or kinks in the railing not specifically called for in the Contract Plans. Any of these defects shall constitute sufficient cause for rejection. Straightening of such bends or kinks shall not be allowed. The Engineer may order some bending or curving to allow for minor adjustments.
- (D) Fence Installation: The fences shall be erected in holes that shall have been formed in the concrete to receive them. Clean holes of loose material, insert posts. After the posts have been set in place and properly supported to hold them to line and grade and fill annular space between post and concrete with non-shrink grout, mixed and placed to comply with grout manufacturer's written instructions. Finish and slope top surface of grout to drain water away from post. After grout has hardened, place a sealant bead along the edge between the post and grout. The sealer shall be applied in strict accordance with the manufacturer's instructions. Any fence not set plumb and true to line and grade shall be removed and replaced at the Contractor's expense.
- (E) Gate Installation: Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary
- (F) Grounding and Bonding
1. Fence Grounding: Install at each fence post except as follows:
    - a. Gates and Other Fence Openings: Ground fence on each side of opening.
    - b. Bond metal gates to gate posts.
  2. Protection at Connection to Surface Mounted Electrical Power Lines: Ground fence at location of initial point of mounting and at a maximum distance of 150 feet on each side of mounting.
  3. Grounding Method: At each grounding location, drive a grounding rod vertically until the top is 6 inches below finished grade. Connect rod to fence with No. 6 AWG conductor. Connect conductor to each fence component at the grounding location.
  4. Bonding Method for Gates: Connect bonding jumper between gate post and gate frame.
  5. Connections: Make connections so possibility of galvanic action or electrolysis is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.
    - a. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
    - b. Make connections with clean, bare metal at points of contact
    - c. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
    - d. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
    - e. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.
- (G) Grounding-Resistance Testing: Engage a qualified testing agency to perform tests and inspections.
1. Grounding-Resistance Tests: Subject completed grounding system to a megger test

at each grounding location. Measure grounding resistance not less than two full days after last trace of precipitation; measure without soil having been moistened by any means other than natural drainage or seepage and without chemical treatment, or other artificial means of reducing natural grounding resistance. Perform tests by two-point method according to Institute of Electrical and Electronics Engineers, IEEE 81.

2. Excessive Grounding Resistance: If resistance to grounding exceeds specified value, notify Engineer promptly. Include recommendations for reducing grounding resistance and a proposal to accomplish recommended work.
3. Report: Prepare test reports certified by a testing agency of grounding resistance at each test location. Include observations of weather and other phenomena that may affect test results.

(H) Adjusting:

1. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
2. Lubricate hardware and other moving parts.

(I) The Contractor must maintain the fences and gates during the life of the Contract and shall repair and replace all members that are disturbed, damaged or destroyed.

(J) Cleaning, Touch-Up and Protection:

1. Clean fence and gates.
2. Remove excess grout at fence posts
3. Replace damaged members as required by Engineer.
4. Touch-Up Painting: Repair damage to the paint system in accordance with the manufacturer's recommendations and approved by the Engineer.
5. Protect fence and gates from construction damage until substantial completion of the project.

6.34 D.10. METHOD OF MEASUREMENT

- (A) Decorative Steel Fence – Extruded Panels: The quantity to be measured for payment under this item shall be the number of linear feet measured along the centerline of the posts in accordance with the Drawings, approved Shop Drawings, the specifications, and the directions of the Engineer.
- (B) Decorative Steel Fence – Flush Panels: The quantity to be measured for payment under this item shall be the number of linear feet measured along the centerline of the posts in accordance with the Drawings, approved Shop Drawings, the specifications, and the directions of the Engineer.
- (C) Decorative Steel Double Gate: The quantity to be measured for payment under this item shall be each double gate unit, including posts, gate leaves, accessories padlocks and chains in

accordance with the Drawings, approved Shop Drawings, the specifications and the directions of the Engineer.

6.34 D.11. BASIS OF PAYMENT

The unit price bid per linear foot of decorative steel fence – extruded, decorative steel fence – flush panel, or each decorative steel double gate unit shall include the cost of furnishing all labor, materials and equipment necessary to complete the work. No payment shall be made for those fence pieces or gate unit that are replacements for those fence pieces or gate units that have been rejected. The cost of excavation, concrete foundations and reinforcement steel will be paid for under separate items.

Payment will be made under:

Item No.	Description	Pay Unit
6.34 DE	DECORATIVE STEEL PICKET FENCE – EXTRUDED PANEL	Linear Foot
6.34 DF	DECORATIVE STEEL PICKET FENCE – FLUSH PANEL	Linear Foot
6.34 DG	DECORATIVE STEEL DOUBLE SWING GATE	Each

**SECTION 6.74 PR**  
**PAVER RESTRAINT SYSTEM**

**6.74PR.1. DESCRIPTION.** Under this Section, the Contractor must furnish and place a paver restraint system for concrete or granite pavers that incorporate a metal edge anchored with a polypropylene geogrid apron laid under the pavers. The items under this section shall be as follows:

- (A) ITEM No. 6.74 PRE, PAVER RESTRAINT EDGE. This item shall consist of furnishing and delivering a paver-restraining metal edge. Installation of the paver restraint edge shall be paid for under Item No. 6.74 PRA, Paver Restraint Anchorage.
- (B) ITEM No. 6.74 PRA, PAVER RESTRAINT ANCHORAGE. This item shall consist of paver restraint anchorage which shall include all hardware as required to anchor a metal paver edge, and shall include complete installation of the metal paver edge in conjunction with adjacent concrete or granite pavers. The metal edge shall be the Item No. 6.74 PRE.

**6.74PR.2. MATERIALS.** Metal Edge Restraint shall be a product manufactured for use as paver restraint. The edge metal restraint shall be corrugated L-shape in profile 1/4" thick extruded aluminum, 6063 alloy, suitable for straight-line and curvilinear applications: Height and width as shown on the plans. Horizontal base shall have holes spaced 4 inches apart along its length to receive anchors. Metal edge restraint shall be provided in minimum 8' lengths. Section ends shall be fabricated to splice together with aluminum connectors. Metal Edge Restraint shall be mill finished.

Anchors: Shall be 1/4" x 1-1/4" concrete nail or drive pin fastener.

Connectors: Metal Raised Edge sections shall splice together with 0.030 inch thick x 1.25 inch wide x 4 inch long aluminum sliding connectors.

**6.74PR.3. SUBMITTALS.** Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications. Installer must demonstrate prior experience with installation of paver restraint system.

Submit photograph, address and reference contact information for previous installations.

Submit product data for all components of the system. Submit sample as required for one (1) linear foot of complete paver restraint system as required for complete installation of Item Nos. 6.47 PRE and 6.47 PRA.

**6.74PR.4. METHODS.** Installation shall be in conformance with manufacturer's instructions. Prepare concrete base for pavement as

Modified for HWKKP005 on January 3, 2018.

required for paver installation. Set metal edge along perimeter. Fill gaps under metal edge with base material to provide proper support. Connect in accordance with manufacturer's instructions. Install setting course and pavers per **Section 6.04 NGP, NEW GRANITE PAVER WEARING COURSE**, of these I-Pages.

**6.74PR.5. MEASUREMENT.**

- (A) PAVER RESTRAINT EDGE. The quantity to be measured for payment shall be the number of linear feet of metal edge delivered to the job site, to the satisfaction of the Engineer.
- (B) PAVER RESTRAINT ANCHORAGE. The quantity to be measured for payment shall be the number of linear feet of metal edge anchored in place, to the satisfaction of the Engineer.

**6.74PR.6. PRICES TO COVER.**

- (A) PAVER RESTRAINT EDGE. The unit price bid per linear foot for Paver Restraint Edge shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to furnish and deliver the Paver Restraint Edge to the project site.

Paver Restraint Edge installation will be paid under Item No. 6.74 PRA, Paver Restraint Anchorage.

- (B) PAVER RESTRAINT ANCHORAGE. The unit price bid per linear foot for Paver Restraint Anchorage shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to install Paver Restraint Edge in designated areas. The unit price bid shall also include, but not be limited to, the cost of furnishing and installing anchors and connectors; 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
6.74 PRE	PAVER RESTRAINT EDGE	L.F.
6.74 PRA	PAVER RESTRAINT ANCHORAGE	L.F.

Modified for HWKKP005 on January 3, 2018.

**SECTION 6.74 SWPB  
STEEL AND WOOD PLANTER BENCH**

**6.74 SWPB.1. DESCRIPTION.**

Under this Item, the Contractor must fabricate, furnish and install steel and wood planter bench units Type A and Type B, in accordance with the Contract Drawings, specifications, approved Shop Drawings, and directions of the Engineer.

**6.74 SWPB.2. RELATED SECTIONS.**

- (A) 7.50 SWBS Steel and Wood Bleacher Seating of these I-Pages.

**6.74 SWPB.3. REFERENCES.**

- (A) American Society for Testing And Materials (ASTM) Standards
1. ASTM A36 "Standard Specification for Carbon Structural Steel."
  2. ASTM A 123 "Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products."
  3. ASTM A 153 "Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware."
  4. ASTM A 500 "Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes."
  5. ASTM A 1008 "Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable."
  6. ASTM B 633 "Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel."
- (B) American Welding Society (AWS) Standards
1. AWS D1.1/D1.1 M "Structural Welding Code – Steel".
  2. AWS D1.3 "Structural Welding Code – Sheet Steel".
- (C) National Ornamental and Miscellaneous Metals Association (NOMMA)
1. Guideline 1 "Joint Finishes"

**6.74 SWPB.4. SUBMITTALS.**

- (A) Product Data: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods.
1. Provide wood slat treatment methodology.
  2. Submit manufacturer's product data sheets for Geocomposite Drainage Mat & Filter Geotextile
- (B) Shop Drawings: Submit manufacturer's Shop Drawings in a scale no smaller than Contract Documents, with north arrow (consistent with construction drawing's north arrow) for each steel and wood planter bench unit, including framing plans, thickness of steel plates, wood slat plans, unit elevations, detailing indicating overall dimensions.
1. Show the following minimum information:
    - a. Dimensioned steel framing plans indicating size, shape and strength of steel members.
    - b. Dimensioned wood slat plans including orientation of slats and slat fastener locations
    - c. Dimensioned elevations of each side of unit



- d. Sections through units indicating framing arrangement and attachment details for steel panels and wood slats
  - e. Details showing welded connections between framing elements, attachment of wood slats, steel panels, ground leveling, as well as unit lifting points for installation and relocation.
  - f. Provide separate drawings showing unit rigging and lifting procedures for installation and temporary removals.
- (C) Samples:
- 1. Blackened Steel Panel: three (3) 12" x 12" of thickness shown on the Contract Drawings with color, finish and protective coating to match Engineer's sample.
  - 2. Wood Planter bench Slat: three (3) two foot long samples of wood slats in size and shape shown on the Contract Drawings with specified preservative treatment and finish.
  - 3. Skate Stop: three (3) complete, unique letters at full scale as shown on the Contract Drawings with material and finish.
  - 4. Stainless Steel Attachment Hardware: three (3) full size samples of tamper-proof wood slat attachment bolts.
- (D) Certificate of Warranty: Written Warranty from Manufacturer on manufacturer's company's letterhead specifying conditions of Warranty as indicated herein.

#### 6.74 SWPB.5. QUALITY ASSURANCE

- (A) Manufacturer's Qualifications: The manufacturer of steel and wood planter benches shall have recent successful experience with projects that include the design and fabrication of similar specialty site furnishings. Prior to commencement of work and ordering any material, the Contractor must submit to the Engineer for approval, the proposed steel and wood planter bench manufacturer including their respective work history and experience in the design and fabrication of products similar to the specified items of this project.
- (B) Product Support: All components of specified planter bench shall be supported with complete engineering drawings and calculations, signed & sealed by a licensed engineer in the State of New York and all testing documentation required.
- (C) Manufacturing Lead Time: Orders shall be filled within 10 weeks of Engineer's approval of Shop Drawings and Samples for Verification.

#### 6.74 SWPB.6. DESIGN AND PERFORMANCE REQUIREMENTS

- (A) Delegated Design: Engage a qualified professional engineer to design steel and wood planter bench.
- (B) Design Standards:
  - 1. New York City Building Code (NYCBC) 2014
  - 2. International Code Council (ICC) 300-2012
  - 3. American Society of Civil Engineers, ASCE 7-10:
- (C) Structural Performance Requirements: Provide full steel and wood planter bench capable of withstanding the following design loads within limits and under conditions indicated:
  - 1. Dead Load: According to material densities
  - 2. Superimposed Dead Load: According to material densities
  - 3. Live Load: 100 psf, deflection criteria for Live Load is limited to L/200 (governs vertically)
  - 4. Horizontal Sway Loads: 24 plf parallel to seating at footboard for each level of seating. 10 plf perpendicular to seating at the footboard of each level of seating.
  - 5. Snow: 25 psf (including extra due to drift)

6. Wind: Minimum wind pressure on components and cladding  $w=20$  psf (governs laterally)
7. Earthquake: Use 17.7% of Dead Load as lateral equivalent loading
8. Temperature: Structures is free to expand in any direction.

#### 6.74 SWPB.7. DELIVERY, STORAGE AND HANDLING

- (A) Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- (B) Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.
- (C) Handling: Protect materials and finish during handling and installation to prevent damage.

#### 6.74 SWPB.8. WARRANTY.

- (A) Warranty Information:
  1. Products will be free from defects in material and/or workmanship for a period of three years from the date of substantial completion.
  2. The warranty may exclude damage resulting from accident, misuse, tampering, negligence, or abuse.
  3. Steel and wood planter bench units and any of their components found defective upon inspection by an authorized manufacturer service representative and Engineer, shall be repaired or replaced to the satisfaction of the Engineer.

#### 6.74 SWPB.9. MANUFACTURER

- (A) Provide pre-assembled steel and wood bleacher units, as manufactured by the following company or approved equal:
  1. Manufacturer:
    - a. MachineMade, Long Island City, NY (347) 943-3814.
    - b. Wausau Tile, Inc. Wausau, WI (715) 359-3121.
    - c. Landscape Forms, Inc. Kalamazoo, MI (800) 430-6209.
    - d. Or approved equivalent

#### 6.74 SWPB.10. MATERIALS.

Materials shall comply with the following requirements:

- (A) Steel Framing:
  1. Plates, Shapes and Bars: ASTM A36, size and strengths as indicated on Drawings.
  2. Uncoated steel sheet: ASTM A 1008, cold rolled steel.
  3. Welding rods and bare electrodes: Select according to AWS specifications for metal allow welded.
  4. Tub Outline: internal outline profile on top border
  5. Tub Drainage: laser-cut openings in base.
  6. Tub Relocation: integrated slots for optional pallet jack relocation.
  7. Finishes: Mill-finish, cold-rolled steel plate substrate laser cut/waterjet to size.
    - a. Electro-plated black finish with nickel-copper-zinc alloy to increase durability and add blackened color variation to steel
    - b. Edge-relief with Scotch Brite pad as necessary to add more character where needed. Steel may need to be distressed before plating if a more distressed look is required.
    - c. Matte-Clear Kynar fluoropolymer powder finish to meet AAMA 2605 standards.

- (B) Wood Slats: Reclaimed teak, unfinished or other Engineer approved hardwood species of sizes and shapes indicated on the Drawings.
1. Wood shall be kiln dried or air-dried and aged reclaimed with a maximum moisture content of 12 percent.
  2. Provide boards hand selected for freedom from characteristics, on exposed surfaces and edges, that would impair finish appearance, including decay, honeycomb, knot holes, shake, splits, torn grain, and wane.
  3. Wood plugs to match color and finish to wood in which plug is inserted.
- (C) Attachment Hardware:
1. Visible attachment hardware: tamper-proof stainless steel, type 304.
  2. Concealed attachment hardware: galvanized steel.
- (D) Skate Stops: Cast silicon bronze, with chamfered corners and brown patina.
1. Internally threaded to receive anchor pins
  2. 3/8 inch diameter anchor pins
- (E) Geocomposite Drainage Mat & Filter Geotextile
1. Geocomposite drainage mat: 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 inch minimum, 0.5 inch maximum. Compressive Strength to be 30,000 psf or greater without impediment of flow per ASTM D 1621 and ASTM D 4716
  2. Filter Geotextile: 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.

#### 6.74 SWPB.11. FABRICATION

- (A) General:
1. Steel and wood planter bench units shall be shop fabricated as indicated on the Drawings.
  2. Units shall be fully assembled prior to delivery and installation with the exception of joining individual sections in the field to create complete units.
  3. Paint steel framework prior to installation of steel panels and wood slats.
- (B) Fabrication of Steel Framework:
1. Steel framework shall be shop fabricated, galvanized and finished to the maximum extent possible.
  2. Pre-drill holes to allow for subsequent attachment of wood and steel panels.
  3. Fabricate framework so that minimal on-site work is required to install, including securing units to the ground and connecting units together.
  4. Finish welds to comply with National Ornamental and Miscellaneous Metals Association (NOMMA), Guideline 1: Finish #2 completely sanded joint, some undercutting and pinholes okay.
- (C) Finishing of Steel Framework:
1. Preparation of steel framework for finishing:
    - a. Clean framework surfaces thoroughly immediately prior to finishing. Surfaces shall be cleaned in accordance with SP-1 Solvent Cleaning. Perform cleaning with a solvent such as mineral spirits, xylol or turpentine to remove all dirt, grease and foreign matter. Surfaces that show evidence of loose mill scale, rust and other

deleterious matter shall be cleaned in accordance with SP-2, Hand Tool Cleaning or SP-3 Power Tool Cleaning to achieve a sound substrate. Apply finish immediately after final SP-1 solvent cleaning and drying.

2. Finishing of steel framework:
  - a. Finishing of the steel framework shall be shop applied only. Field applied finish, except for touch-ups is not permitted.
  - b. Apply finish in accordance with the manufacturers written instructions.
  
- (D) Installation of Geocomposite Drainage Mat and Filter Geotextile
  1. Clean and prepare surfaces to receive geocomposite drainage mat
  2. Place the Filter Geotextile in accordance with manufacturer's instructions.
  3. Secure geocomposite drainage mat and the Filter Geotextile to sides of planter.
  
- (E) Installation of Wood Slats:
  1. Install wood slats in accordance with the Drawings and approved Shop Drawings.
  2. Pre-drill wood for fasteners.
  3. Install wood with growth ring curves point downward.
  
- (F) Installation of Skate Stops:
  1. Install skate stops in accordance with the Drawings and approved Shop Drawings.
  2. Pre-drill wood for skate stops.
  3. Anchor skate stops with epoxy. Ensure seamless, flush, and clean connect to wood slats with no seepage of excess epoxy onto wood slats.

#### 6.74 SWPB.12. CONSTRUCTION METHODS.

The following methods of installation shall be used.

- (A) Examination:
  1. Examine areas to receive steel and wood planter bench units.
  2. Notify Engineer of conditions that would adversely affect installation or subsequent use.
  3. Do not begin installation until unacceptable conditions are corrected and acceptance verified in writing by Engineer.
  
- (B) Installation:
  1. Comply with manufacturer rigging and hoisting requirements when moving planter bench units.
  2. Install steel and wood planter bench units in accordance with manufacturer's instructions and approved Shop Drawings at locations indicated on the Contract Drawings and as directed by Engineer.
  3. Install units level. Provide ground attachments and shimming as required and as approved by the Engineer.
  
- (C) Adjusting:
  1. Finish Damage: Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Engineer.
  2. Component Damage: Remove and replace damaged components that cannot be successfully repaired as determined by Engineer.
  
- (D) Cleaning: Clean steel and wood planter bench units promptly after installation in accordance with manufacturer's instructions. Do not use harsh cleaning materials or methods that could damage finish.
  
- (E) Protection; Protect installed steel and wood planter bench units to ensure units will be without damage or deterioration at time of Substantial Completion.

**6.74 SWPB.13. MEASUREMENT.**

The quantity of STEEL AND WOOD PLANTER BENCH UNITS to be measured for payment shall be EACH in the shapes and sizes indicated on the drawings.

**6.74 SWPB.14. PRICES TO COVER.**

The bid prices shall be a unit price per EACH Steel and Wood Planter Bench Unit and shall include the cost furnishing all labor, materials, shop drawings, equipment, insurance, and incidentals necessary to furnish, assemble and install each Steel and Wood Planter Bench Unit in accordance with the contract drawings, approved shop drawings, specifications and the directions of the Engineer. The price bid per Each unit shall also include, but not be limited to all steel framing, hardware, wood slats, skate stops, drainage mat and filter geotextile.

Payment will be made under:

Item No.	Description	Pay Unit
6.74 SWPBA	STEEL AND WOOD PLANTER BENCH UNIT TYPE A	EACH
6.74 SWPBB	STEEL AND WOOD PLANTER BENCH UNIT TYPE B	EACH

**SECTION 6.77 SP**  
**SOLAR POWERED TRASH COMPACTOR WITH OR WITHOUT INTEGRATED RECYCLING UNITS**

6.77SP.1. **INTENT.** This section describes the furnishing and installation of Solar Powered Trash Compactors with or without Integrated Recycling Units as specified.

6.77SP.2. **DESCRIPTION.** Under this Section, the Contractor must furnish and install Solar Powered Trash Compactors with or without integrated recycling units, as specified, all in accordance with the Contract Drawings, the specifications and directions of the Engineer. Integrated recycling units shall consist of an Integrated Bottles and Cans Recycling Compactor Unit, a Single Stream Recycling Unit consisting of an Integrated Bottles/Cans, and Paper receptacle, and/or an Integrated Non-Compacting Receptacle for Paper, as specified.

6.77SP.3. **MATERIALS.** The Solar Powered Trash Compactors and Recycling Units shall be the BigBelly®, a Solar Powered Compaction Apparatus (Patent number 7,124,680), as manufactured by BigBelly Solar Company, 85 Wells Ave., Suite 305, Newton, MA 02459, Telephone: Toll Free: (888) 820-0300, and Fax: (617) 558-1010, and distributed by:

Direct Environmental Corp. – Telephone: (718) 607-7658 or [decalternate@gmail.com](mailto:decalternate@gmail.com);

Waste Management – Telephone: (609) 798-3062 or [dweist@wm.com](mailto:dweist@wm.com);

BigBelly Solar, Inc. – Telephone: (617) 500-2584 or [rgaudette@bigbelly.com](mailto:rgaudette@bigbelly.com);

or, other approved suppliers.

Each trash compactor unit with an integrated compactor unit for bottles and cans recycling, and a non-compacting receptacle for paper shall be made of galvanized metal and ABS plastic; have a combined weight of 620 pounds; a height, width and depth of 50.4" x 73.7" x 25.9"; a bin volume of 32 gallons for the compactor and 50 gallons for each of the recycling unit; a hopper insertion opening of 6" x 17" for the compactor, an opening of 1-3/4" by 12" for the paper collecting unit, and a 5" diameter opening for the bottle and can recycling unit; a hopper handle height of 41.6" on the compactors; have a powder coating finish; and, two (2) sets of access keys to be keyed alike for all compactors furnished. Color shall be black.

Liner bags shall be 32" high, 92" in circumference and at least two (2) mils thick.

6.77SP.4. **SUBMITTALS.**

1. Product Data: Submit manufacturer's product data, including installation instructions.
2. Warranty: Submit manufacturer's standard warranty.

6.77SP.5. **METHOD.** The Contractor must furnish and install trash compactors as per the manufacturer's instructions and directed by the Engineer.

1. Approved trash compactors shall be installed as specified, as indicated on the plans, and as directed by the Engineer. Clearances from curbs and any existing sidewalk infrastructure shall be per manufacturer's instructions.

6.77SP.6. MEASUREMENT.

## (A) SOLAR POWERED TRASH COMPACTOR

The quantity to be measured for payment shall be the actual number of single stations consisting of Solar Powered Trash Compactor units that have been satisfactorily installed at the site to the satisfaction of the Engineer.

## (B) SOLAR POWERED TRASH COMPACTOR WITH INTEGRATED BOTTLES AND CANS RECYCLING COMPACTOR UNIT

The quantity to be measured for payment shall be the actual number of dual stations consisting of a Solar Powered Trash Compactor with an Integrated Compactor for Bottles and Cans Recycling that have been satisfactorily installed at the site to the satisfaction of the Engineer.

## (C) SOLAR POWERED TRASH COMPACTOR WITH INTEGRATED BOTTLES AND CANS RECYCLING COMPACTOR AND INTEGRATED NON-COMPACTING RECEPTACLE FOR PAPER

The quantity to be measured for payment shall be the actual number of triple stations consisting of a Solar Powered Trash Compactor unit with an Integrated Recycling Unit for Bottles and Cans Recycling Unit and an Integrated Non-Compacting Receptacle for Paper that have been satisfactorily installed at the site to the satisfaction of the Engineer.

## (D) SOLAR POWERED TRASH COMPACTOR WITH INTEGRATED SINGLE STREAM RECYCLING UNIT

The quantity to be measured for payment shall be the actual number of dual stations consisting of a Solar Powered Trash Compactor with an Integrated Single Stream Recycling Unit that have been satisfactorily installed at the site to the satisfaction of the Engineer.

6.77SP.7. PRICES TO COVER.

## (A) SOLAR POWERED TRASH COMPACTOR

The unit price bid per each single station consisting of a Solar Powered Trash Compactor unit shall include the cost of furnishing all labor, materials, equipment, insurance, and incidentals required to complete the work include, but not limited to, the cost of furnishing and installing a High Energy Solar Powered Trash Compactor unit, anchoring the unit to the pavement, furnishing access keys, software activation and configuration, and furnishing and installing a liner bag in the unit; all in accordance with the Contract Drawings, the Specifications and the directions of the Engineer.

## (B) SOLAR POWERED TRASH COMPACTOR WITH INTEGRATED BOTTLES AND CANS RECYCLING COMPACTOR UNIT

The unit price bid per each dual station consisting of a Solar Powered Trash Compactor with Integrated Bottles and Cans Compactor Unit shall include the cost of furnishing all labor, materials, equipment, insurance, and incidentals required to complete the work of furnishing and installing a High Energy Double Station consisting of a Trash Compactor unit with an Integrated Bottles and Cans Recycling Unit. The work shall include, but not limited to, anchoring compactor and recycling units to the pavement, furnishing access keys, software activation and configuration, and furnishing and installing a liner bag in each unit; all in accordance with the Contract Drawings, the Specifications and the directions of the Engineer.

Modified for HWKKP005 on January 3, 2018.

(C) SOLAR POWERED TRASH COMPACTOR WITH INTEGRATED BOTTLES AND CANS RECYCLING UNIT AND INTEGRATED NON-COMPACTING RECEPTACLE FOR PAPER

The unit price bid per each Solar Powered Trash Compactor with Integrated Recycling Units shall include the cost of furnishing all labor, materials, equipment, insurance, and incidentals required to complete the work of furnishing and installing a High Energy Triple Station consisting of a Trash Compacting Unit, an Integrated Bottles and Cans Recycling Unit, and an Integrated Non-Compacting receptacle for paper. The work shall include, but not limited to, anchoring compactors and recycling units to the pavement, furnishing access keys, software activation and configuration, and furnishing and installing a liner bag in each unit; all in accordance with the Contract Drawings, the Specifications and the directions of the Engineer.

(D) SOLAR POWERED TRASH COMPACTOR WITH INTEGRATED SINGLE STREAM RECYCLING UNIT

The unit price bid per each dual station consisting of a Solar Powered Trash Compactor with Integrated Single Stream Recycling Unit shall include the cost of furnishing all labor, materials, equipment, insurance, and incidentals required to complete the work of furnishing and installing a High Energy Double Station consisting of a Trash Compactor unit with an Integrated Single Stream Recycling Unit. The work shall include, but not limited to furnishing access keys, software activation and configuration, and furnishing and installing a liner bag in each unit; 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
6.77 SP-1	SOLAR POWERED TRASH COMPACTOR	EACH
6.77 SP-2	SOLAR POWERED TRASH COMPACTOR WITH INTEGRATED BOTTLES AND CANS COMPACTION UNIT	EACH
6.77 SP-3	SOLAR POWERED TRASH COMPACTOR WITH INTEGRATED BOTTLES AND CANS COMPATION UNIT AND INTEGRATED NON-COMPACTING RECEPTACLE FOR PAPER	EACH
6.77 SP-4	SOLAR POWERED TRASH COMPACTOR WITH INTEGRATED SINGLE STREAM RECYCLING UNIT	EACH



**SECTION 6.79 B**  
**Ductile Iron Pipe Connection Drain**

**6.79B.1. INTENT.** This section describes the construction of ductile iron pipe connection drain between basins, inlets, house traps, reducers, manholes, cleanouts, etc.

**6.79B.2. DESCRIPTION.**

(A) Ductile iron pipe connection drain shall be constructed with internally locked "Push-On" joints not requiring thrust blocks or tie rods, and laid on a compacted layer of Broken Stone, or encased in concrete where specified.

(B) Pipes shall be of the nominal inside diameter shown or specified.

(C) Dimensions of concrete encasement shall be as shown on the plans.

**6.79B.3. MATERIALS.**

(A) Ductile Iron Pipe shall be of the various sizes specified, shall be epoxy lined and in compliance with the requirements of the New York City Department of Environmental Protection, Standard Sewer Specifications, dated August 1, 2009, Section 2.06.

(B) Broken Stone shall be hard, roughly cubical in shape; unweathered stone uniformly graded from 1/4" to 3/4" in diameter, and shall conform to commercial 1/4" to 3/4" stone.

(C) All joints for Ductile Iron Pipe shall be "Push-On" joint types, meeting the requirements of ANSI Specification A21.11.

The joints shall be internally locked, not requiring thrust blocks or tie rods, and shall be made in accordance with manufacturer's instructions for assembling the type of joint furnished.

Push-on joints shall be the Super Bell-Tite Joint of Amstead Industries, the Tyton Joint of U.S. Pipe and Foundry Company, the Fastite Joint of the American Cast Iron Company or such other joint as may be approved as equal by the City. For each bell, there shall be furnished a rubber gasket.

(D) Concrete shall comply with the requirements of **Section 3.05** of the Standard Highway Specifications; Class B-32; Type IIA Portland cement; Type 1A sand, and Type 1, Grade B, or Type 2, Size No. 57 coarse aggregate.

(E) Mortar for joints shall comply with the requirements of **Section 3.07** of the Standard Highway Specifications, Type 1, Mortar, except that the proportions shall be one (1) part of cement to one and one-half (1-1/2) parts of sand and that the ingredients may be mixed by hand.

Modified for HWKKP005 on January 3, 2018.

**6.79B.4. METHODS.****(A) Excavation**

Excavation for construction of pipe connections, on a minimum of six (6) inch thick broken stone base or encased in concrete where specified, shall be made to the widths and depths required in accordance with the Standard Sewers Specifications of the NYC Department of Environmental Protection or as shown on the contract drawings. No pipe or the broken stone therefore, or concrete for pipe encasement, shall be laid or placed until the subgrade of the trench shall have been tested and found correct.

**(B) Bedding**

Unless otherwise directed, the Ductile Iron Pipe Connection Drain shall be laid on a minimum of six (6) inch thick compacted layer of Broken Stone. The layer of Broken Stone shall be placed on the subgrade of the trench for its full width. The subgrade must be prepared to the proper grade so that the ductile iron pipe may be placed on the broken stone base accurately to line and grade in agreement with the plans, specifications and as directed by the Engineer. Broken Stone shall also be placed around the pipe to a depth of one-half (1/2) the outer diameter of the pipe and for the full width of the trench. The rest of the trench shall be backfilled and compacted as specified and directed by the Engineer.

**(C) Laying**

The pipe shall be laid with male ends toward the outlet. All pipes shall be laid true to line and grade, tightly fitted together and matched so that when laid in the work they will form a drain with a smooth and uniform invert. Unless a shorter length of pipe is required or otherwise permitted, not less than fifty (50) feet of piping shall be laid in one operation and the trench for each basin connection shall be fully excavated for its entire length before any pipes are laid therein. The Contractor shall provide ductile iron pipe fittings (Wyes, Tees, House Trap, Reducers, etc.) as required by the contract drawings, field conditions and as directed by the Engineer.

During the progress of the work the interior of the connections shall be cleared of all foreign matter and the exposed ends of pipe shall be provided with approved temporary covers fitted to the pipe so as to exclude such materials. Dead ends of pipe shall be closed with bulkheads of brick masonry eight (8) inches in thickness.

**(D) Joints**

All joints for Ductile Iron Pipe shall be "Push-On" joints.

(E) Structures shall be installed as shown on the plans and in accordance with manufacturer's instructions.

Clear the interior of installed piping and structures of dirt and other superfluous material as work progresses. Maintain swab or drag in piping and pull past each joint as it is completed. Place plug in ends of uncompleted pipe at end of each day or when work stops.

(F) Fitting Into Reinforced Concrete Structures

Pipe connections shall not enter reinforced concrete structures less than twelve (12) inches from the top or bottom of the structure. The ends of pipes which enter the reinforced concrete structure shall be neatly cut to fit the inner face of the structure. When directed, such cutting shall be done before the pipes are built in.

Wherever the proposed connection is to connect with an existing structure in which there is a branch pipe which is damaged or of unsuitable size or in improper position, such pipe shall be removed and be replaced with a pipe of suitable size or be reset in the proper position.

(G) Backfilling

Immediately after the Engineer has inspected and approved the pipe laid, the trench shall be backfilled.

**6.79B.5. MEASUREMENT.** The quantity of Ductile Iron Pipe Connection Drain to be measured for payment shall be the number of linear feet of pipe of each size, kind and class incorporated in the work, complete, as shown, specified or required, including fittings, measured along the axis of the pipe installed.

Payment will be made from inside face of structure or pipe connection to inside face of structure or pipe connection, unless otherwise shown or specified in the contract documents.

**6.79B.6. PRICES TO COVER.** The contract price for "DUCTILE IRON PIPE CONNECTION DRAINS" shall be the unit price bid per linear foot for each size, kind and class of drain and shall cover the cost of all labor, materials, plant, equipment, samples, tests, insurance, and incidentals necessary to construct the ductile iron pipe connection drains of the sizes and to the lines and grades shown including, but not limited to, earth excavation of all materials of whatever nature encountered (See NYCDEP Standard Sewer Specification, Section 4.03 - Earth Excavation); all sheeting and bracing; pumping; fluming; bridging; breaking down and filling in of abandoned sewer appurtenances; connections; concrete cradles and encasements; crushed rock bedding; and encasements; joint materials; fittings; special pipe fittings when called for on the plans and required; reducers; cleanouts; vent pipes; bulkheads; house traps; concrete manholes; galvanized steel manhole frames and covers;

maintaining flow in drains; backfilling; 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, specifications and standards, and as directed by the Engineer.

*Payment will be made under:*

Item No.	Item Description	Pay Unit
6.79 BA	2" DUCTILE IRON PIPE CLASS 56 CONNECTION DRAIN	L.F.
6.79 BB	3" DUCTILE IRON PIPE CLASS 56 CONNECTION DRAIN	L.F.
6.79 BC	4" DUCTILE IRON PIPE CLASS 56 CONNECTION DRAIN	L.F.
6.79 BD	6" DUCTILE IRON PIPE CLASS 56 CONNECTION DRAIN	L.F.
6.79 BE	8" DUCTILE IRON PIPE CLASS 56 CONNECTION DRAIN	L.F.
6.79 BF	10" DUCTILE IRON PIPE CLASS 56 CONNECTION DRAIN	L.F.
6.79 BG	12" DUCTILE IRON PIPE CLASS 56 CONNECTION DRAIN	L.F.

**SECTION 7.07 RR**  
**REMOVE AND RESET METAL BOLLARD**

7.07RR.1. Description. Under this section, the Contractor must furnish all labor, material, plant, equipment, insurance, and incidentals necessary to carefully remove existing metal bollards; temporarily store those bollards at the site; and, re-set the bollards at their new locations in accordance with the plans, the specifications, and the directions of the Engineer. The term metal bollard shall apply to any exposed steel member embedded below grade regardless of size or shape indicated as a bollard on the plans. Existing metal chains that connect individual bollards shall be included in the work of this section.

7.07RR.2. Material. Concrete for collars and fill shall comply with the requirements of the NYCDOT Standard Highway Specifications, Subsection 4.06 for Class B-32 concrete, Type II A; cement Type II Portland; sand Type I A; coarse aggregate Type 1, Grade B, or Type 2, Size No. 57. An approved air entraining agent shall be added at the time concrete ingredients are mixed with water.

Materials and methods used for the reinstallation of granite blocks adjacent to metal bollards that are removed shall meet the requirements of Section 6.04 G of these I-Pages and, as directed by the Engineer.

Finish coat above grade for bollards shall be Black in color equal to Federal Standard No. 595B, Color No. 14036, or as otherwise required to match that of the existing bollards; and shall conform to Federal Specification TT P 37C.

All other materials shall be as approved by the Engineer.

7.07RR.3 Submittals. Submit shop drawings showing complete details of the removed bollards, with dimensions of the bollard foundation and its depth below finished grade. Provide details of the proposed new foundation and sections showing the reset bollard in place in relation to the finished grade. Submit proposed finish paint products for approval that are recommended by paint manufacturers for the intended application.

7.07RR.4. Construction Details. Existing bollards that are designated to be removed and reset shall be carefully excavated, along with their foundations, cleaned to the satisfaction of the Engineer, and stored at the site for resetting at the same location when directed by the Engineer. Holes excavated for the removal of the bollards shall be backfilled with suitable material and covered with temporary asphalt pavement until permanently restored with new concrete sidewalk, or reinstalled granite blocks, as directed by the Engineer.

The Contractor must be required to store bollards at the site in a secure location or other approved storage area, to the satisfaction of the Engineer. Should any bollard be damaged or lost as a result of the Contractor's operations, the Contractor must be required to repair or replace the bollard in kind, to the satisfaction of the Engineer.

Prior to resetting bollards, all exterior metal surfaces of the bollards shall be painted. Prior to painting, bollards shall be thoroughly cleaned with a solvent such as mineral spirits or turpentine, to remove all dirt, grease and foreign matter. After the bollards have dried, the bollards shall be painted as follows:

Above grade the bollards shall be painted with two coats of finish paint. Below grade the bollards shall be

coated with black asphalt paint as approved by the Engineer.

Handling and erecting of painted bollards shall not be performed until coatings are thoroughly dry. Special care shall be exercised to avoid abrasion, staining, or other damage to the painted surface. Stacking and storing of painted bollards at the job site shall be done using softeners and timbers to keep individual members free from contact with the ground and with each other. Also, bollards shall be protected from soiling by adjacent fabrication or construction operations.

The Contractor must carefully excavate the existing area adjacent to the bollard by hand to the required depth and area, as necessary or directed, to reinstall the bollard at its new location. The new concrete collar dimensions shall match that of the original concrete collar prior to removal of the bollard, unless otherwise directed by the Engineer. Reset bollards shall be shimmed and level as necessary such that bollards are vertical, in plumb, and at the same elevations in their final position. Concrete collars or granite blocks shall be furnished and placed to match the adjacent surfaces. The concrete and finishing thereof, and joint filler and sealers, shall conform to the requirements of the NYCDOT Standard Highway Specifications Section 4.13. Granite block installation shall conform to the requirements of Section 6.04 G of these I-Pages.

Touchup after erection shall consist of smoothing all abraded areas and building back each coat damaged to achieve the initial condition. Surface areas that have been abraded to bare metal shall be cleaned and then painted in proper recoating intervals.

**7.07RR.5. Method of Measurement.** The quantity to be measured for payment shall be the number of bollards actually re-set to the satisfaction of the Engineer.

**7.07RR.6. Price to Cover.** The contract price bid per each existing bollard removed and reset shall cover the cost of all labor, material, plant, equipment, insurance, and incidentals necessary to complete the work including, but not limited to, removal of existing bollards, granite blocks, and concrete foundations, separating bollards from the foundation materials, storage of the existing bollards, cleaning and painting of bollards, furnishing and placing new concrete collars, installing granite blocks and performing all excavation and backfilling, as may be required and deemed necessary, all in accordance with the plans, the specifications and the directions of the Engineer.

The cost of removing, storing, cleaning, painting and reconnecting metal chains shall be deemed included in the contract price bid for this Item No. 7.07 RR

The cost of furnishing and installing concrete sidewalk around bollards shall be paid for under the appropriate concrete sidewalk item and the additional depth of concrete shall be deemed included in the unit price bid for this Item No. 7.07 RR.

The cost of removing, storing, cleaning and reinstalling granite blocks around bollards shall be deemed included in the unit price bid for this Item No. 7.07 RR. Temporary pavement restoration shall be made under Item No. 4.02 CB.

Payment will be made under:

Item No.	Description	Pay Unit
7.07 RR	REMOVE AND RESET EXISTING BOLLARD	EACH

Modified for HWKKP005 on January 3, 2018.

**SECTION 7.30 RSR  
REMOVE, STORE AND INSTALL RAIL TRACKS**

7.30 RSR.1. Description.

Under this section, the Contractor must remove and dispose of track ties and track foundation; remove and store steel rails; reinstall existing girder rails; furnish and install new girder rails, and new Tee rails. The work includes steel reinforcement and epoxy fill material installed in existing and new girder rails and anchor studs for rail embedment in concrete as indicated on the plans or directed by the Engineer.

Existing rails are located where indicated in the plans. The existing rail infrastructure below grade is indeterminate. Rail tracks generally consist of a pair of steel rails spaced approximately five (5) feet apart on ties. At some locations a switch rail will connect one rail to another within a track, or there may be Tee sections at rail junctions and frogs at switches. All of the at-grade components of the steel rail track are included in the work of this section.

7.30 RSR.2. Materials.

(A) New rail foundation shall be concrete base for pavement, high early strength (Item No. 4.04 HC), or a granular base as part of new concrete sidewalk work (Item No. 4.13 CABS).

(B) Non-shrink Epoxy Grout as Girder Rail Fill: The grout material shall meet all the following typical performance criteria when cured at 73°F (23°C):

1. Compressive Strength, ASTM C579A: 7 days 14,000 psi
2. Flexural Strength, ASTM C 580: 6,800 psi
3. Tensile Strength, ASTM C 307: 2,500 psi
4. Creep, ASTM C1181, 1 year 400 psi, 140°F,  $10 \times 10^{-3}$  in/in

The grout manufacturer shall have been in the business of manufacturing similar products for over ten years, maintain a strict quality assurance program, offer technical services and provide a representative at the jobsite for product training, prior to product installation, upon written request

(C) Reinforcement Steel: ASTM A615, Grade 60

(D) New Girder Rail: Rail section Ri59-10 complying with ASTM A2-02 – Carbon Steel Girder Rails, Class A.

(E) New Tee Rail in Crosswalks: Rail section 132RE complying with the standard specifications of the American Railway Association (AREA).

(F) New Tee Rail in Sidewalks: Rail section 80 ASCE complying with the standard specifications of the American Society of Civil Engineers (ASCE) and the requirements of ASTM A1-00(2010) – Standard Specification for Carbon Steel Tee Rails.

(G) Steel Studs: Steel used for studs shall conform to the requirements of ASTM A108, UNS Designation G10100 thru G10200.

7.30 RSR.3. Submittals:

(A) Epoxy Grout: Product technical specification indicating conformance with the performance criteria, color, and recommended installation procedures.

(B) Steel Reinforcement: Certified Mill Test Reports.

(C) New Girder Rail: Manufacturer's shop drawing and proof of compliance with applicable ASTM requirements.

(D) New Tee Rail: Manufacturer's shop drawing and proof of compliance with applicable AREA and ASTM requirements.

(E) Steel Studs: Manufacturer's certification of compliance with the ASTM requirements.

7.30 RSR.4. Method.

(A) Preparation. Prior to the commencement of work, the Contractor must take preconstruction photographs of the rails. The Contractor must prepare a photo log and submit photographs to the Engineer for approval. Payment for this work shall be made under Item No. 6.43 D- PHOTOGRAPHS. Excavation for track removal shall not commence until preconstruction photographs are approved by the Engineer.

(B) Sequence of Operations. The existing rails to be removed shall be exposed for a more accurate determination of existing conditions. The method of splicing rails, the method of fastening rails to ties, and the materials and dimensions of the rails and ties shall be noted. A written sequence of demolition operations shall be submitted by the Contractor for approval of the Engineer.

(C) Rail Identification. The Contractor must verify the limits of track removal to the nearest rail section from the limits of work. Each section of rail shall be numbered prior to commencement of demolition operations.

(D) Survey of Tracks. The Contractor must survey the precise locations of the center of rails, and submit a layout of the existing conditions to the Engineer for approval. The survey shall be conducted by a Land Surveyor licensed in the State of New York. Excavation for track removal shall not commence until the track layout drawings have been approved by the Engineer.

(E) Excavation. The existing track ties, rails and all their foundation components shall be removed per the limits indicated on the plans or as directed by the Engineer. Extreme care shall be taken not to damage the rails during excavation and removal operations, and not to damage rails outside of the project limits.

(F) Salvage Determination: Once removed the existing rails will be examined by the Engineer to determine their suitability for reinstallation. Rail that will not be reinstalled shall become the property of the contractor and properly disposed off-site at no additional cost to the City.

(G) Storage. The Contractor must deliver the rails and stockpile at the storage facility leased under Item



No. DUMBO STOR for salvaged granite block. The facility shall be secured with fencing and watchman service throughout the duration of the storage of the rails.

(H) Cleaning and Surface Preparation. The Contractor must thoroughly clean the rails of all adhering materials prior to reinstallation. The flange space to receive the epoxy grout shall be prepared in accordance with the approved epoxy grout manufacturer's recommended procedure.

(I) Steel Reinforcing Bar: Reinforcing bar of the size indicated on the plan shall be cleaned of all surface rust, dirt and oil and tack welded to the rail at the spacing indicated on the plans.

(J) Placing Epoxy Grout:

1. Delivery, Storage and Handling:

- a. All materials shall be delivered to the jobsite in their original, unopened packages, clearly labeled with the manufacturer's identification, printed instructions and batch code.
- b. Store and condition the specified product in accordance with the appropriate product data sheet.
- c. For handling instructions, refer to the Material Safety Data Sheet.

2. Surface Preparation: The steel rail surface shall be clean, free of oil, grease, rust and other contaminants. Sandblasting to a Society for Protective Coatings, SSPC-SP6 commercial finish is required for optimized bond development of epoxy to steel.

3. Placing Epoxy Grout: Follow manufacture's environmental condition requirements, mixing and pouring recommendations when placing the epoxy grout.

4. Finishing and Curing: Prior to hardening, epoxy grout can be finished with a solvent wiped steel trowel. Maintaining a sufficient solvent coat is important as epoxy grout will adhere to dry trowel. Epoxy grouts cannot be trimmed after set except by mechanical means. Final level in the rails should be brought to the finished elevation before hardening.

(K) Rail Installation.

1. The Contractor must install the rails as indicated on the plans at elevations such that rails will be flush with the re-laid granite block or granite slab pavement or top of sidewalk once installed.
2. The Contractor must layout the existing rail alignments as appropriate using the rail numbering system specified in paragraph 7.30 RSR.4 (C) above. The rails shall be placed at appropriate locations for approval by the Engineer prior to installation.
3. Segments of rails along an alignment shall be butted against each other and tack welded to avoid the alignment shifting during granite block pavement or concrete sidewalk installation.
4. Where indicated on the contract plans girder rails or Tee rails shall be mortared to concrete base pavement.
5. Granite block or granite slab pavement shall be installed perpendicular to, and along the edge of each rail as indicated on the plans.

7.30 RSR.5. Property of Contractor. All excavated material except for rails removed and identified for salvage and reinstallation hereunder shall become the property of the Contractor, unless otherwise provided, and shall be disposed of away from the site by the Contractor.

7.30 RSR.6. Measurement.

(A) The quantity to be measured for payment under Item No. 7.30 RRT shall be the number of linear feet of rail track removed from the existing roadway or sidewalk, as measured along the centerline of each individual rail.

(B) The quantity to be measured for payment under Item No. 7.30 NGRC and 7.30 NGRS shall be the number of linear feet of new curved and straight girder rail, respectively furnished and installed, as measured along the centerline of each individual Girder rail.

(C) The quantity to be measured for payment under Item No. 7.30 NTRC, 7.30 NTRS, and 7.30 NTRSW shall be the number of linear feet of new curved and straight Tee rail of the size indicated on the plans, respectively furnished and installed, as measured along the centerline of each individual Tee rail.

(D) The quantity to be measured for payment under Item No. 7.30 SGR shall be the number of linear feet of salvaged girder rail reinstalled as measured along the centerline of each individual Girder rail.

7.30 RSR.7. Price To Cover. The contract price bid per linear foot for rail track and foundation removal, delivery to and from the storage facility, reinstalling rails, furnishing and installing new girder rails and new Tee rails as indicated on the plans shall cover the cost of all labor, plant, material, insurance, equipment, the survey of the existing rails, reinforcing bars, steel studs, epoxy grout and necessary incidentals required for completing the work in accordance with the plans, the specifications, and the directions of the Engineer. Payment for new concrete foundation base shall be made under Item No.4.04HC. Payment for concrete sidewalk shall be made under Item No. 4.13 CABS. Payment for storing rails shall be included in Item No. DUMBO-STOR.

Payment will be made under:

<u>Item No.</u>	<u>Description</u>	<u>Pay Unit</u>
7.30 RRT	REMOVE AND STORE GIRDER RAIL	L.F.
7.30 NGRC	FURNISH AND INSTALL NEW GIRDER RAIL – CURVED SECTION	L.F.
7.30 NGRS	FURNISH AND INSTALL NEW GIRDER RAIL – STRAIGHT SECTION	L.F.
7.30 NTRC	FURNISH AND INSTALL NEW TEE RAIL – CURVED SECTION	L.F.
7.30 NTRS	FURNISH AND INSTALL NEW TEE RAIL – STRAIGHT SECTION	L.F.
7.30 NTRSW	FURNISH AND INSTALL NEW TEE RAIL IN SIDEWALK	L.F.
7.30 SGR	REINSTALL SLAVAGED GIRDER RAIL	L.F.

**SECTION 7.50 SF-DO**  
**MOVABLE AND FIXED SITE FURNISHINGS**

7.50SF-DO.1.            **INTENT:** This section describes the products and installation of Movable and Fixed Site Furnishings.

7.50SF-DO.2.            **DESCRIPTION:** Under this Section, the Contractor must furnish and install the followings Site Furnishings, in accordance with the Contract Drawings, specifications, and directions of the Engineer:

- (A) Tables
- (B) Chairs
- (C) Umbrellas
- (D) Umbrella Anchors
- (E) Lounge Chair
- (F) Bench
- (G) Picnic Table
- (H) Trash Receptacle

7.50SF-DO.3.            **RELATED SECTIONS:**

- (A) 7.50 SWBS for Steel and Wood Bleacher Seating of these I-Pages.
- (B) 7.50 SWPB for Steel and Wood Planter Bench of these I-Pages

7.50SF-DO.4.            **SUBMITTALS:**

- (A) Product Data: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.
- (B) Shop Drawings: Submit manufacturer's shop drawings, including plans and elevations, indicating overall dimensions of furniture unit and mounting details if required for approval by the Engineer.
- (C) Samples: Submit manufacturer's samples of indicated materials, finishes, and colors, including three (3) samples of specified color as applied to an 8 inch by 8 inch square of specified metal for approval by the Engineer.
- (D) Warranty: provide a warranty for a minimum of three years.

7.50SF-DO.5.            **DELIVERY, STORAGE, AND HANDLING:**

- (A) Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- (B) Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.

- (C) Handling: Protect materials and finish during handling and installation to prevent damage.

7.50SF-DO.6. WARRANTY:

(A) Warranty Information:

1. Products will be free from defects in material and/or workmanship for a period of three years from the date of substantial completion.
2. The warranty may exclude damage resulting from accident, misuse, tampering, negligence, or abuse.
3. Products shall be repaired or replaced to the satisfaction of the Engineer any items found defective upon inspection by an authorized manufacturer service representative and Engineer.

7.50SF-DO.7. MATERIALS:

- (A) Tables: Powder coated aluminum tubular frame with extruded aluminum top Costa Table, model 8143 as manufactured by FermobUSA, Dawsonville, GA (706) 216-6600. [www.fermobusa.com](http://www.fermobusa.com). Aluminum powder coat color shall be selected by the Engineer from the manufacturer's standard colors.

1. Subject meeting the requirements, tables are available from the following Vendors:
  - a. GRDN, Brooklyn, NY (718) 797-3628.
  - b. Collyer's Mansion, Brooklyn, NY (347) 987-3342.
  - c. Fermob Showroom, New York Design Center, New York, NY (212) 651-4389

- (B) Chairs: Powder coated aluminum tubular frame with extruded aluminum slat Luxembourg Chair, model 4101 Stacking Chair as manufactured by FermobUSA, Dawsonville, GA (706) 216-6600. [www.fermobusa.com](http://www.fermobusa.com). Aluminum powder coat color shall be selected by the Engineer from the manufacturer's standard colors.

1. Subject meeting the requirements, chairs are available from the following Vendors:
  - a. GRDN, Brooklyn, NY (718) 797-3628.
  - b. Collyer's Mansion, Brooklyn, NY (347) 987-3342.
  - c. Fermob Showroom, New York Design Center, New York, NY (212) 651-4389.

- (C) Umbrellas: Nine foot (9') octagon, Ocean Master Max Classic Parasol, as manufactured by Tuuci, Miami, FL (305) 634-5116. [www.tuuci.com](http://www.tuuci.com). Fabric color to be selected by the Engineer from the manufacture's standard colors and finishes.

1. Subject to meeting the requirements, Umbrellas are available from the following Vendors:
  - a. DWR, New York, NY (212) 477-1155.
  - b. Walters Wicker, New York, NY (212) 758-0472.
  - c. Dedon, New York, NY (212) 334-3345

- (D) Umbrella Anchors: 210 lb., galvanized steel round g-plate double stack combo, model number Base-GV30+30R by Tuuci, Miami, FL (305) 634-5116. [www.tuuci.com](http://www.tuuci.com). Finish to be selected by the Engineer from the manufacture's standard colors and finishes.

1. Subject to meeting the requirements, Umbrella Anchors are available from the following Vendors:
  - a. DWR, New York, NY (212) 477-1155.
  - b. Walters Wicker, New York, NY (212) 758-0472.
  - c. Dedon, New York, NY (212) 334-3345

- (E) Lounge Chair: Recycled High Density Polyethylene (HDPE) and stainless steel Lollygagger Lounge as manufactured by Loll Designs, Duluth, MN (877) 740-3387. [www.lolldesigns.com](http://www.lolldesigns.com). Color to be selected by the Engineer from the manufacturer's standard colors.
1. Subject to meeting the requirements, Lounge Chairs are available from the following Vendors:
    - a. DWR, New York, New York, NY (917) 647-7789
    - b. Phoebe & Belle, Cutchogue, NY (631) 765-5120
    - c. Sylvester & Co. at Home, Sag Harbor, NY (631) 267-9777
- (F) Bench: Aluminum base and backrest with electro-zinc coated steel seat with anti-UV powder coating Bellevie bench as manufactured by FermobUSA, Dawsonville, GA (706) 216-6600. [www.fermobusa.com](http://www.fermobusa.com)
1. Subject to meeting the requirements, Benches are available from the following Vendors:
    - a. GRDN, Brooklyn, NY (718) 797-3628.
    - b. Collyer's Mansion, Brooklyn, NY (347) 987-3342.
    - c. Fermob Showroom, New York Design Center, New York, NY (212) 651-4389
- (G) Picnic Table: Powder coated aluminum BuzziBreeze picnic table as manufactured by BuzziSpace, UK, London 44 20 7253 3363. <http://buzzi.space/>. Aluminum powder coat color shall be selected by the Engineer from the manufacturer's standard colors.
1. Subject to meeting the requirements, Picnic Tables are available from the following Vendors:
    - a. SL Group, Boston, MA. (617) 799-1589
    - b. RB&co, Stamford, CT. (914) 494-7494
    - c. Coscia Design, Philadelphia, PA. (215) 232 9393
- (H) Trash Receptacle: 45 Gallon, side-door opening, steel bar receptacle. Powder-coat color shall be selected by the Engineer from the manufacturer's standard colors. Model DYN-SD-45 as manufactured by Victor Stanley, Dunkirk, MD or similar.
1. Subject to meeting the requirements, Garbage Receptacles are available from the following manufacturers:
    - a. Victor Stanley, Dunkirk, MD. (301) 855-8300.
    - b. Site Specialists, Westbury, NY. (516) 338-1630
    - c. Landscape Forms, Kalamazoo, MI. (800) 430-6209
    - d. Or approved equal.
- (I) Attachment Hardware: galvanized steel expansion bolts, size as indicated on the Drawings.

1. Bolts shall be tamper proof.

7.50SF-DO.8. FABRICATION: Furnishings shall be shop fabricated and fully assembled, to the extent possible prior to site installation.

7.50SF-DO.9. METHODS: The following methods of installation shall be used.

- (A) Examination:
1. Examine areas to receive the Site Furnishings.
  2. Notify Engineer of conditions that would adversely affect installation or subsequent use.
  3. Do not begin installation until unacceptable conditions are corrected and acceptance verified in writing by Engineer.

**(B) Installation:**

1. Install Site Furnishings in accordance with manufacturer's instructions and as indicated on the Drawings at locations indicated on the Drawings. For bolted units, provide tamper proof bolts or peen bolts to prevent removal.
2. Install attached Site Furnishings plumb, level and fully secured without rocking.
3. Locate loose Site Furnishings as directed by Engineer.

**(C) Adjusting:**

1. Finish Damage: Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Engineer.
2. Component Damage: Remove and replace damaged components that cannot be successfully repaired as determined by Engineer.

**(D) Cleaning:** Clean Site Furnishings promptly after installation in accordance with manufacturer's instructions. Do not use harsh cleaning materials or methods that could damage finish.**(E) Protection:** Protect installed Site Furnishings to ensure they will be without damage or deterioration at time of Substantial Completion.

7.50SF-DO.10.        MEASUREMENT: The quantities of Site Furnishings to be measured for payment shall be the quantity of each type Site Furnishing installed at the site to the satisfaction of the Engineer.

7.50SF-DO.11.        PRICES TO COVER: The prices bid shall be the unit price per EACH type site furnishing item covered under this Section and shall include the cost of furnishing all labor, materials, equipment, insurance, and incidentals necessary to furnish, assemble and install the Site Furnishings including, but not limited to, chair arm rests and glides, and hardware, 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
7.50 SF-DO1	TABLES	EACH
7.50 SF-DO2	CHAIRS	EACH
7.50 SF-DO3	UMBRELLAS	EACH
7.50 SF-DO4	UMBRELLA ANCHORS	EACH
7.50 SF-DO5	LOUNGE CHAIR	EACH
7.50 SF-DO6	BENCH	EACH
7.50 SF-DO7	PICNIC TABLE	EACH
7.50 SF-DOT	TRASH RECEPTACLE	EACH

**SECTION 7.50 SWBS  
STEEL AND WOOD BLEACHER SEATING**

**7.50 SWBS.1.            DESCRIPTION**

Under this Item, the Contractor must fabricate, furnish and install steel and wood bleacher seating units Type A and Type B, in accordance with the Contract Drawings, specifications, approved Shop Drawings, and directions of the Engineer.

**7.50 SWBS.2.            RELATED SECTIONS**

- (A) 6.74 SWPB Steel and Wood Planter Bench of these I-Pages
- (B) E 265619 LED, LED Strip Lighting System of the EL-Pages

**7.50 SWBS.3.            REFERENCES**

- (A) American Society of Testing and Materials (ASTM) ASTM Standards
  1. ASTM A36 "Standard Specification for Carbon Structural Steel."
  2. ASTM A 123 "Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products."
  3. ASTM A 153 "Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware."
  4. ASTM A 500 "Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes."
  5. ASTM A 1008 "Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable."
  6. ASTM B 633 "Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel."
- (B) American Welding Society (AWS) Standards
  1. AWS D1.1/D1.1 M "Structural Welding Code – Steel".
  2. AWS D1.3 "Structural Welding Code – Sheet Steel".
- (C) Society for Protective Coatings, SSPC

**7.50 SWBS.4.            SUBMITTALS**

- (A) Product Data: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods.
  1. Provide wood slat Forest Stewardship Council (FSC) Certificates
  2. Bleacher Electrical Receptacle Unit
- (B) Shop Drawings: Submit manufacturer's Shop Drawings in a scale no smaller than Contract Documents, with north arrow (consistent with construction drawing's north arrow) for each steel and wood bleacher unit, including framing plans, wood slat plans, unit elevations, detailing indicating overall dimensions. Shop drawings shall include the layout and installation details of the LED Strip Lighting System, and locations and installation details of Bleacher Electrical Receptacle units.
  1. Show the following minimum information:

- a. Dimensioned steel framing plans indicating size, shape and strength of steel members.
- b. Dimensioned wood slat plans including orientation of slats and slat fastener locations
- c. Dimensioned elevations of each side of unit
- d. Sections thru units indicating framing arrangement and attachment details for steel panels and wood slats
- e. Details showing welded connections between framing elements, interconnection of unit component pieces, attachment of wood slats, steel panels, removable steel panel access plates, mounting details for lighting elements, unit ground mounting and leveling, as well as unit lifting points for installation and relocation.
- f. Provide separate drawings showing unit rigging and lifting procedures for installation and temporary removals. Drawings should also indicate how units are ground anchored and fastened together after installation.

## (C) Samples:

1. Blackened Steel Panel: three (3), 12" x 12" in thickness shown on the Contract Drawings with color, finish and protective coating to match Engineer's sample.
2. Wood Bleacher Slat: three (3) two foot long samples of wood slats in size and shape shown on the Contract Drawings with finish.
3. Skate Stop: three (3) complete, unique letters at full scale as shown on the Contract Drawings with material and finish.
4. Stainless Steel Attachment Hardware: three (3) full size samples of tamper-proof wood slat attachment bolts.

(D) Certificate of Warranty: Written Warranty from Manufacturer on manufacturer's company's letterhead specifying conditions of Warranty as indicated herein.

7.50 SWBS.5. QUALITY ASSURANCE

- (A) Manufacturer's Qualifications: The manufacturer of steel and wood bleacher seating shall have recent successful experience with projects that include the design and fabrication of similar specialty site furnishings. Prior to commencement of work and ordering any material, the Contractor must submit to the Engineer for approval, the proposed steel and wood bleacher seating manufacturer including their respective work history and experience in the design and fabrication of products similar to the specified items of this project.
- (B) Product Support: All components of specified benches shall be supported with complete shop drawings.
- (C) Manufacturing Lead Time: Orders shall be filled within 10 weeks of Engineer's approval of Shop Drawings and Samples for Verification.

7.50 SWBS.6. DELIVERY, STORAGE AND HANDLING

- (A) Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- (B) Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.
- (C) Handling: Protect materials and finish during handling and installation to prevent damage.



7.50 SWBS.7. COORDINATION

- (A) Coordinate under bleacher lighting with electrical connections to provide required access panels and electric receptacle mountings.

7.50 SWBS.8. WARRANTY

## (A) Warranty Information:

1. Products will be free from defects in material and/or workmanship for a period of three years from the date of substantial completion.
2. The warranty may exclude damage resulting from accident, misuse, tampering, negligence, or abuse.
3. Steel and wood bleacher units and any of their components found defective upon inspection by a manufacturer representative and Engineer, shall be repaired or replaced to the satisfaction of the Engineer.

7.50 SWBS.9. MANUFACTURER

- (A) Provide pre-assembled steel and wood bleacher units, as manufactured by the following companies, or approved equal:

1. Manufacturer:
  - a. MachineMade, Long Island City, NY (347) 943-3814.
  - b. Wausau Tile, Inc. Wausau, WI (715) 359-3121.
  - c. Landscape Forms, Inc. Kalamazoo, MI (800) 430-6209.
  - d. Or approved equivalent.

7.50 SWBS.10. MATERIALS

## (A) Steel Framing:

1. Plates, Shapes and Bars: ASTM A36, size and strengths as indicated on Drawings.
2. Uncoated steel sheet: ASTM A 1008, cold rolled steel.
3. Welding rods and bare electrodes: Select according to AWS specifications for metal alloy welded.

- (B) Galvanizing: For bleacher framework, comply with ASTM A123. Hot dip after fabrication.

- (C) Wood Slats: Reclaimed teak, unfinished or other Engineer approved hardwood species of sizes and shapes indicated on the Drawings.

1. Wood shall be kiln dried or air-dried and aged reclaimed with a maximum moisture content of 12 percent.
2. Provide boards hand selected for freedom from characteristics, on exposed surfaces and edges, that would impair finish appearance, including decay, honeycomb, knot holes, shake, splits, torn grain, and wane.
3. Wood plugs to match color and finish to wood in which plug is inserted.

## (D) Attachment Hardware:

1. Visible attachment hardware: tamper-proof stainless steel, type 304.
2. Concealed attachment hardware: galvanized steel.

- (E) Steel Panel Finish: Mill-finish, cold-rolled steel plate substrate, laser cut/waterjet to size.

1. Electro-plated black finish with nickel-copper-zinc alloy to increase durability and add blackened color variation to steel.

2. Edge-relief with Scotch Brite pad as necessary to add more character where needed. Steel may need to be distressed before plating if a more distressed look is required.
  3. Matte-Clear Kynar fluoropolymer powder finish meeting American Architectural Manufacturers Association, (AMMA) MA 2605 standards.
- (F) Skate Stops: Cast silicon bronze, with chamfered corners and brown patina.
1. Internally threaded to receive anchor pins
  2. 3/8" diameter anchor pins
- (G) Under bleacher lighting: See Section E 265619 LED – LED Strip Lighting System
- (H) Bleacher Electrical Receptacle Unit
1. Lockable Two Gang Weatherproof Receptacle with cover.
  2. The receptacle shall comply with current NEC and have two 20 amp GFCI receptacles.
  3. The unit shall be 4-1/4 inches in depth and accommodate a 0.8 in. cord diameter with an exit port of 1.27 in.
  4. The cover shall accept a 0.125 inch diameter shank.
  5. All covers are to be provided with a lock and two keys. All covers shall be keyed alike.
- (I) High Performance Coating:
1. Basis for Design shall be a custom color, as manufactured by Sherwin Williams, or approved equal.
    - a. First Coat: Primer is a fast drying, 85% + 2% weight solids, VOC compliant, corrosion resistant with a dry film thickness of 3-8 mils.  
Acceptable manufacturers include the following:
      1. Macropoxy 646 Fast Cure Epoxy as manufactured by Sherwin Williams Company, Woodside, NY.
      2. Carboguard 60 as manufactured by Carboline Company, St. Louis, MO.
      3. Mercury Mermas 200CW epoxy, as manufactured by Mercury Paint Corporation, Brooklyn, NY.
      4. Or approved equal.
    - b. Second and Third Coat: Coating is a low VOC, aliphatic, acrylic polyurethane resin having a dry film thickness of 3-5 Mills.  
Acceptable manufacturers include the following:
      1. High-Solids Polyurethane Part S, B65-350 (Semi-gloss Series) as manufactured by Sherwin Williams Company, Woodside, NY.
      2. Carbothane 133 Series as manufactured by Carboline Company, St. Louis, MO.
      3. Mercury Merthane 300 CW, as manufactured by Mercury Paint Corporation, Brooklyn, NY.
      4. Or approved equal.

## 7.50 SWBS.11. FABRICATION

### (A) General:

1. Steel and wood bleacher seating units shall be shop fabricated in multiple sections as indicated on the Drawings.
2. Units shall be fully assembled prior to delivery and installation with the exception of joining individual sections in the field to create complete units.
3. Lighting elements to be shop fabricated and installed upon approval of the Engineer.
4. Paint steel framework prior to installation of steel panels and wood slats.

**(B) Fabrication of Steel Framework:**

1. Steel framework shall be shop fabricated, galvanized and finished to the maximum extent possible.
2. Pre-drill holes to allow for subsequent attachment of wood, steel panels, lighting clips and ground mounting hardware.
3. Fabricate framework so that minimal on-site work is required to install, including securing units to the ground and connecting units together.
4. Finish welds to comply with National Ornamental and Miscellaneous Metals Association (NOMMA) Guideline 1: Finish #2 completely sanded joint, some undercutting and pinholes okay.

**(C) Painting of Steel Framework:**

1. Preparation of steel framework for painting:
  - a. Clean framework surfaces thoroughly immediately prior to painting. Surfaces shall be cleaned in accordance with SSPC-SP-1 Solvent Cleaning. Perform cleaning with a solvent such as mineral spirits, xylol or turpentine to remove all dirt, grease and foreign matter. Surfaces that show evidence of loose mill scale, non-adhered rust and other deleterious matter shall be cleaned in accordance with SSPC- SP-2, Hand Tool Cleaning or SSPC- SP-3 Power Tool Cleaning to achieve a sound substrate. Apply paint immediately after final SSPC-SP-1 solvent cleaning and drying.
2. Painting of steel framework:
  - a. Painting of the steel framework shall be shop applied only. Field applied paint, except for touch-ups is not permitted.
  - b. Apply paints in accordance with the manufacturers written instructions.
  - c. Apply paints when ambient air temperature is 50° F and rising and surfaces to be painted are moisture free. Do not paint when conditions are below the minimum ambient air temperature during painting and required drying time. Do not paint when the ambient temperature and humidity conditions will allow moisture to condense on surfaces.

**(D) Finishing of Exposed Bleacher Panels:**

1. Steel panel finishing shall be performed in the shop only by the steel panel supplier. Field applied finishing, except for touch-ups is not permitted.
2. Apply finish in accordance with the manufacturers written instructions.

**(E) Installation of Wood Slats:**

1. Install wood slats in accordance with the Drawings and approved Shop Drawings.
2. Pre-drill wood for fasteners.
3. Install wood with growth ring curves point downward.

**(F) Installation of Skate Stops:**

1. Install skate stops in accordance with the Drawings and approved Shop Drawings.
2. Pre-drill wood for skate stops.
3. Anchor skate stops with epoxy. Ensure seamless, flush, and clean connect to wood slats with no seepage of excess epoxy onto wood slats.

7.50 SWBS.12. CONSTRUCTION METHODS

The following methods of installation shall be used.

## (A) Examination:

1. Examine areas to receive steel and wood bleacher units.
2. Notify Engineer of conditions that would adversely affect installation or subsequent use.
3. Do not begin installation until unacceptable conditions are corrected and acceptance verified in writing by Engineer.

## (B) Installation:

1. Comply with manufacturer rigging and hoisting requirements when moving bleacher units.
2. Install steel and wood bleacher units in accordance with manufacturer's instructions and approved Shop Drawings at locations indicated on the Contract Drawings and as directed by Engineer.
3. Install units level. Provide ground attachments and shimming as required and as approved by the Engineer.
4. Anchor steel and wood bleacher units securely in place in accordance with Contract Drawings and approved Shop Drawings.

## (C) Adjusting:

1. Finish Damage: Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Engineer.
2. Component Damage: Remove and replace damaged components that cannot be successfully repaired as determined by Engineer.

## (D) Cleaning: Clean steel and wood bleacher units promptly after installation in accordance with manufacturer's instructions. Do not use harsh cleaning materials or methods that could damage finish.

## (E) Protection; Protect installed steel and wood bleacher units to ensure units will be without damage or deterioration at time of Substantial Completion.

7.50 SWBS.13. MEASUREMENT

The quantity of STEEL AND WOOD BLEACHER UNITS to be measured for payment shall be EACH in the shapes and sizes indicated on the drawings.

7.50 SWBS.14. PRICES TO COVER

The bid prices shall be a unit price per EACH Steel and Wood Bleacher Unit and shall include the cost furnishing all labor, materials, shop drawings, bleacher electrical receptacle units, skateboard deterrents, equipment, insurance, and incidentals necessary to furnish, assemble and install each Steel and Wood Bleacher Unit in accordance with the contract drawings, approved shop drawings, specifications and the directions of the Engineer.

Bleacher Lighting to be paid for under Item No. E 265619 LED – LED Strip Lighting System

Payment will be made under:

Item No.	Item	Pay Unit
7.50 SWBSA	STEEL AND WOOD BLEACHER SEAT UNIT TYPE A	EACH
7.50 SWBSB	STEEL AND WOOD BLEACHER SEAT UNIT TYPE B	EACH

**SECTION 7.57 DGRA**  
**Drill and Grout Reinforcement Bars**

7.57DGRA.1. Description. Under this section, the Contractor must furnish all labor, materials, equipment, insurance, and incidentals required to drill holes and grout reinforcing bars within those holes, all in accordance with the plans, the specifications and directions of the Engineer.

7.57DGRA.2. Materials. Grout material shall be a non-metallic, non-shrink grout or polymer resin supplied in prepackaged and/or premeasured containers. It shall contain no metals, rust or corrosion promoting agents and shall be moisture insensitive. Packaged stability of each component in original unopened containers stored in temperatures between 32°F and 100°F shall be a minimum of six months. The mixing instructions, cure time and expiration date of the material shall appear on each container.

Material Requirements: The grouting material shall be able to withstand 50 cycles of freeze thaw (10% NaCl) with a maximum loss of 4%. The proposed material shall be listed on the New York State Department of Transportation's Materials and Equipment Approved List for Concrete Grouting Materials (701-05), and submitted for approval by the Engineer.

Steel reinforcement bars shall comply with the requirements of Section 4.14 of the Standard Highway Specifications.

7.57DGRA.3. Methods. Equipment - All equipment proposed for use shall be as approved by the Engineer prior to actually performing the work.

1. Drilling and Grouting Reinforcing Bars -

- a. All holes shall be drilled by means of a rotary impact drill. If reinforcing steel is encountered, the reinforcing steel shall be cut and removed by means of a core drill. The remainder of the drilling shall be done with the rotary impact drill.
- b. Drilling with a lubricant will not be permitted. Water is not considered a lubricant. Drilling methods shall not cause spalling or other damage to concrete. Concrete spalled or otherwise damaged by the Contractor's operations shall be repaired in a manner satisfactory to the Engineer. Such repair shall be done at the expense of the Contractor.
- c. Holes shall be surface dry and shall have had all foreign and loose material removed immediately prior to grout placement.
- d. Grout shall be mixed and placed in strict accordance with the manufacturer's instructions, unless modified here or elsewhere in the contract documents.

- e. No grout shall be placed at a temperature below that recommended by the grout manufacturer.
- f. Prior to reinforcing bar placement in the grouted hole, all material which might interfere with the bond between the reinforcing bar and the grout shall have been removed. This includes, but is not limited to: moisture, grease, dirt, mill scale, and rust. Rust which cannot be removed even by vigorous scrubbing with a wire brush is considered firmly bonded and may remain. The hole diameter shall be in accordance with the grout manufacturer's recommendation. The reinforcing bars shall be inserted full depth into the hole and shall be manipulated to ensure complete coverage by the grout. After insertion of the reinforcing bar, all excess grout shall be struck-off flush with the concrete face. Should the grout fail to fill the hole after bar insertion, additional grout shall be added to the hole to allow a flush strike-off.
- g. If the reinforcing bar is inserted in a hole with an axis predominantly horizontal to the ground surface, care shall be taken to prevent grout from running down the face of the concrete. These precautions shall be done in a manner satisfactory to the Engineer.

7.57DGRA.4. Test Loads. ASTM A568M Property Class 8.8 GRADE 60 REBARS

<u>Size (bar #)</u>	<u>Test Load (kips)</u>
#4	10.80
#5	16.70
#6	23.80
#7	32.40
#8	42.70

Anchors shall be deemed to pass if the specified test load is attained without permanently displacing the anchors. NOTE: THIS LOAD TESTING IS DESIGNED TO BE NON-DESTRUCTIVE. LOADING SHALL BE STOPPED AS SOON AS THE TEST LOAD IS REACHED.

7.57DGRA.4. Measurement. Measurement will be taken as the number of linear foot of holes into which grouted reinforcing bar have been satisfactorily inserted, measured to the nearest tenth of a foot, as shown on the plans or directed by the Engineer.

7.57DGRA.5. Price to Cover. The unit price bid per linear feet shall include the cost of all labor, materials, insurance, and equipment necessary to complete the work, and shall include, but not limited to, the cost of grout and reinforcing bars. Payment will not be made for holes which do not contain both grout and reinforcing bar in accordance with the plans, the specifications, and the directions of the Engineer.

*Payment will be made under:*

Item No.	Description	Pay Unit
7.57	DGRA DRILL AND GROUT REINFORCEMENT BARS	L.F.



**SECTION 8.06**  
**SHEET MEMBRANE WATERPROOFING**

- 8.06.1 INTENT.** This section describes the furnishing and installation of a rubberized asphalt sheet membrane waterproofing system and protection board.
- 8.06.2 DESCRIPTION.** Under this Item, the Contractor must furnish and install Sheet Membrane Waterproofing including preparing the surface on which the liner is placed at the locations shown on the Contract Drawings or where directed by the Engineer.

**8.06.3 REFERENCES.**

- |                     |   |
|---------------------|---|
| (A) ANSI/ASTM D412  | Tests for Rubber Properties in Tension  |
| (B) ANSI/ASTM E96   | Tests for Water Vapor Transmission of Materials in Sheet Form.  |
| (C) ANSI/ASTM C836  | Test Method for High Solids Content, Cold Liquid Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course. |
| (D) ANSI/ASTM E154  | Testing Materials for use as Vapor Barriers Under Concrete Slabs and as Ground Cover in Crawl Spaces                              |
| (E) ANSI/ASTM D5385 | Test Method for Hydrostatic Pressure Resistance of Waterproofing Membranes  |

**8.06.4 MATERIALS.**

- (A) **WATERPROOF MEMBRANE:** Provide self-adhering waterproofing membrane consisting of 56-mil (1.4 mm) thick rubberized asphalt layer integrally bonded to a 4-mil (0.1 mm) cross-laminated, high density polyethylene film.

**PHYSICAL PROPERTIES:**

<u>Property</u>	<u>Test Method</u>	<u>Typical Value</u>
Color		Dark gray-black
Thickness	ASTM D 3767	60-mils (1.5 mm)
Resistance to Hydrostatic Head	ASTM D 5385	231 ft. (70 m)
Tensile Strength, Membrane	ASTM D 412 (C) mod.	325 lbs/in <sup>2</sup> (2240 kPa) min.
Tensile Strength, Film	ASTM D 412	5,000lbs/in <sup>2</sup> (34.5MPa) min.
Elongation, rubberized asphalt	ASTM D 412 (C) mod.	300% minimum
Water Vapor Permeance	ASTM E 96 (B)	0.05 Perms (2.9 ng/m <sup>2</sup> s Pa)
Low Temperature Flexibility	ASTM D 1970	Unaffected at -20°F (-29°C)
Crack Cycling, 100 Cycles	ASTM C 836	Unaffected at -25°F (-32°C)
Peel Strength	ASTM D 903	10 lbs./in. (1.8 kN/m)
Lap Adhesion	ASTM D 1876 mod.	7.0 lbs./in. (1.2 kN/m)
Puncture Resistance, Membrane	ASTM E 154	61 lbs. (0.275 kN)
Water Absorption	ASTM D 570	0.09%
Exposure to Fungi in Soil	GSA-PBS 07115	16 weeks, Unaffected

- (B) Primer, Mastic, and other specified accessory to be provided by membrane manufacturer.

- (C) SEALANT: Single component polyurethane sealant.
- (D) PROTECTION BOARD: Approved material by manufacturer.

#### 8.06.5. EXECUTION.

- (A) INSPECTION: Verify that surfaces and site conditions are ready to receive work. Do not start work until all defects have been corrected.
- (B) PREPARATION:
  1. Preparation of the surface shall be done in accordance with the sheet membrane manufacturer's written instructions. Surfaces shall be clean and smooth, free of depressions, waves, projections, voids, spalled areas, holes (tie rod or rock pockets), spatters, ridges, and loose aggregate. Any contaminants shall be removed such as grease, oil, and wax.
  2. Concrete must be properly cured and dry. Curing time is a minimum of 7 days for normal structural concrete and a minimum of 14 days for lightweight structural concrete. Only self-dissipating curing compounds acceptable to the waterproofing membrane manufacturer shall be used. Resin type curing compounds shall not be used. Porous brick or block shall have smooth trowel-cut mortar joints or parge coat.
  3. All concrete surfaces shall have a smooth finish (broom finish is not acceptable).
  4. Removable forms shall be removed as soon as possible. Membrane must not be applied to decks with forms in place, unless the forms are vented.
  5. Grind irregular construction joints and high spots off to a suitable flush surface.
  6. Cracks greater than 1/16" in width shall be cut out to a minimum width of 1/4" with a minimum depth of 1/4", and sealed using polyurethane sealant prior to the installation of the sheet membrane.
- (C) PRIMING:
  1. Quick Dry Primer: Apply primer to a properly prepared, clean surface. All surfaces that are to receive a waterproofing membrane shall be primed at the rate of 250 to 300 square feet per gallon. Apply an even coat, and allow to dry. Refer to manufacturer's written application instructions for specific application rates and drying time.
  2. Water-Based Primer: Apply primer to a properly prepared, clean surface. All surfaces that are to receive a waterproofing membrane shall be primed at the rate of 350 to 400 square feet per gallon. Apply an even coat, and allow to dry. Refer to manufacturer's written application instructions for specific application rates and drying time.
- (D) APPLICATION:
  1. Horizontal: Starting at the low point of the surface and working to the high point, install the sheet waterproofing membrane by simultaneously rolling the sheet into place while pulling and rolling the release paper. Side laps shall be a

min. 2.5", and end laps shall be a min. 5". Stagger all end laps. All terminating edges shall be sealed with mastic. Check that the seams are firmly sealed and there are no gaps or fishmouths.

2. Vertical: Apply membrane in lengths not to exceed 8'. Start at the lowest point with the top section overlapping the bottom section by a minimum of 5". If the membrane is terminated on a vertical surface a reglet or counterflashing shall be used. Apply mastic to all terminations.

(E) FLOOD TEST:

1. Before the application of a protection layer, all horizontal applications shall be flood tested with a minimum of 2" head of water for 24 hours.
2. Check for leaks and make repairs immediately. Before flood testing, be sure the structure is capable of withstanding the dead load of the water. Retest after repairs have been made.

(F) MEMBRANE PROTECTION:

1. Vertical surfaces shall be protected immediately following installation of the membrane.
2. Horizontal surfaces shall be protected immediately following the 24 hour flood test. If the flood test is delayed, a temporary protection layer must be installed to protect the membrane from future operations and other trades.

- (G) CLEAN UP: In areas where adjacent finished surfaces are soiled by work of this Section, consult manufacturer of surfaces for cleaning advice and conform to their documented instructions. Remove all debris, tools and equipment.

**8.06.6. QUALITY CONTROL.**

- (A) QUALIFICATIONS: Applicator shall be a company specializing in the work of this Section and approved by the waterproofing membrane manufacturer.

(B) DELIVERY, STORAGE, AND HANDLING:

1. Deliver products in the manufacturer's original containers, dry and undamaged, seals and labels intact.
2. Store products in weather protected environment out of direct sunlight, below 90°F, above 32°F clear of ground and moisture. All waterproof tarps shall be opaque.
3. Do not double stack pallets.

- (C) ENVIRONMENTAL REQUIREMENTS: Do not apply waterproofing membrane during inclement weather, to a damp or frosty surface, or when ambient temperatures are below 35°F or above 90°F.

(D) PREINSTALLATION CONFERENCE:

1. Convene prior to commencing work of this Section. Meet at project site with installer, sheet membrane waterproofing manufacturer, installers of related work, the Engineer, and the City.
2. Review installation procedures and coordination required with related work.

(E) **WARRANTY:** Provide manufacture's standard written 5 year limited material warranty upon completion of the work.

**8.06.5. MEASUREMENT.** The quantity measured for payment shall be the number of square feet of Sheet Membrane Waterproofing furnished and installed in accordance with the Contract Drawings, specifications and to the satisfaction of the Engineer.

**8.06.6. PRICE TO COVER.** The unit price bid per square foot of Sheet Membrane Waterproofing shall include the cost of all labor, materials, equipment, insurance and all incidentals necessary to complete the work, including but not limited to, the cost of preparing the surface upon which the sheet membrane is placed and securing the edges of the sheet membrane; all in accordance with the Contract Drawings, specifications and the direction of the Engineer.

*Payment will be made under:*

Item No.	Item	Pay Unit
8.06	SHEET MEMBRANE WATERPROOFING	S.F.

**SECTION 8.15 DUMBO  
OUTDOOR BOTTLE FILLER WITH DRINKING FOUNTAIN**

8.15 DUMBO.1. INTENT: This section describes the furnishing and installation of the Outdoor Bottle Filler with Drinking Fountain.

8.15 DUMBO.2. DESCRIPTION: Under this Section the Contractor shall furnish and install an Outdoor Bottle Filler with Drinking Fountain., including, but not limited to, all plumbing work and connection to water service; all in accordance with the Contract Drawings, the specifications, and directions of the Engineer.

8.15 DUMBO.3. MATERIALS: Unless otherwise specified herein, all materials and methods of construction shall conform to NYCDOT Standard Highway Specifications.

- (A) Equipment: Drinking Fountain shall be "Murdock model GYM EG-08 Pedestal Mounted Bottle Filler with Drinking Fountain manufactured by Murdock or approved equivalent model manufactured by:
1. Elkay, 2222 Camden Court, Oak Brook, IL
  2. Most Dependable Fountains, Inc., 5705 Commander Drive, Arlington, TN.
- (B) Bottle Filler with Drinking Fountain shall be delivered as preassembled body, with all external parts and internal plumbing as per the manufacturer's details. All parts shall meet applicable requirements of NYC Codes.
1. Model GYM: Heavy duty vandal resistant pedestal Bottle Filler with Drinking Fountain with attached pet fountain shall include a 12 gage Type 304 Stainless Steel pedestal with textured black powder coating and 18 gage stainless steel fountain bowl. Pedestal base shall have four mounting holes. Access cover shall be secured with vandal resistant stainless steel screws. Bottle filler shall be activated by a 9 volt sensor or a pushbutton. Unit shall contain a 100 mesh inlet strainer, lead and cyst filter, 6-AA battery pack and laminar flow spout.
  2. Hardware: All hardware shall be as specified by the manufacturer. All heads shall be vandal resistant.
  3. Bottle Filler with Drinking Fountain Assembly: Stainless steel bubblers and bowls, strainers, push-buttons, and all internal plumbing shall be preassembled by the Bottle Filler manufacturer and shall meet the requirements of the plumbing section of this specification and the Contract drawings. The Bottle Filler manufacturer shall have all factory installed plumbing components pre-tested before delivery to site. All factory connections shall be made by a licensed plumber.
    - a. Bubbler Head: Shall be stainless steel, vandal-resistant bubbler head with 100% lead-free waterways, with non-squirt feature and operate on water pressure range of 20-105 psig.
    - b. Fountain shall be certified to ANSI A117.1, Public Law 111-380, CHSC 116875 and NSF/ANSI 61, Section 9.
- (C) Water Piping: Water Piping shall be rigid hard temper type "K" copper tubing as shown on the contract drawings meeting the requirements of Section PK-13B of these I-Pages.
- (D) Drain Piping: Drain piping shall be ductile iron pipe as shown on the Contract drawings.
- (E) Drywell: Broken Stone: Broken stone shall be Type 1, Grade A, size No. 3, coarse aggregate meeting the requirements of Section 2.02 of NYCDOT Standard Highway Specifications.
- (F) Concrete Pier: Concrete shall be in accordance with Section 4.06 of NYCDOT Standard Highway Specifications. Stone base shall be, Type 1, Grade A or B, size No. 57 coarse aggregate in meeting

the requirements of Section 2.02 of NYCDOT Standard Highway Specifications

8.15 DUMBO.4. METHODS:

- (A) **Plumbing:** The Contractor shall furnish and install all pipe, fittings, valves, and other sundries to complete the plumbing for the Bottle Filler with Drinking Fountain connections. The Drinking Fountain waste water line shall be extended into the drywell as shown on the Contract Drawings and as directed by the Engineer. The half inch internal copper tubing shall be connected to one half inch cold water line which shall be extended and connected to the water supply at the plug valve, as shown on the Contract Drawings and as directed by the Engineer. Connection to water supply shall be made with a threaded, extra heavy fitting. The Contractor shall provide dielectric fitting at appropriate locations.
- (B) **Field Installation :** The poured in place concrete pier shall be set level on a bed of compacted coarse aggregate installed to the dimensions as shown on the Contract Drawings. The Bottle Filler with Drinking Fountain is to be handled at lifting locations designated by the manufacturer; no chipped, cracked, or otherwise defective fountain will be acceptable. The factory installed portion of the cold water supply and waste water lines shall be extended from the fountain base at lengths indicated on the Contract Drawings. All field connections to be made by a licensed plumber. Installation shall meet applicable requirements of NYC Codes.
- (C) **Winterization:** Bottle Filler with Drinking Fountain shall be winterized by shutting off water supply and opening bleeder valve (outside of fountain). The Bottle Filler with Drinking Fountain shall be designed to allow internal water to drain by gravity.
- (D) **Water and Drain Lines:** Pitch water and drain lines away from the Bottler Filler with Drinking Fountain. Pockets in rigid piping that cannot be drained by gravity will be rejected. The plumber will be required to reinstall piping until gravity drain is achieved.

8.15 DUMBO.5. SUBMITTALS: All submittals shall be submitted as per Subsection 1.06.13 of NYCDOT Standard Highway Specifications and as specified herein.

- (A) **Catalogue Cuts:** The contractor shall submit Catalogue Cuts of the hardware, bubblers, bowls, strainer, push buttons, and all other plumbing parts for approval twelve weeks prior to proposed installation.
- (B) **Shop Drawings:** The Contractor shall submit a complete dimensional shop drawing, for approval by the Engineer prior to proposed installation, showing details of construction, plumbing, etc., including gauges of metal and thickness of wall construction, etc.

8.15 DUMBO.6. MEASUREMENT: The quantity to be measured for payment shall be the quantity of each Bottle Filler with Drinking Fountain installed at the site in accordance with the Contract Drawings and specifications, to the satisfaction of the Engineer

8.15 DUMBO.7. PRICE TO COVER: The price bid shall be a unit price for each Bottle Filler with Drinking Fountain, and shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work, including, but not limited to, excavation, stone base, concrete pier, hardware, and all plumbing work including piping, couplings, connections to water service and waste water line to dry well, broken stone for drywell, all in accordance with the Contract Drawings, specifications, and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
8.15 DUMBO	BOTTLE FILLER WITH DRINKING FOUNTAIN	EACH

**SECTION 8.32  
BARK CHIP MULCH**

8.32.1. DESCRIPTION. Under this section, the Contractor must furnish and place Bark Chip Mulch in accordance with the plans and specifications and as directed by the Engineer.

8.32.2. MATERIAL. Bark Chip Mulch shall be a natural forest product of 98% bark containing less than 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. Size of bark shall be from 5/8" to 1-1/4". The ph. factor should range from 5.8 to 6.2.

8.32.3. METHODS. Bark Chip Mulch shall be applied where required on the plans or directed by Engineer as a ground cover to the surface of beds and tree pits after the planting is completed. Mulch shall be applied to a uniform depth of three inches (3") and shall be so distributed as to create a smooth, level cover over the exposed soil. Plants shall not be covered.

8.32.4. MEASUREMENT. The quantity of Bark Chip Mulch to be paid for will be the number of square yards of ground surface area that has been satisfactorily covered with bark chip mulch within limits of enlarged tree pits surrounding existing trees as indicated on the plans and where directed by the Engineer.

8.32.5. PRICE TO COVER. The unit price bid per square yard for Bark Chip Mulch shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to complete the work under this section in accordance with the plans, the specifications and the directions of the Engineer.

No payment will be made under this item for furnishing and placing mulch in tree pits around newly planted or transplanted trees.

Payment will be made under:

Item No.	Item	Pay Unit
8.32	BARK CHIP MULCH	S.Y.

## SECTION 8.52 DUMBO STRUCTURAL STEEL FOR SPECIALTY LIGHTING SUPPORT

### 8.52.1 SUMMARY

- A. This Section specifies requirements for structural steel shapes and plates.
- B. Items specified in this Section include but are not limited to the following, where shown on the Contract Drawings:
  - 1. Structural steel wide flange sections, steel plates and angles for specialty lighting supports in the plaza archway.

### 8.52.2 QUALITY CONTROL

- A. The Contractor or subcontractor performing the Work of this Section shall be regularly engaged in structural steel fabrication, painting and erection involving complexities similar to those required under this Contract. Prior to commencement of work and ordering any material, the Contractor must submit to the Engineer for approval, the proposed structural steel fabricator and erector including their respective work history and experience in the fabrication, painting and erection of steel structures similar to the specified requirements of this project.
- B. The Contractor's quality control plan shall be submitted to the Engineer for review and approval. The Engineer may elect to inspect the fabrication shop to verify that the fabrication is performed in accordance with contract documents and that the shop is operated in accordance with the quality control plan. As a minimum the quality control plan for fabrication shall address the trace-ability of materials to mill certificates and heat numbers, and the documentation that shows welders and technicians are properly certified to perform the subject work and the inspection, testing and dimensional checks performed during fabrication.
- C. Name and location of the shop that will perform painting work along with the shop's quality control plan.
- D. The Contractor must qualify welding processes and welding operators in accordance with the applicable American Welding Society (AWS) Welding Code and shall provide certification that welders to be employed in the Work have satisfactorily passed AWS qualification tests.
- E. The Contractor must maintain a quality control program for both fabrication and erection of structural steel to assure that all installations conform to the requirements of the Contract Drawings and Specifications. The quality control program shall conform to the AISC Code of Standard Practice for Steel Buildings and Bridges, as well as the requirements in this Section for both shop and field inspection and testing. The Contractor must employ non-destructive testing personnel that meet American Society For Nondestructive Testing (ASNT) SNT-TC-1A level II qualifications and AWS certified welding inspectors.
- F. Welds shall be inspected and tested at the fabricating shop by the Contractor in accordance with AWS D1.1 and as follows:
  - 1. All welds shall be visually inspected by an AWS certified inspector.
  - 2. Full penetration welds used in transverse joints (splices) of plates or shapes, and any length of weld in longitudinal joints of built-up members that is subject to direct tensile stress (acting in a direction perpendicular to the axis of the weld), shall be non-destructively tested for 100 percent of the weld length by radiographic or ultrasonic



methods, as approved by the Engineer. All other full penetration welds shall be non-destructively tested in a similar manner for 25 percent of their length.

3. Defects found visually in partial penetration and fillet welds shall be non-destructively tested by magnetic particle or dye penetrant methods, as approved by the Engineer, If in the opinion of the Engineer, the test results disclose unacceptable welds, then the percentage of welds required to be tested may be increased, as deemed necessary by the Engineer, up to 100%, without additional compensation therefor.
  4. Where shown on the contract drawings, utilize ultrasonic testing to detect delaminations.
- G. The Contractor must have sole responsibility for coordinating the Work and notifying the Engineer in a timely manner to assure that all testing and inspection procedures required by the Engineer are properly provided.
- H. Field Measurements. Contractor must verify by accurate field measurements the locations of existing bolt holes in stone walls and other construction where steel will be erected for perfect fit before fabricating. Show recorded field measurements on Shop Drawings.

#### 8.52.3 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the construction site at appropriate intervals so as to ensure uninterrupted progress of Work.
- B. Material shall be stored in an area designated or approved by the Engineer. Structural steel shall be drained properly. Adequate shoring and protection shall be provided to prevent distortion and other damage. Structural steel shall be stored on timber and not on mud or cinders, and otherwise handled so as not to damage shop paint. All sections which are to be placed in ground storage shall be readily accessible for inspection.

#### 8.52.4 SUBMITTALS

##### A. Shop Drawings

1. The shop drawings shall contain all dimensional and geometric information. Materials shall not be ordered, fabricated, or delivered to the construction site before the shop drawings have been approved.
2. Shop drawings shall include layouts and details showing the type of steel for each member, sizes of members, connections, cuts, copes, cope reinforcing, bolts, welds and other pertinent data. Provisions for the connection of any other work shall be indicated on the shop drawings.
3. All welds shall be indicated by standard welding symbols as defined by AWS. Shop drawings shall show the size, length, and type of each weld.
4. The review of shop drawings by the Engineer shall not in any way relieve the Contractor from the responsibility for the adequacy of the design of the connections and all required detailing, the responsibility for the proper fitting of the Work in strict conformance with the Contractor requirements and from the necessity of furnishing material and workmanship required by Contract Drawings and Specifications in addition to that indicated on the shop drawings.
5. The Contractor must complete the design of connections for any portion of the structures not shown on the Contract Drawings or indicated in the Specifications. Design and detailing for any alternative connections proposed by the Contractor and accepted by the

Engineer shall be prepared by the Contractor. All connection design and detailing prepared by the Contractor must be performed under the supervision of a Professional Engineer licensed in the State of New York. The calculations and shop drawings shall also bear the signature and seal of a Professional Engineer licensed in the State of New York. In the case of conflict between the requirements of this Contract and the Codes and Standards contained in the American Association of State Highway Transportation Officials (AASHTO) or American Institute of Steel Construction (AISC) publications referenced in 1.02, the requirements of this Contract shall govern.

**B. Product Data**

1. **Coatings:** Manufacturer's complete technical literature of the proposed three coat paint system. Provide finish paint sample colors from manufacturer's full range of standard and custom colors for selection by Engineer.
2. **Removable Adhesive Anchor Bolt System:** Manufacturer's technical literature and installation instructions for the stainless steel anchor bolt system installed in existing holes in stone masonry. The Contractor must only use qualified technicians that have been recently trained by the anchor bolt manufacturer to install the anchor bolt system. The Contractor must submit proof that the technicians have been trained to install the approved anchor bolt system.
3. **Sealant:** Sealant around steel shapes shall be one part polyurethane, elastomeric adhesive conforming to ASTM C 920, Type M, Class 25, Grade NS. Acceptable manufacturers include the following:
  - a. Sonneborn's Ultra Sealant, as manufactured by BASF Building Systems, Inc., Shakopee, MN
  - b. Sikaflex-la as manufactured by Manufactured by Sika Corporation, Lyndhurst, NY
  - c. DynaTred as Manufactured by Pecora Corporation, Harleysville, PA
    - i. **Samples:** Provide samples, 3" x 6" in size, on metal surface of selected finish paint color for approval by Engineer
    - ii. **Material Certification**

**C. Mill Reports:** Prior to commencing with fabrication of steel, certified copies of all mill reports covering the chemical and physical properties of all steel used in this Contract shall be submitted. Such certification shall be obtained from the mills producing the steel and shall certify that the steel meets the minimum requirements as to physical properties, inspection, marking, and tests for structural steel as defined by the American Society for Testing and Materials (ASTM) for the type of steel shown on the Contract Drawings.

**D. Welder qualifications** in accordance with 1.04 B.

**8.52.5 COORDINATION:**

- A.** Coordinate the work of this section with concrete foundations, sidewalks and curbs indicated on the Drawings.
- B.** Coordinate the work of this section with specialty lighting and electrical work to be connected to the structural steel as indicated on the Drawings.

### 8.52.6 MATERIALS

- A. Structural Steel Shapes and Plates: ASTM A36. Anchor bolts ASTM F1554 Grade 36
- B. Removable Adhesive Anchors: Anchor bolt and sleeve assembly shall be stainless steel complying with ASTM 304/316 and meet the requirements of International Code Council (ICC) ES AC308 and American Concrete Institute (ACI) 355.4. The system shall be demonstrated to the capability to sustain, without failure, a load equal to five (5) times the load imposed when installed in stone masonry as determined by testing per ASTM E 488, conducted by a qualified independent testing agency. Only qualified technicians trained by the anchor bolt manufacturer shall install the anchor bolt system.
- C. High Performance Coating: Coating system shall be shop applied and consist of three coats; Primer, Intermediate and Finish coats. Prime shall be suitable for coating galvanized surfaces. Finish coat color shall be black. Approved coating manufacturers include Sherwin Williams, Carboline Company, and PPG Protective and Marine Coatings. Suggested three coat system is as follows:
  - 1. First Coat:
    - a. Sherwin Williams # Pro-Cryl® Universal Primer, B66-310, Red Oxide, acrylic primer for galvanized surfaces as manufactured by Sherwin Williams Company, Woodside, NY.
    - b. Galoseal WB as manufactured by Carboline Company, St. Louis, MO.
    - c. Mercury Series 2100 Mercrylic Primer, as manufactured by Mercury Paint Corporation, Brooklyn, NY.
    - d. Or approved equal.
  - 2. Second Coat Second Coat and Third Coat: Acrylic coating having a dry film thickness of 2.5-4 mills requires 5 hours drying time @ 77 F; 8 hours @ 50 F, before recoating (verify required drying time with manufacturer). Acceptable manufacturers include the following:
    - a. Sher-Cryl HPA, B66-350, Black, as manufactured by Sherwin Williams Company, Woodside, NY
    - b. Carbocrylic 3359 DTM as manufactured by Carboline Company, St. Louis, MO.
    - c. Mercury Series 2150 Black, as manufactured by Mercury Paint Corporation, Brooklyn, NY.
    - d. Or approved equal.

### 8.52.7 FABRICATION

- A. Fabricate and assemble structural assemblies in shop to greatest extent possible. Provide camber and fabricate items of structural steel in accordance with the standards and specifications referenced herein and as indicated on shop drawings approved by the Engineer.
- B. Properly mark and match-mark materials for field assembly. Fabricate for a delivery sequence which will expedite erection and minimize field handling of materials.
- C. Where finishing is required, complete assembly, including welding of units, before the start of finishing operations. Provide finish surfaces of members, exposed in final structure, free of

markings, burrs, and other defects.

- D. Galvanizing: All structural steel wide flange sections, steel plates and angles for specialty lighting supports shall be hot-dip galvanized complying with ASTM A 123/A 123M. For hardware items, hot-dip galvanizing to comply with ASTM A 153/A 153M. **Do not quench steel following galvanizing to avoid surface contaminants from depositing on the steel and to ensure compatibility with the high-performance coating.**

#### 8.52.8 STEEL FINISH

- A. Surface Preparation: Clean surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants. After cleaning, apply a zinc-phosphate conversion coating suited to the organic coating to be applied over it. Clean welds, mechanical connections, and abraded areas and repair galvanizing to comply with ASTM A 780.
- B. High-Performance Coating: Immediately after cleaning, apply three coat system to prepared surfaces. Comply with coating manufacturer's written instructions and with requirements in Society for Protective Coatings, (SSPC) -PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting. Apply at spreading rates recommended by coating manufacturer. High performance coating shall be shop applied only.
- C. Match approved Samples for color, texture, and coverage. Remove and refinish, or recoat work that does not comply with specified requirements

#### 8.52.9 PREPARATION

- A. Work Under Other Sections: Examine all prepared under other Sections of these Specifications to incorporate the Work of this Section and ensure any defects affecting installation are corrected. Prior to commencement of the Work under this Section, verify the dimensions and coordinate the structural steel Work with Work under other Sections.
- B. Anchor Bolts:
  1. The Contractor must ascertain by accurate survey, the location, alignment, diameter and elevation of the existing bolt holes that shall be used to connect new steel plates to the stone masonry. Any discrepancy between the locations shown on the Contract Drawings and the actual field conditions shall be indicated on the steel shop drawings, prior to the start of steel fabrication.
  2. Once anchor bolts and sleeve diameters are approved, a determination will be made by the Engineer if the existing bolt whole diameters shall be enlarged. If so determined, the bolt holes shall be enlarged using diamond core drill bit and performed by qualified technicians trained by the anchor bolt system manufacturer.

#### 8.52.10 ERECTION

- A. Workmanship: All Work shall be erected plumb, square and true to lines and levels in strict accordance with Contract requirements and within tolerances of the American Institute of Steel Construction (AISC) "Code of Standard Practice for Steel Buildings and Bridges" and in the case of bridges in accordance with AASHTO Specifications.
- B. Temporary Shoring and Bracing: Provide temporary shoring and bracing members with connections of sufficient strength to bear imposed loads. Remove temporary members and connections when permanent members are in place and final connections are made. Provide temporary guy lines to achieve proper alignment of structures as erection proceeds.

- C. Temporary Planking: Provide temporary planking and working platforms as necessary to effectively complete the Work.
- D. Field Assembly:
  1. Set structural frames accurately to lines and elevations indicated. Align and adjust various members forming part of complete frame before permanently fastening. Clean bearing surfaces and other surfaces that will be in permanent contact before assembly.
  2. Perform necessary adjustments to compensate for discrepancies in elevations and alignment. Level and plumb individual members of structure within specified AISC tolerances or more stringent tolerances when shown on the contract drawings. Establish required leveling and plumbing measurements at mean operating temperature of structure. Make allowances for difference between temperature at time of erection and mean temperature of structure when completed and in service.
- E. Touch-up Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint. Apply paint to exposed areas using same material as used for shop painting. Apply by brush or spray to provide minimum dry film thickness of 2.0 mils unless otherwise shown on the Contract Drawings.

#### 8.52.11 FIELD TESTS

- A. The Contractor must perform inspections of connections; proper tensioning of bolts (The Contractor must furnish an approved calibrated torque wrench and assign two workers to assist the Engineer.); levels, plumbness and alignment of the framing; and field painting. Inspections shall be performed in accordance with the Codes and Standards contained in the following publications:
  1. AASHTO Standard Specifications for Highway Bridges. Guide Specifications for Fracture Critical Non-Redundant Steel Bridge Members
  2. AISC Code of Standard Practice for Steel Buildings and Bridges: Sections 2; 6; 8; and 10, only (except that all references to the responsibility of the Owner and the Engineer will not apply).
- B. Field welding shall be inspected and tested by the Contractor in accordance with 1.04 F. and the Contractor's quality control plan for erection.

#### 8.52.12 METHOD OF MEASUREMENT

- A. The quantity to be measured for payment shall be the number of pounds of structural steel.
- B. Payment Weight: Payment will be based on the computed weight of metal as shown on the approved shop drawings, and shall include permanent bolts and welds in the structure as erected. The weight of all erection materials including but not limited to bolts, 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, shall be excluded. 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.
- C. Computed Weight: The density of steel shall be assumed as 490 p.c.f. The weights of rolled shapes and of plates of all dimensions shall be computed on the basis of their nominal weights as required by the dimensions shown on the approved shop drawings

8.52.13 BASIS OF PAYMENT

Payment will be made under:

Item No.	Item	Pay Unit
8.52 DUMBO	Structural Steel	Pound

**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:

- a. Material and Finish: Grade 304 Stainless Steel with mill finish
- b. Nominal Thickness: As required by Contractor to safely support imposed sidewalk live loads
- c. 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)	1'-7¼"	8½"
B	Paving Tray (Area Totem)	2'-11¼"	8½"
C	Paving Tray (Neighborhood Totem)	4'-3¼"	8½"
D	Paving Tray (SBS Totem)	2'-1½ "	8½"

**8.52PT.7. PRICE TO COVER.** No separate payment will be made for the Paving Tray.

**SECTION 8.52 WSF**  
**Wayfinding Sign Footing**

**8.52WSF.1. INTENT.** Under this section, the Contractor must furnish concrete footing for the wayfinding sign footing and all necessary incidentals in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

**8.52.WSF.2 MATERIALS**

(A) Saw cut must be done in accordance with **Section 6.55** and price must be deemed included in the price of this item.

(B) Excavation must be done in accordance with **Section 6.02** and its Item No. 6.02 AAN and price must be deemed included in the price of this item.

Special care excavation must be done in accordance with **Section 8.02** and Item No. 8.02A and must be paid accordingly under its respective pay item number in the BID SCHEDULE.

(C) Concrete must meet with the requirements of **Section 3.05**, Concrete, and be of the class, type and mixing specified and will be done in accordance with **Section 4.06**; price must be deemed included in the price of this item.

Sub base material must be of the type, grade, size number and nominal size specified and must be done in accordance with **Section 6.67**; type MATERIAL B, price must be deemed included in the price for this for this item.

(D) Concrete reinforcement must comply with the requirements of the following sections:

**Steel Bars--Section 2.23**

Kind of reinforcement, size and placement must be as specified and as shown on Contract Drawings. Reinforcement must be installed in accordance with the requirements of **Section 4.14** and price is deemed included in the price for this item.

(E) Joint Sealer and pre-molded joint filler as shown on drawing must comply with the requirements of **Section 2.22** and **Section 2.15** respectively type as specified and price is deemed included in the price for this for this item.

(F) Anchor Bolt ASTM A240, Grade 304, 1/2" dia., to be drilled and installed with epoxy filler as shown on drawings or as directed by the Engineer.

(G) Galvanized Steel Footing plate to be installed as per drawing and **Section 8.52 FP**, cost of installation is deemed included in the price of this item. Furnishing of this plate must be made under the allowance Item HW-914.

(H) Paving tray and temporary cover plate to be installed as per drawing and **Section 8.52 PT**, cost of installation is deemed included in the price of this item. Furnishing paving tray and temporary cover plate must be made under the allowance Item HW-914.

(I) Use galvanized rigid metal conduit in accordance with Chapter 5 of NYCDOT specifications for the installation of conduit, duct and bends (November 2013) or HDPE pipe, schedule 40, in accordance with subsection C5.2.1, at page 63 of NYCDOT specifications for traffic signals and its systems (November 2013); as directed by the Engineer and as shown in the drawings.

(J) Plastic Filter fabric must be done in accordance with **Section 6.68** and its Item No. 6.68 and price must be deemed included in the price of this item.

**8.52 WSF.3. DESIGN AND CONSTRUCTION OF FORMS.** Forms must accurately conform to the shape, lines and dimensions of the footing for which they are required, be substantial and sufficiently tight to prevent leakage of mortar, and have, unless otherwise specified by the Engineer, moldings or chamfer strips at angles. They must be of adequate strength and be braced or tied together with approved ties and spacers, to maintain position and shape, and to insure the safety of workmen and passersby, be clean and free from sawdust, chips, dirt, ice and other objectionable materials. Forms must present smooth, true surfaces to the concrete placed against them, having temporary openings where necessary, to facilitate cleaning and inspection immediately before concrete is deposited. Forms must be coated with non-staining oil before the reinforcement is placed, or be wetted except in freezing weather.

**8.52 WSF.4. MEASUREMENT.** Footing must be paid as EACH, installed to the satisfaction of the Engineer.

**8.52 WSF.5 BASIS OF PAYMENT.** The unit price bid per each footing must cover the cost of materials, insurance, equipment, labor, and installation for the respective wayfinding footings, including shallow footings for each type, the cost of all items referenced in the wayfinding, with the exception of Items 8.02 A, 4.13 AAS, 4.13 CABS and 6.05 DP, must be deemed included in the price of wayfinding sign footings (Item numbers 8.52 WSF-A, B, C, and D), complete in all respect, and must include, but not be limited to, the furnishing and incorporation of all concrete; reinforcement; curing; finishing; samples; testing equipment and facilities for testing; all, in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

*Payment with be made under:*

Item No.	Item	Pay Unit
8.52 WSF-A	WAYFINDING SIGN FOOTING TYPE A	EACH
8.52 WSF-B	WAYFINDING SIGN FOOTING TYPE B	EACH
8.52 WSF-C	WAYFINDING SIGN FOOTING TYPE C	EACH
8.52 WSF-D	WAYFINDING SIGN FOOTING TYPE D	EACH

**SECTION 9.00 B**  
**Drilling Pilot Holes**

1. Description. This section describes the work of Drilling Pilot Holes in sidewalks suspected of having vaults, as directed by the Engineer, for the purpose of:

- a) Identifying the outline and roof elevation of possible building vaults and subway vaults (hereinafter referred to as vaults) which extend under the sidewalk area and/or curb line.
- b) Determining if elevation and construction type of vault roofs interfere with construction of sidewalks

2. Materials and Methods. Work to be performed by the Contractor, or his agent, shall consist of core drilling exploratory two (2)-inch diameter holes through the sidewalk pavement to determine the depth of vault roofs and establish the vault roof envelope where other inspection methods of identifying vault roof structures have failed.

Taking care not to damage the existing waterproofing materials over vault roof structures, the Contractor must be required to core drill holes in all other materials of whatever nature encountered until underground structures have been located, as directed by the Engineer, or to a depth of approximately twelve (12) inches, whichever comes first. All core materials shall be removed and disposed of away from the site by the Contractor.

Bore holes shall be maintained free of debris and kept dry by the Contractor in order to permit inspection and observations to be made by the Engineer.

Bore holes shall be temporarily plugged during non-working hours and uncovered only as required for observation work. Plugs will be allowed to remain in the holes for up to three (3) working days for the Engineer to inspect the bore holes.

Immediately after inspection of each bore hole by the Engineer, the hole shall be backfilled to the bottom of the sidewalk pavement and capped to grade with a non-shrink epoxy mortar of a type approved by the Engineer, provided the mortar can obtain a minimum compressive strength of 3,000 psi in twenty-four hours and a minimum compressive strength of 3,200 psi in 28 days.

Should the Contractor accidentally puncture a vault or void area, the Contractor must immediately cease his drilling operation and notify the Engineer as to what has happened. Any vault structures punctured by the Contractor's operations shall be repaired by the Contractor to match the existing structure. Said hole in vault structures shall be temporarily repaired with an approved epoxy mortar, or securely steel plated if permanent repairs are not completed prior to the end of that same working day. No holes in vault roofs shall be left unattended at any time. The Contractor must also be responsible to replace damaged water proofing directly over vault roofs at his own expense and shall make all necessary repairs and/or replacement of materials within the vault damaged as a

result of the Contractor's operations. Said work shall be done to the satisfaction of the Engineer, at no additional cost to the City.

3. Measurement. The quantity of Drilling Pilot Holes to be measured for payment shall be the number of linear inches of holes actually drilled as prescribed herein.

4. Price to Cover. The unit price bid per linear inch of pilot hole drilled shall include the cost of all labor, material, plant, equipment, insurance, appliances, and all other incidentals required to core drill holes, including but not limited to, removal and disposal of all material of whatever nature encountered; assisting the Engineer in inspecting the drilled holes; backfilling and temporary capping of holes; permanent restoration of pavement with epoxy mortar; and maintaining both pedestrian and vehicle traffic as may be required; all in accordance with these specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Description	Pay Unit
9.00 B	DRILLING PILOT HOLES	INCH

**SECTION 9.06 HW  
ALLOWANCE FOR DECORATIVE MESH FABRIC**

**9.06HW.1. DESCRIPTION.** Under this section, the Contractor will be paid to furnish and install panels of breathable mesh fabric upon which art work is printed in a maximum of four (4) colors, as directed by the Engineer. Each panel shall also contain metal grommets installed at a one (1) foot maximum spacing around the perimeter of the fabric for mounting on the Temporary Chain Link Fence (Item No. 6.34 ADTP), unless an alternate method of mounting the fabric is proposed by the Contractor and approved by the Engineer. All art work to be printed on the fabric will be provided to the Contractor by the City.

At the completion of the work the panels shall remain the property of the City and shall be delivered to the Engineer, unless otherwise directed.

**9.06HW.2. PRICE TO COVER** The lump sum payment made under this item shall be equal to the sum total of all invoices submitted by the Contractor, as approved by the Engineer, for furnishing and installing decorative mesh fabric materials, to the satisfaction of the Engineer, plus an allowance of 10% overhead and 10% profit.

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. No guarantee is given that the actual lump sum cost for this item will in fact be the "fixed sum" amount. The "fixed sum" amount is included in the bid solely to insure that sufficient monies will be available to pay the Contractor for this work, which may be more or less than the fixed amount. This "fixed sum" amount shall be included with the other amounts bid by the Contractor for all the other items under this contract.

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 drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Description	Pay Unit
9.06 HW	ALLOWANCE FOR DECORATIVE MESH FABRIC	F.S.

**SECTION 9.10 WSS****Temporary Wall Support System**

9.10WSS.1. Intent. This section describes the work to provide temporary structural support to existing vault walls during the vault abandonment operation as directed and approved by the Engineer.

9.10WSS.2. Description. Under this work, the Contractor shall design, furnish, place, maintain and remove a Temporary Wall Support System (TWSS) as ordered by the Engineer. Details of the TWSS must conform to the requirements of Federal and Local Regulations.

Temporary wall support shall be defined as a timber and steel sheeting or shoring, a shield system (i.e. trench box or trench shield) or pre-engineered support system that may be used to support existing vault retaining walls directly adjacent to buildings or roadways. The Contractor shall be responsible for the design of a TWSS by a New York State Licensed Professional Engineer and the method of installing the TWSS shall be submitted to the Engineer for approval in conformance with Section 1.06.13 of the NYCDOT Standard Highway Specifications.

The requirements of any support system shall be as contained in Title 29 Code of Federal Regulations, Part 1926, Safety and Health Regulations for Construction (OSHA), and current Standard Specifications, Construction and Materials, Volumes I, II and III, of the New York State Department of Transportation Standard Specifications, Office of Engineering (NYSDOTSS).

9.10WSS.3. Materials. The selection of TWSS materials shall be the Contractor's option subject to approval of the Engineer. Material shall comply with the following requirements:

- A. Temporary Timber Sheeting. Timber sheeting shall be new or used and consist of any acceptable species which can be placed satisfactorily. The sheeting shall have a preservative treatment conforming to the American Wood-Preservers Association (AWPA) Standard C-2, Soil Contact. The timbers should not be less in actual cross section or stress grade than that shown on the approved working plans, or approved by the Engineer and shall be in accordance with the requirements and provisions of NYSDOT Standard Specifications (NYSDOTSS) Subsection 712-14, Stress Graded Timber and Lumber. The timber shall be sound and free from any defects which might impair its strength or tightness. The materials shall include all necessary waling and bracing required.
- B. Temporary Steel Sheeting. Steel sheeting shall be new or used, conforming to the requirements of ASTM A328 unless otherwise indicated on the plans. Waling and bracing shall be new and unused

conforming to the requirements of ASTM A36 unless otherwise indicated on the contractor's design. Stock steel may be used. The Contractor shall furnish to the Engineer certified copies of physical and chemical test results, which shall include a sworn statement by a qualified mill representative to the effect that the subject material conforms to the requirements of the steel specified.

C. Temporary Soldier Pile and Lagging Wall. Materials shall comply with the following requirements:

1. STRUCTURAL STEEL: conforming to the provisions of NYSDOT Standard Specifications, Section 715-01, Structural Steel.
2. WOOD: The timber lagging shall have a preservative treatment conforming to the AWWA Standard C-2, Soil Contact. The timbers should not be less in actual cross section or stress grade than that shown on the plans, or approved by the Engineer. Stress Grading and acceptance shall be in accordance with the requirements and provisions of NYSDOT Standard Specifications Subsection 712-14, Stress Graded Timber and Lumber.
3. CONCRETE: Concrete shall conform to the provisions of NYCDOT ITEM NO. 4.06 Concrete In Structures, Class A-40.

9.10WSS.4. Construction Details. It shall be the Contractor's responsibility to install a TWSS in accordance with the State and Federal Safety Codes.

A. The TWSS installed under this item shall be of sufficient size and strength to meet the requirements of Title 29, Code of Regulations, Part 1926, Safety and Health Regulations for Construction (OSHA), and New York State Standard Live Load requirements. Prior to use, the Contractor shall supply the Engineer with documentation of compliance.

B. Excavation support elements shall be installed by persons especially skilled in such work.

C. Install soldier piles if used, by pre-boring or other pre-excavating methods to the tip elevation shown on approved working drawings. Prevent pre-bored or other pre-excavated holes from collapsing. Driving of piles will not be permitted.

D. Construct supports in a manner that will ensure that supported faces, and loads exerted thereon, will be stabilized; give particular attention to lateral supports.



E. Weld in accordance with AWS D1.1.

F. Maintain TWSS in safe condition. If unstable conditions, settlement, or movement is observed, it may result in damage to structures, facilities and construction or endanger personnel and the public; therefore the Contractor shall immediately remedy those conditions, settlements, and movements by methods such as adding bracing and supports and, as a last resort, backfilling. Remedies shall be subject to acceptance by the Engineer

G. Install lagging with no gap between the boards unless specifically directed. As installation progresses, backfill the voids between the excavation face and the lagging with sand or soil rammed into place. If gaps in the lagging are allowed, limit the gap width between lagging boards to 1/2 inch maximum.

H. Depth of exposed excavated face below the last placed lagging board shall not exceed 15 inches.

I. All damage to the adjacent structures or roadway caused by the inability of the chosen TWSS to provide adequate support shall be repaired to the satisfaction of the Engineer at no additional cost to the City. Severe damage, which directly affects the safety of the public, shall be immediately repaired to the satisfaction of the Engineer. The operation shall be halted until a satisfactory prevention method is instituted.

9.10WSS.5. Measurement. The quantity of Temporary Wall Support System to be paid for shall be the number of square feet obtained by multiplying the measured installed vertical height by the measured installed horizontal length of Temporary Wall Support System approved by the Engineer.

9.10WSS.6. Price to Cover. The unit price bid per square foot for this work shall include the cost of furnishing all labor, material, equipment, insurance, and incidentals necessary to complete this work including, but not limited to, furnishing and installing waling, bracing, and design services. The cost of maintaining the Temporary Wall Support System will also be deemed included in the unit price bid for this item. Seventy-five (75%) percent of the unit price bid will be paid upon installation of the TWSS and the remaining twenty-five (25%) percent will be paid after its function is no longer required and/or removed. The cost of any work necessary to remove and or replace any portions of the Temporary Wall Support System when abandoning the individual vault shall be deemed included in the unit price bid.

*Payment will be made under:*

Item No.	Description	Pay Unit
9.10 WSS	TEMPORARY WALL SUPPORT SYSTEM	S.F.

Modified for HWKKP005 on January 31, 2018.

**SECTION 9.13 HD  
HIGH-DENSITY POLYETHYLENE DRAINAGE PIPE**

**9.13HD.1. INTENT.**

This section describes the work of constructing new High-Density Polyethylene (HDPE) Pipe (4" Dia.) under-sidewalk drain from private properties, at the back of sidewalk to the roadway curb face.

**9.13HD.2. DESCRIPTION.**

High-Density Polyethylene (HDPE) Pipe (4" Dia.) under-sidewalk drains shall be furnished and installed at the locations as shown on the Contract Drawings and in accordance with the directions of the Engineer

**9.13HD.3. MATERIALS.**

- (A) PIPE: HDPE pipe must be 4" dia., have a full circular cross-section, with a corrugated non perforated exterior wall, and a smooth inner wall (waterway). Corrugations may be either annular or spiral. HDPE pipe must be made from virgin polyethylene compounds. All pipe and pipe connections must be soil-tight; all pipe and pipe connection materials must be from the same manufacturer to ensure compatibility of materials.

Acceptable manufacturers for HDPE pipe:

1. Advanced Drainage Systems, Inc., Ludlow, MA
  2. ISCO Industries, Louisville, KY
  3. JM Eagle, Livingston, NJ
  4. Hancor, New York, NY
  5. or an approved equivalent.
- (B) Wire fabric shall comply with **Section 2.25** of NYC Department of Transportation, Volume I, 2015.
- (C) Concrete shall comply with **Section 4.06** of NYC Department of Transportation, Volume I, 2015.
- (D) Expansion Joint shall comply with **Section 2.15, Type IV** of NYC Department of Transportation, Volume I, 2015.

**9.13HD.4. METHODS.**

Installation of under-sidewalk drains shall comply with the New York City Department of Transportation's Standard Details of Construction for Highways H-1037, or as otherwise shown on the Contract Drawings. The cast iron pipe show in said Standard Detail must be substituted with High-Density Polyethylene (HDPE) Pipe (4" Dia.) per **Section 9.13HD.3.A**

HDPE pipes shall be cut to the lengths required, installed in the locations, and laid true to the lines and grades, all as shown on the Contract Drawings or ordered by the Engineer.

Holes required for the HDPE pipe shall be cut in the face of the curb steel facing at the locations shown on the Contract Drawings.

After the installation of the HDPE pipe, the pipe end that protrudes the new curb face shall be cut flush with the curb face and ground smooth. Prior to the placement of concrete for cradle and

sidewalk, the drain pipe shall be secured in place and all connections shall be tested for water drainage and leaks.

**9.13HD.5. SUBMITTALS.**

Contractor must submit for Engineer's approval product data and installation details and instructions for HDPE pipe, pipe fittings, and connections.

**9.13HD.6. MEASUREMENT.**

The quantity to be measured for payment must be the number of linear feet (laying length) of HDPE pipe, including fittings, measured in their final position, installed to the satisfaction of the Engineer.

**9.13HD.7. PRICES TO COVER.**

The contract price per linear foot of High-Density Polyethylene (HDPE) pipe under-sidewalk drains shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to furnish and install cast iron under-sidewalk drains, complete with connections, concrete and wire fabric, 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
9.13 HD4	4" HIGH-DENSITY POLYETHYLENE DRAINAGE PIPE	L.F.

**SECTION DUMBO-STO  
STORAGE FACILITY****DUMBO-STO.1 DESCRIPTION**

- (A) Under this section, the Contractor must furnish all labor, material, equipment, insurance, and incidentals necessary to receive, store, deliver and handle salvaged and purchased "used" granite blocks for installation under the Contract in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.
- 1) Such materials consist of the following:
    - (a) Salvaged granite blocks removed and sorted under Item No. 6.03 SEPS
    - (b) "Used" Granite blocks purchased as directed by the Engineer under Item No. 6.04 UGB
    - (c) All incidental materials and equipment needed for the cleaning, sorting and transporting granite blocks to the project site for installation.
    - (d) Existing rails removed from the project limits for cleaning and reinstallation.
- (B) Related Sections
- 1) 6.03 SEPS Stripping Existing Pavement Surfaces of these I-Pages
  - 2) 6.04 G Granite Block Pavement and Header of these I-Pages
  - 3) 7.30 RSR Remove, Store and Install Rail Tracks of these I-Pages
- (C) Submittals: Submit the following within fourteen (14) days of the Notice to Proceed:
- 1) Storage Facility Data: General facility description, total usable space (in square feet), address, contract information for owner and facility manager, description of security services, and other information as may be requested by the Engineer.

**DUMBO-STO.2 MATERIALS AND METHODS**

- (A) The Contractor must lease Storage Space for exclusive use as specified in this Section.
- 1) The Storage Space shall be rented in an open space or warehouse building or other equivalent space that can be legally occupied for the intended purpose.
  - 2) Location: The Storage Space shall be located off the work site, within fifteen (25) miles of the site.
  - 3) Total storage area shall be as determined by the Contractor, with Engineer's approval, as appropriate for simultaneously storing all materials as described in this Section, subject to a minimum of 20,000 square feet of flat unobstructed, usable storage area.
  - 4) Date of Occupancy: The Storage Space shall be leased and available for Contractor's use within (30) thirty days of the Engineer's submittal approval.
  - 5) Security:
    - (a) Storage space shall be locked and physically secured against intrusion.
    - (b) Provide burglar and fire alarms linked to a central station.
  - 6) Contractor must pay all deposits, monthly rental, all utilities, telephone/communications, security systems, insurance, accessory and maintenance fees and miscellaneous fees.
- (B) Receipt of Materials
- 1) Coordinate as needed to arrange for delivery of the materials to the Contractor's storage facility.
  - 2) Receive and unload materials at the storage facility, and place in designated storage area.
  - 3) Upon Contractor's receipt of the materials for storage, the materials shall be considered as "Work" as defined under Article 2, Sub-article 2.1.33 of the Standard Construction Contract.
  - 4) The materials shall be insured along with other required Work in accordance with Article 22 of the Standard Construction Contract.

(C) Use of Storage Space

- 1) The storage space shall be dedicated solely to the purposes of this project and may include salvaged girder rails under Item No. 7.30 RRT. Materials purchased by the Contractor may be stored in this space only with the written approval of the Engineer.
- 2) Clearly mark all stored materials "PROPERTY OF THE CITY OF NEW YORK" upon arrival to the storage facility, and remove such marking upon delivery to the work site.
- 3) The Contractor must not at any time move any of said materials to another off-site place of storage without prior written consent of the Engineer.
- 4) Once placed in storage, materials may not be relocated until the Contractor is prepared to incorporate in the work, and the Engineer has issued written approval.

(D) Protection of Materials:

- 1) Contractor must be under an absolute obligation to protect the stored materials against any damage, loss, theft and/or vandalism consistent with Article 7 of the Standard Construction Contract.

**DUMBO-STO.3 MEASUREMENT AND PAYMENT**

All payments under this item shall be based on the actual number of months that the storage facility is in active use.

- 1) No payments shall be made under this item until the Contractor has furnished satisfactory evidence to the Engineer that the storage facility has been reimbursed for said costs in providing storage.
- 2) Payment for this item shall be on a monthly basis upon submission of vouchers for storage fees paid to an approved storage facility, to be verified by the Engineer.

**DUMBO-STO.4 PRICES TO COVER**

The contract price bid per unit month shall cover the cost of all labor, material, equipment, insurance, and incidentals necessary to complete the work including but not limited to coordination with suppliers, receiving, handling, protecting, labeling, and storing materials, and delivering materials to the site, 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
DUMBO STO	STORAGE FACILITY	UNIT MONTH

**SECTION HW-91X****ALLOWANCE FOR RAMP TO BUILDING ENTRANCE****HW-91X.1. DESCRIPTION.**

Under this item, the Contractor must be required to remove and restore existing ramps to building entrances as per these specifications and as directed by the Engineer. The work may consist of the following:

- a. Remove, store and reset the existing ramp in order to construct new sidewalk, and driveways at new elevations; or
- b. Remove and construct a new ramp in order to construct new sidewalk and driveway at new elevations.
- c. Provide temporary structures as required to maintain safe access to the impacted property during the restoration work as determined by the Engineer.

**HW-91X.2 SUBMITTALS**

Shop Drawings: Contractor must submit detailed shop drawings of the proposed work including complete dimensions and elevations of the ramp, adjacent curb, sidewalk and adjacent building entrance. Include all components of the ramp and stair and detail how the structure is to be anchored to the sidewalk. Submit details of the proposed coating system to be applied to the ramp. The shop drawings shall be prepared and signed by a Professional Engineer in the State of New York.

Product Data and Material Certifications: Submit manufacturer's product data for all elements of the restored or new ramp and material certifications for the ramp structural components as determined by the Engineer to ensure compliance with all applicable codes and regulations.

**HW-91X.2. MATERIALS.**

All materials proposed for the restored or new ramp shall be submitted and approved by the Engineer prior to ordering or fabrication.

**HW-91X.3. CONSTRUCTION DETAILS.**

The Contractor must take photos prior, during and post construction of items being restored under this section. The Contractor must organize photos with a key map / sketch for each property to the satisfaction of the Engineer.

Prior to performing any work under this Item, the Engineer will coordinate with the Contractor to define the scope of "restoration work" per each property impacted, and the extent to which temporary structures are required to maintain safe access to the building entrances.

The Engineer and Contractor will then meet with the property owner to explain the work to be performed on the property and obtain the property owner's signoff with a consent agreement. The Contractor will then submit to the Engineer a detailed estimate to perform the agreed to work and a schedule for completion. The Engineer will review the submittal and once approved, direct the Contractor to begin work.

If during the course of the work there are unforeseen changed conditions than what was documented in the

scope of "restoration work", the Contractor must stop work immediately and notify the Engineer. All parties shall agree to any changes to the original scope prior to restarting the restoration work.

The Contractor must remove, store and re-install items to the satisfaction of the Engineer. It is the intent of this contract to initially reuse existing materials to the maximum extent possible. If approved by the Engineer, certain items can be replaced to facilitate and expedite the work. However, in the event that the existing items are considered to be of such an age or condition that removal and exact replacement is not feasible or practical, the Engineer in consultation with the property owner will select materials with similar properties. Temporary structures provided to maintain access to building entrances shall be erected and dismantled in a timely manner so as not to delay the restoration work and inconvenience the property owner.

Any materials to be reused that are damaged due to negligence by the Contractor must be replaced by the Contractor at no additional cost to the City or the property owner. The Contractor must be responsible to complete the restoration work on schedule and to the satisfaction of both the Engineer and Property Owner.

#### **HW-91X.4. MEASUREMENT.**

The quantity to be measured for payment shall be based on each ramp for which a scope of "restoration work" has been submitted and approved, and detailed invoices submitted by the Contractor have been approved by the Engineer. Interim payments may be made to the Contractor based on material procurement or work progress, solely at the discretion of the Engineer.

#### **HW-91X.5. BASIS OF PAYMENT.**

The "fixed sum" shown in the proposal for Property Restoration shall be considered the price bid for this item. However, actual payment to the Contractor will be based on the actual invoices submitted by Contractor and approved by the Engineer. 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" 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 payment to the Contractor made from the fixed sum amount under this item shall be equal to the sum of all invoices of approved estimates per property based on satisfactorily completed ramp restoration work that has been approved by the Engineer with a signoff from both the Engineer and the Property Owner.

The unit price shall cover the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work including photos and any temporary structures, as per the Engineer's approved scope of "Restoration Work", and in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
HW-91X	ALLOWANCE FOR RAMP TO BUILDING ENTRANCE	FIXED SUM



**SECTION HW-900-AVW  
ALLOWANCE FOR ADDITIONAL VAULT RELATED WORK**

**HW-900-AVW.1. DESCRIPTION.**

Under this item, the Contractor is required to perform unforeseen additional under sidewalk vault related work within the project limits as shown on the contract documents, specifications or as directed by the Engineer. The vault is directly under and within the limits of proposed sidewalk replacement. The additional vault related work may consist of some or all of the following:

- Relocate the existing services and utilities within the vault space.
- Determine the structural condition of all visible structural elements by a Structural Engineer licensed in the State of New York prior to start of construction.
- Perform additional survey for vault dimensions and elevations which will be tied into the existing project survey.
- Perform soil borings to determine soil properties and tests to determine bearing capacity of the existing structural members.
- Reclaim and/or fill in additional vaults that not identified in the contract documents.
- File with, and obtain approval from, the New York City Buildings Department for proposed vault disposition.
- Coordinate with property owners and obtain their approvals, and the execution of vault entry construction agreements. An agreement must be required for alteration of each vault.
- Perform asbestos inspection, sampling and testing by a Certified Asbestos Investigator and make an assessment of the possibility that asbestos installations exist within the vaults
- Develop scope of work to gain access to inaccessible vault spaces.
- All other unforeseen vault related work.

**HW-900-AVW.2. Quality Assurance**

The Contractor or subcontractor that will abandon existing undersidewalk vaults shall have not less than seven (7) years' continuous experience in the various structural operations required to abandon undersidewalk vault spaces, including but not limited to: excavation in confined areas; temporary structural steel and timber support systems; construction of reinforced concrete retaining walls; placing flowable fill material; providing continuous access to impacted properties; and any other related structural operations that may be required to complete the work.

**HW-900-AVW.3. MATERIALS.**

The Contractor must provide shop drawings signed by a Professional Engineer licensed in the State of New York, catalog cuts or other manufacturer documentation in order to verify new materials to be installed or constructed as directed and approved by the Engineer.

**HW-900-AVW.4. CONSTRUCTION DETAILS.**

The Contractor must take photos prior, during and post construction of items being removed, relocated and constructed under this section. The Contractor must organize photos with a key map / sketch for each property to the satisfaction of the Engineer.

Prior to performing any work under this Item, the Engineer will coordinate with the Contractor to define the scope of "additional vault related work" per each property impacted. The Engineer and Contractor will then meet with the property Owner to explain the work to be performed on the property and obtain the property

Owner's signoff. The Contractor will then provide the Engineer an estimate to perform the agreed to work. The Engineer will then review and once approved, direct the Contractor to begin work.

If during the course of the work there is an unforeseen changed condition than wasn't documented in the scope of "additional vault related work", the Contractor must stop work and notify the Engineer. All parties must agree to any changes to the original scope prior to restarting the additional vault related work.

The Contractor is responsible to complete the vault related work to the satisfaction of both the Engineer and Property Owner.

**HW-900-AVW.5. MEASUREMENT.**

The fixed price lump sum shown in the Bid Schedule for this item must be included in the total bid price; however, actual payment to the Contractor will be based on the actual invoices submitted by the Contractor. The invoice must be based on the approved Contractor's estimate per property and satisfactorily completed with signoff from both the Engineer and Property Owner.

**HW-900-AVW.6. BASIS OF PAYMENT.**

The "fixed sum" shown in the proposal for additional vault related work must 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" 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. No guarantee is given that the "fixed sum" amount shall be fully or partly used.

The "fixed sum" payment made under this item must be equal to the sum of all invoices of approved estimates per property submitted by the Contractor for this item, as approved by the Engineer.

The unit price must cover the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work as per the Engineer's approved scope of "Additional Vault Related Work", and in accordance with the new design if applicable, the contract drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
HW-900-AVW	ALLOWANCE FOR ADDITIONAL VAULT RELATED WORK	F.S.

**SECTION HW-908**  
**ALLOWANCE FOR EXTRA WORK DUE TO ARCHAEOLOGICAL DISCOVERIES**

In accordance with the Special Provisions article titled "ARCHAEOLOGICAL DISCOVERIES", should extra work be ordered by the Resident Engineer as a result of any archaeological discoveries being found under this project, it shall be paid for under this item as extra work in accordance with the requirements of Article 26 in the Standard Construction Contract dated January 2018.

Payment made under this Fixed Sum item shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to complete any extra work ordered by the Engineer due to archaeological discoveries found at the site.

No guarantee is given that this allowance item will in fact be required in this contract. The estimated "fixed sum" amount shown in the Bid Schedule is included in the total bid solely to insure a method of payment for any extra work performed by the Contractor, as directed by the Engineer in consultation with the City's Archaeologist due to archaeological discoveries found at the site.

*Payment will be made under:*

Item No.	Item	Pay Unit
HW-908	ALLOWANCE FOR EXTRA WORK DUE TO ARCHAEOLOGICAL DISCOVERIES	F.S.

**SECTION HW-914  
ALLOWANCE FOR WAYFINDING TOTEMS**

**HW-914.1. DESCRIPTION.**

Under this item, the Contractor must be required to pay to the 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 must only install (WAYFINDING) TOTEMS signs once the foundation (including paving tray and steel foundation plate) has been installed by the Contractor. The Contractor must 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 will be made under:

Item No.	Item	Pay Unit
HW-914	ALLOWANCE FOR WAYFINDING TOTEMS	F.S.

**SECTION PK-12D****WATER TAP, 2" DIAMETER**

**PK-12D.1. WORK:** Under this Item, the Contractor must obtain permits from the New York City Department of Environmental Protection, and install water tap(s) of the size(s) specified at existing New York City water mains where shown on the plans.

**PK-12D.2. PERMIT:** The Contractor must employ a licensed Certified Master Plumber to obtain a permit from the New York City Department of Environmental Protection, Bureau of Water Supply and Wastewater Collection, Tapping Division, hereinafter referred to as D.E.P.

**PK-12D.3. MATERIALS & EXECUTION:** The Contractor must notify the Engineer and the D.E.P. three (3) days prior to intended date of work. All saw cutting, excavation, installation of water tap, and restoration of street pavement (where applicable) shall be performed in accordance with D.E.P. and New York City Department of Transportation requirements.

All materials necessary for the installation of the tap(s) will be furnished by the D.E.P. and shall be paid for by the Contractor.

**PK-12D.4. MEASUREMENT AND PAYMENT:** The quantity of WATER TAP to be paid for shall be the number of Water Taps installed to the satisfaction of the Engineer.

The price bid shall be a unit price for EACH tap and shall include the cost of all labor, materials, equipment, insurance, and incidental expenses, including, but not limited to, disconnection and abandonment of the existing wet connection or water/tap, the cost of permits and the amounts paid to the D.E.P. necessary to complete the work in accordance with the plans, the specifications and directions of the Engineer.

Excavation, Saw cutting, and Restoration of Street Pavement (where applicable) will be paid separately under the appropriately scheduled items.

Payment will be made under:

Item No.	Item	Pay Unit
PK-12D	WATER TAP, 2" DIAMETER	EACH

**SECTION PK-13****TYPE "K" COPPER TUBING**

**PK-13.1. DESCRIPTION.** Under this section the Contractor must furnish, install and connect the water service pipe of the size shown in accordance with the Contract Drawings, the specifications and directions of the Engineer.

**PK-13.2. MATERIALS**

- (A) **PIPE:** The water service pipe shall be rigid hard temper type "k" copper tubing in straight lengths meeting the specification for ASTM designation No. B88.
- (B) **FITTINGS:** Fittings shall be approved wrought copper and bronze solder - joint pressure fittings (ANSI B 16.22), Di-Electric fittings as required.
- (C) **JOINTS:** Joints shall be made by soldering, using 95-5 tin antimony solder. From the curb valve to the water tap, joints shall be of the "flared" type.
- (D) **INSULATION**
  - 1. Insulation shall be 1" thick cellular glass insulation complying with ASTM C 552, as manufactured by Pittsburgh Corning Corporation, FOAMGLAS insulation; or approved equivalent.
  - 2. Jacketing shall be flexible waterproof membrane complying with ASTM E 96 for 0.002 per inch, as manufactured by Pittsburgh Corning Corporation, ITTWRAP jacketing; or approved equivalent.

**PK-13.3. METHODS****(A) INSTALLATION**

- 1. The pipe shall be laid true to line and grade with a cover as indicated on the plans or as directed by the Engineer.
- 2. Where cover is less than four (4) feet, pipe shall be insulated per the manufacturer's recommendations.
- 3. When the foundation is good firm earth, the earth should be pared or molded to give a full support and if necessary a layer of fine sand or other suitable material should be placed. The same means of securing firm foundation should be adopted in case the excavation has been made deeper than necessary, in which case the Contractor must furnish the gravel at his own expense.
- 4. Where the bottom of the trench is in rock, fresh fill, soil of low bearing power or other situations where special foundations are required, the Contractor must provide such foundation in accordance with the written order of the Engineer. The work shall be paid for at the unit prices bid for the materials used in the work.

Modified for HWKKP005 on January 3, 2018.

## (B) TESTS

1. The Contractor must not backfill over any pipe until ordered by the Engineer.
2. The pipe system shall be tight and show no leaks when filled with water, sealed and subjected to an internal hydrostatic pressure of 100 psi for thirty minutes.
3. Temporary caps shall be placed where required to permit making the tests where valves are not available.
4. The tests shall be made in the presence of the Engineer or his representative.

**PK-13.3. MEASUREMENT.** The quantity of TYPE K COPPER TUBING to be paid for under these items shall be the number of linear feet (laying length) of each tubing size incorporated in the work to the satisfaction of the Engineer, measured along the centerline of the tubing.

**PK-13.4. PRICES TO COVER.** The unit price bid for each size TYPE K COPPER TUBING shall include the cost of all labor, materials, equipment, insurance, and incidental expenses necessary to complete the work including, but not limited to, excavation and backfilling to grade, furnishing and installing tubing, fittings and fine gravel; all in accordance with the plans, the specifications, and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
PK-13A	TYPE K COPPER TUBING, 1/2" DIAMETER	L.F.
PK-13B	TYPE K COPPER TUBING, 3/4" DIAMETER	L.F.
PK-13D	TYPE K COPPER TUBING, 1" DIAMETER	L.F.
PK-13E	TYPE K COPPER TUBING, 1 1/2" DIAMETER	L.F.
PK-13F	TYPE K COPPER TUBING, 2" DIAMETER	L.F.

**SECTION PK-14D****CURB GATE VALVE**

**PK-14D.1. WORK:** Under this Item, the Contractor must furnish and install CURB GATE VALVES of the size shown on the plans, in strict accordance with the plans, specifications, and directions of the DDC Resident Engineer.

**PK-14D.2. SHOP DRAWINGS:** The Contractor must submit catalog cuts of the curb gate valve in accordance with the requirements of the NYC Department of Transportation, Standard Highway Specifications, Section 1.06.13 for the Engineer's approval.

**PK-14D.3. MATERIALS.**

**(A) VALVES:** Valves shall be Stockham No. B-130 with bronze body, bronze bonnet, inside screw, non-rising stem, solid wedge disk, and threaded ends, or approved equivalent.

**(B) OPERATING KEY:** An approved operating key of proper size for each valve shall be furnished by the Contractor. However, the Contractor need not furnish more than two (2) keys for each type of valve, regardless of the quantity of valves called for in the Contract. For valves 2" diameter, the operating key shall be Stockham No. 1V437, or approved equivalent.

**PK-14D.4. METHOD:** All plumbing work shall be done by a New York City Master Licensed Plumber. The Contractor must comply with all rules, regulations and requirements of all regulatory agencies having jurisdiction.

**PK-14D.5. MEASUREMENT:** The quantity of CURB GATE VALVE to be paid for under this Item shall be the number of valves of each size, furnished and installed in accordance with the Contract Drawings, specifications, and to the satisfaction of the Engineer.

**PK-14D.6. PRICE TO COVER** The price bid shall be a unit price for EACH Curb Gate Valve of Each Size, and shall include the cost of all labor, materials, equipment, and other incidentals necessary to complete the Work in accordance with the Contract Drawing the specifications, and directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
PK-14B	CURB GATE VALVE, 1/2" DIA.	EACH
PK-14C1	CURB GATE VALVE, 1" DIA.	EACH
PK-14D	CURB GATE VALVE, 2" DIA.	EACH

Modified for HWKKP005 on January 3, 2018.



**SECTION PK-17****CAST IRON VALVE BOX, 5-1/4" DIAMETER**

**PK-17.1. DESCRIPTION:** Under this Section the Contractor must furnish and install CAST IRON VALVE BOX, 5-1/4" DIAMETER in accordance with the Contract Drawings, the specifications, and directions of the Engineer.

**PK-17.2. MATERIALS:** Box: 5 1/4" diameter valve boxes shall be Bingham & Taylor Fig. No. 4908 with a Fig No. 4904-L locking cover, or approved type manufactured by Star Pipe Products, Houston, TX; Tyler Utilities Division, Tyler, TX; or approved equivalent. The cover shall have the designation "WATER" cast thereon. The boxes shall extend within the limits called for on the plans. Cast Iron Valve box furnished by the following suppliers, or approved equivalent, are acceptable for use in this contract:

Bingham & Taylor  
PO Box 939  
Culpeper, VA 22701  
Ph. (540) 825-8334  
<http://www.binghamandtaylor.com/>

Border States  
1734 A Airpark Drive  
Grand Haven MI 49417-8943  
Ph. (616) 842-2382  
<https://www.borderstates.com/>

Tripac  
475 Klug Circle  
Corona California 92880  
Ph. (951) 280-4488  
<http://www.tripaconline.com/>

**Setting:** The valve boxes shall be set plumb, as shown on the plans, on a footing of brick laid in cement mortar, supported on a foundation of broken stone.

**Brick:** The brick shall be made from clay or shale, well burned, of a quality approved by the Engineer. The mortar shall be composed of one part Portland Cement and two parts sand.

**Broken Stone:** The broken stone shall be clean broken traprock, or other approved stone, all of which shall pass a one-inch square opening screen and retained on a 5/8 inch square opening screen.

**PK-17.3. SHOP DRAWINGS** The Contractor must submit Shop Drawings when required, in accordance with the requirements of the New York City Department of Transportation Standard Highway Specifications under Division 1 Contract Requirements **Section 1.06.13**. The Contractor must submit Shop Drawings when required, for Engineer's approval.

**PK-17.4. MEASUREMENT.** The quantity of CAST IRON VALVE BOXES, 5-1/4" DIAMETER, to be paid for under this item shall be the number of boxes satisfactorily installed.

**PK-17.5. PRICE TO COVER.** The price bid shall be a unit price per EACH Cast Iron Valve Box and shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work including, but not limited to, excavation and restoration, and furnishing and placing brick and broken stone setting bed; all in accordance with the plans, the specifications, and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
PK-17	CAST IRON VALVE BOX, 5-1/4" DIAMETER	EACH

**SECTION PK-184-GH1****GROUND HYDRANT - 1" DIAMETER**

**PK-184-GH1.1. INTENT:** The Contractor must furnish and install a ground hydrant, all piping, fittings, and other sundries necessary to connect the water lines, as shown on the Contract Drawings, the specifications and directions of the Engineer.

**PK-184-GH1.2. DESCRIPTION:** Under this Section the Contractor must furnish and install a GROUND HYDRANT - 1" DIA., including, but not limited to, all plumbing work and connection to water service; all in accordance with the Contract Drawings, the specifications, and directions of the Engineer.

**PK-184-GH1.3. MATERIALS:** Unless otherwise specified herein, all materials and methods of construction shall conform to NYCDOT Standard Highway Specifications.

- (A) Equipment: One inch (1") Ground Hydrant shall be Type Z-1360-HD-RK-NB-10 manufactured by Zurn Industries Inc., Hydromechanics Division, Erie, PA or approved equivalent model manufactured by:
1. MIFAB, Inc. Chicago, IL
  2. Jay R. Smith Manufacturing Co., Montgomery, AL
  3. or approved equivalent.

Hose connection shall be one inch (1") diameter.

- (B) Hydrant shall be an encased, ground hydrant for flush-with-grade installation, complete with bronze casing, polished nickel bronze box, all bronze interior parts, bronze seat and replaceable seat washer, non-turning operating rod with free-floating compression closure valve with 1" connection. Polished nickel-bronze box shall have a scoriated heavy-duty cover with operating key lock and the word "Water" cast on cover. Depth of bury is two (2) feet minimum. Four (4) keys are to be supplied to the Engineer.
- (C) Brass Garden Hose Adaptor (for one inch Ground Hydrant only): Shall be (1" x 3/4") Model # FM1076 as manufactured by George Taylor Brass and Bronze Works, Huntington, N.Y., or approved equivalent model as manufactured by Jay R. Smith Manufacturing Co., Montgomery AL or Zurn Industries Inc., Hydromechanics Division, Erie, PA; or other approved manufacturer.
- (D) Concrete Collar: Class A-40 concrete in accordance with **Section 4.06** of New York City Department of Transportation (NYCDOT) Standard Highway Specifications.
- (E) Broken Stone: Broken Stone shall consist solely of crushed ledge rock. Stone shall be as designated on the detail and shall be of the approved size and quality specified in NYCDOT Standard Highway Specifications, Division II Basic Materials of Construction, **Section 2.02-Aggregate-Coarse** (Broken Stone and Gravel).
- (F) Geotextile Filter Fabric: Geotextiles used in drainage applications shall be Class 2 and shall conform to the following AASHTO-M288 properties for drainage geotextiles:

	ASTM Test	TYPE	TYPE
Structure		Woven (Class 2)	Non-Woven (Class 2)
Percent Elongation	ASTM D4595	<50%	≥50%
Grab Strength (Min.)	ASTM D4632	247 lbf	157 lbf
Tear Strength (Min.)	ASTM D4533	90 lbf	56 lbf
Puncture Strength (Min.)	ASTM D4833	90 lbf	56 lbf
Permittivity (Min.)	ASTM D4491	0.21 / sec.	
Apparent Opening Size/ Sieve Designation (Max.)	ASTM D4751	0.0098 inch/ Std. No. 60 sieve	

a. Manufacturers:

- 1) Advanced Drainage Systems, Inc., Hillard, OH.
- 2) Carthage Mills, Cincinnati, OH.
- 3) Mirafi, Inc., Charlotte, NC.
- 4) Approved equivalent.

**PK-184-GH1.4. SUBMITTALS.** Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications.

- (A) Catalog Cuts: The Contractor must submit Catalog Cuts of the ground hydrant for approval prior to installation.
- (B) Shop Drawings: The Contractor must submit shop drawings when required by the Engineer, in accordance with the requirements of **Section 1.06.13** of the NYCDOT Standard Highway Specifications.
- (C) Operating Keys: The Contractor must furnish four (4) operating keys for each hydrant type/size installed under this item.
- (D) Parts Repair Kit: Contractor must supply one (1) Parts Repair Kit for each Ground Hydrant type/size installed under this item.

**PK-184-GH1.5. MEASUREMENT:** The quantity to be measured for payment shall be the actual number of EACH Ground Hydrant, of the size specified, actually installed, complete with all plumbing work, to the satisfaction of the Engineer.

**PK-184-GH1.6. PRICE TO COVER:** The price bid shall be a unit price for each Ground Hydrant of the size specified and shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work including, but not limited to, all plumbing work and connections to water service within five (5') feet of the ground hydrant, furnishing and installing broken stone, geotextile, PVC pipe, concrete collar, hose adapter, and all submittals; 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
PK-184- GH1	GROUND HYDRANT - 1" DIAMETER	EACH

## SECTION PK-143

**RPZ & WATER METER WITH REMOTE & STRUCTURE - 2" DIA.**

**PK-143-WORK:** Under this section, the Contractor must provide all labor, materials and equipment necessary or required to furnish and install RPZ & WATER METER WITH REMOTE & STRUCTURE of the size indicated, including all piping, fittings, valves, test tee, and test tee valve, if required and other incidentals necessary to complete plumbing work and connection to water service and water feed lines in accordance with the plans, specifications and as directed by the Engineer. RPZ (Reduced Pressure Zone) device is also known as a Backflow Preventer. Water Meter W/ Remote Reader shall include Water Meter, Water Meter Strainer and Automatic Reading & Billing System (also known as Remote Reading Device). Factory plumbing work is to be done by a Licensed Plumber. All on-site plumbing work is to be done by a New York City Master Licensed Plumber. The Contractor must comply with all rules, regulations, and requirements of all regulatory agencies having jurisdiction.

**PK-143- MATERIALS:** Unless otherwise provided for herein, all materials and methods of construction shall conform to the requirements in the Section 1.06 of New York City Department of Transportation Standard Highway Specifications. Entire unit shall be fabricated and installed in accordance with this specification and New York City Department of Parks and Recreation Standard Detail Drawing #TYLA/146-R8 "RPZ and Water Meter Details for Site work" as shown on Dwg. No. D6 / Sheet No. 12 of the Contract Drawings.

Precast Concrete Structures: Enclosure structures for the RPZ and water meter shall be as manufactured by A.C. Miller Concrete Products Inc., Spring City, PA, or approved equivalent.

Precast concrete structures furnished by the following suppliers, or approved equivalent, are acceptable for use in this contract:

A.C. Miller Concrete Products, Inc.  
31 East Bridge Street  
Spring City, PA 19475

T Mina Supply, Inc.  
12653 36th Avenue  
Flushing, NY 11368

RB Construction Products, Inc.  
2785 Noyac Road  
Sag Harbor, NY 11963

Concrete: All concrete shall fulfill the material requirements of the New York City Department of Parks and Recreation (NYCDPR) Section B, except that compressive strength shall be 5,000 psi at 28 days. All precast concrete shall have a honed finish. The precast concrete shall be well cured, shall be dense and shall have good edges. The cement and aggregate shall be thoroughly mixed in a proportion of one (1) part Portland Cement to not over six (6) or less than four (4) parts of aggregate. The aggregate fine and course shall conform to ASTM C-33. Aggregate shall be free of all deleterious substances which cause reactivity with oxidized hydrogen sulfides. Aggregate shall be graded to produce a homogeneous concrete mix.

Modified for HWKKP005 on January 3, 2018.

Reinforcement: Steel reinforcement shall conform to the provisions of the NYCDPR standard items for "Steel Bar Reinforcement" and "Steel Fabric Reinforcement". Reinforcement shall be placed as shown on the drawings.

Ladder Rungs: Ladder rungs for each water meter structure shall be constructed of copolymer polypropylene plastic, as manufactured by M.A. Industries, Peachtree City, Ga., or approved equivalent.

Ladder rungs: furnished by the following suppliers, or approved equivalent, are acceptable for use in this contract:

M.A. Industries, Inc. 2027  
South 12th Street  
Allentown, PA 18103

Fontana Metal Sales Corporation 3120  
Expressway Drive  
South Islandia, NY 11749

Lane International Corporation  
10758 S.W. Manhasset Drive  
Tualatin, OR 97062

RPZ Structure Access Doors: Doors shall be JustSet Doors as manufactured by Pennsylvania Insert Corp., Spring City, PA 19475, or approved equivalent. The two (2) types of RPZ Structure doors as follows:

Two (2) vertical 30" x 24" (hinged) high security stainless steel access doors.  
One (1) Horizontal 12" x 24" (no hinges) high security stainless steel access door.

RPZ structure access doors furnished by the following suppliers, or approved equivalent, are acceptable for use in this contract:

M.A. Industries, Inc. 2027  
South 12th Street Allentown,  
PA 18103

Fontana Metal Sales Corporation  
3120 Expressway Drive  
South, Islandia, NY 11749

Lane International Corporation  
10758 S.W. Manhasset Drive  
Tualatin, OR 97062

Water Meter Structure Access Door: Access door shall be 36" x 30" size, heavy duty (H20 loading) high security color (brown) anodized aluminum access doors such as JustSet Doors, as manufactured by Pennsylvania Insert Corp., Spring City, PA 19475, or approved equivalent. Frame shall have integral drain channel, anchor flanges, and neoprene gasket. A one-and-one half inch drain (1-1/2") coupling shall be located on the corner of the frame. Operation shall be spring assisted for easy operation. A hold open arm shall automatically lock the door in the 90° position. Hinge shall be heavy forged brass with a stainless steel pin. Door shall be provided with two locks. Lock shall be "Ford" lifter worm lock with waterworks bronze pentagonal bolt type "LL". All hardware shall be zinc or cadmium plated.

Water meter structure access doors furnished by the following suppliers, or approved equivalent, are acceptable for use in this contract:

M.A. Industries, Inc.  
2027 South 12th Street  
Allentown, PA 18103

Fontana Metal Sales Corporation  
3120 Expressway Drive  
South Islandia, NY 11749

Lane International Corporation  
10758 S.W. Manhasset Drive  
Tualatin, OR 97062

Construction Accessories: Frames shall be 3/16" x 2" x 2" angle welded with joints ground smooth, after fabrication. Hinges shall be heavy duty and welded to door and frame.

Security Bolts for RPZ Structure: Security Bolts for RPZ Structure shall be NYCDPR pattern # 83 registration # "116183", Part # H11777155, as manufactured by McGard, contact - Dave Smith, Orchard Park, N.Y. 14127, or approved equivalent. Threads for security bolts shall be at least one-third (1/3) bolt dia. for proper "bite". Vertical doors shall have two (2) security bolts; 7/16 - 20 x .750. Horizontal door for RPZ structure shall have four (4) security bolts; 7/16 - 20 x .750

Security bolts for Water Meter Structure Horizontal Door: Security bolts for Water Meter Structure Horizontal Door shall be two (2) pentahead security bolts.

Special Design Criteria for Security Bolts:

1. Bolt must be made from alloy steel, heat treated to 150,000 psi tensile strength.
2. Head of bolt must be selectively hardened to Re 60 min. to prevent the use of files, hacksaws, and chisels.
3. Bolt is to be made with either a flat or 120° cone seat as required.
4. Bolt shall be torqued by means of a recessed curvilinear ("Daisy") groove in the top face of bolt head. A special mating key is required to operate in groove for installation and removal of bolt.
5. Bolts are to be zinc nickel plated in order to meet an ASTM B-368 C.A.S.S. test for 22 hours.
6. Bolt lengths are to be held to +/- 0.01".
7. Bolt threads are to be class UNC-2A.

Modified for HWKKP005 on January 3, 2018.



Water Piping: Shall be hard temper type 'K' copper tubing meeting the requirements of Section PK-13 of these I-Pages. Fittings shall be approved wrought copper and bronze solder-joint pressure fittings American National Standards Institute (ANSI B 16.22).

RPZ: The RPZ (Reduced Pressure Principle Backflow Prevention device) shall be Febco Model #860, (209) 252-0791, or approved equivalent. Size shall be as indicated above and on the Contract Drawings. The RPZ shall meet the requirements of American Society of Sanitary Engineers (ASSE) Standard 1013 & the American Water Works Association (AWWA) Standard Code 506-78.

RPZ devices furnished by the following suppliers, or approved equivalent, are acceptable for use in this contract:

Schlumberger Industries Water Division  
1600 Alabama Highway 229  
Tallasse, AL 36078

Zurn Industries, Inc.  
1801 Pittsburgh Avenue  
Erie, PA 16502

Watts Water Technologies, Inc.  
815 Chestnut Street  
North Andover, MA 01845

The RPZ shall consist of two independently operating center guided, spring loaded, "Y" pattern check valves and one hydraulically dependent differential relief valve. Mainline valve body and caps including relief valve body and cover shall be bronze. Check valve and relief valve components shall be constructed so they may be serviced without removing the valve body from the line. Shut-off valves and test cocks shall be full ported resilient seated ball valves.

Meter Outlet Control Valve: The MOCV shall be a Class 125, all bronze gate valve, with non-rising stem and solid disc, with screwed bonnet and threaded ends, such as Stockham Figure B-110, or approved equivalent. The MOCV shall be capped for testing.

Water Meter: Water Meter shall be Metron-Farnier Spectrum 130D as manufactured by Schlumberger Industries Water Division, (860) 828-6807, or ABB's C-700 as manufactured by ABB Water Meter, Inc., Oak, Florida, or approved equivalent. All water meters furnished shall conform to the "Standard Specifications for Cold Water Meters", AWWA Standard C700 latest revision. Water meters furnished by the following suppliers, or approved equivalent, are acceptable for use in this contract:

Schlumberger Industries Water Division  
1600 Alabama Highway 229  
Tallasse, AL 36078

Mueller Systems  
48 Leona Drive, Suite C  
Middleboro, MA 02346

Badger Meter, Inc.  
4545 West Brown Deer Road  
Milwaukee, WI 53224

Metron-Farnier LLC  
5665 Airport Blvd #105  
Boulder, CO 80301

**Register:** The register shall be of the straight reading sealed magnetic drive type and shall contain six (6) numeral wheels. Registers must be sealed and dry. All direct reading register lenses shall be flat, of high strength, and impact resistant glass to prevent breakage. The dial shall be of the center sweep pointer type and shall contain 100 equally divided graduations at its periphery. The register must contain a low flow indicator with a 1:1 disc notating ratio to provide leak detection. Register boxes shall be bronze.

All meters must be adaptable to digital encoder register without interruption of the customer's service for the purpose of pit, remote, or central meter reading. The registers shall be secured to the main case by means of a plastic tamperproof seal pin to allow for in-line service replacement. Seal screws are not acceptable.

Register retainer rings shall have an impact resistant design which absorbs register glass lens impact. All registers shall have the size, model, and date of manufacture stamped on the dial plate.

**Measuring Chamber:** The measuring chamber shall be a nutating disc type; the flat nutating disc shall be molded of a non-hydrolyzing hard rubber or synthetic polymer and shall contain a type 316 stainless steel spindle. The nutating disc shall be equipped with a synthetic polymer thrust roller with a stainless steel shaft located within the disc slot. The roller head shall roll on the buttressed track provided by the diaphragm in the measuring chamber. The measuring chamber shall be of a 2-piece snap-joint type. The measuring chamber shall be made of non-hydrolyzing synthetic polymer, shall be smoothly and accurately machined and shall contain a removable molded diaphragm of the same material as that of the chamber. No screws shall be used to secure the chamber together. The control block shall be the same material as the measuring chamber and be mounted on the chamber top to provide sand ring protection. The control block assembly shall be removable to facilitate repairing. Control block assemblies shall be designed to allow no magnetic slippage which would result in a loss of revenue. The measuring chamber outlet port shall be sealed to the main case outlet port by means of an "O" Ring gasket to eliminate chamber leak paths.

**Guarantee:** Registers must be guaranteed for at least ten years. All meters will be guaranteed for one year on material and workmanship. To ensure accuracy, each meter must be accompanied by a factory test tag certifying the accuracy at the flows required by AWWA C700 (low, intermediate, and full flow). All meters shall be guaranteed adaptable to the Neptune ARB Encoder Electronic Meter Reading Systems.

**Remote Reader:** The Remote Reader shall be Neptune Proread ARB System ® as manufactured by Schlumberger Industries Water Division (860) 828-6807 or Remote Meter Read (RMR) System® as manufactured by ABB, or approved equivalent. The Remote Reader shall be a self-contained encoder register metering system designed to obtain remote simultaneous water meter registration directly from the register odometer. The metering information shall be obtained through a remotely located receptacle using a compatible data capture system. The system shall consist of the Encoder Meter Register and Remotely Mounted Receptacle.

Encoder Meter Register: Shall be direct mounted with encoded odometer wheels and digital data stream. Batteries or pulses are not allowed.

Registration: The register shall provide a six digit visual registration at the meter. The unit shall, in a digital format, simultaneously encode the four or six most significant digits of the meter reading for transmission through the remotely located receptacle. (The most significant meter registration digits are defined as those digits on the register number wheels that denote the highest recorded values of water consumption.) A quick indexing mechanism shall be employed which shall prevent ambiguous reading. The register shall have a full test sweep hand or dial divided into gradients of down to 1/100th of the units of registration. Register test rings shall be available for shop testing. The units of registration shall be in U.S. gallons. These units shall be clearly designated on the face of the register. The month and year of manufacture and other identification information shall appear on the face of the register. The register shall employ a leak detection indicator on the dial face. Registers using pulse generation or conversion of pulses to digital output is not permitted. Batteries shall not be required.

Mechanical Construction: Materials used in the construction of the register shall be compatible with the normal water meter environment and with each other. The unit shall possess a copper bottom and incorporate a rubber O-ring seal. Where indicated, pit set registers must be provided with moisture protection for all internal components when operating under flooded pit conditions. The register and mounting base shall be integral components and should not allow for disassembly. The register shall be attached to the meter case by a bayonet attachment. Fastening screws or nuts shall not be required. A tamperproof plastic seal pin shall be used to secure the register to the main case. No special tools shall be required to remove the register. The register head must swivel 360 degrees without removing the seal pin to facilitate visual reading and ease of wiring. The register shall be removable from the meter without disassembling the meter body and shall permit field installation and/or removal without taking the meter out of service. Provision shall be made in the register for the use of seal wires to further secure the register. Terminal screws must be accessible on the register for transmission wire connection to the remote receptacle or future connections to a telephone system.

Electrical Construction: The materials employed for contacts and connectors shall inhibit corrosion and shall suffer minimal effect from environmental conditions to which they are exposed. The number wheels used in the register assembly shall be provided with spring-type bifurcated metal contacts to insure a high probability of information transmission.

Connection shall be made to the register by three screw-type terminals, sonically inserted into the register top. Access to the terminals shall be available to all models of register. A port cover shall be provided to cover the terminals after they have been wired. Digitally formatted data transmitted from the register shall incorporate a check sum character to verify correct information transmission and integrity. Data errors shall be indicated by the reading equipment.

Meter Reading Information: The encoder register shall provide up to six digits of information to the reading equipment. A ten digit identification number shall also be provided with each reading. The utility shall have the option to reprogram the internal register identification number an unlimited number of times. The encoder register must have the capability to provide additional custom information to the reader. This information shall be programmed (and reprogrammed at any time) by the utility. Information on programming the register, equipment needed, and encoder meter reading output shall be provided with each proposal.

Remote Mounted Receptacle: Remote receptacle shall provide a communication link for the transmission of information from the register.

Modified for HWKKP005 on January 3, 2018.

**Mechanical Construction:** Where indicated, a remote receptacle must be provided for attachment to a pit meter lid with another unit also designed for attachment by wall mounting. The materials employed shall be corrosion resistant, resist ultraviolet degradation, unaffected by rain or condensation, and compatible with rugged service and long life. The pit mounted receptacle shall be mounted to the water meter access door of the meter concrete structure using two screws to be provided by the utility. The whole size to be drilled in the access door shall not exceed 3/8" each. The pit mounted receptacle shall be provided with a minimum length of ten feet of wire connected and sealed at the receptacle without terminal exposure.

**Electrical Construction:** The receptacle construction shall incorporate the function of a cable clamp or strain relief. Design of the unit shall be such that it provides for mechanical and electrical connection between the receptacle and interrogation equipment.

**Cable:** The connecting cable shall be of the two-wire conductor type in a sheath which shall be abrasion and moisture resistant. Each conductor shall be color coded.

### **PK-143- INSTALLATION:**

**Excavation:** The Contractor must excavate to the lines as shown in the drawings. Temporary sheeting is required in excavation for the precast concrete structure, and shall conform to the requirements of the NYCDOT Standard Highway Specifications, Section 4.11. **Setting of Precast Concrete Water Meter Structure:** The precast concrete water meter structure shall be set on a six (6) inch thickness of broken stone with additional stone added inside the twelve inch (12") x twelve inch (12") drain sleeve to the top of the bottom slab. The RPZ Structure shall be set on the Water Meter Structure, as shown on NYCDPR Standard Detail Drawing.

The Contractor must install supports for the water meter at the height shown on the Contract Drawings. The meter shall be set so that the dial faces upward and is horizontal. The dial shall not be more than three (3) feet above the floor. The encoder register shall be installed on meter as per manufacturer's instructions. The remote reader receptacle shall be installed in the pit cover as per the manufacturer's directions and recommendations, allowing reading of the meter from above ground level. The Contractor must allow sufficient Water Meter Remote Reader cable slack for manhole cover removal. The RPZ shall be installed as shown on the Contract Drawings and per manufacturer's instructions.

**Connections:** The Contractor must connect the water piping as shown on the Contract Drawings for complete and satisfactory operating unit to the satisfaction of the Engineer. Connections shall be made to the Water Meter by coupling union or flange union on both inlet and outlet ends of the meter and bored for sealing with holes not less than one-eighth (1/8) of an inch in diameter - solder connections are not permitted. Connections to the RPZ shall be as shown on the Contract Drawings and per manufacturer's instructions.

**SUBMITTALS:** Shall be submitted in accordance with the requirements of the General Provisions of the NYCDOT Standard Specifications.

**Shop Drawings:** The Contractor must submit Shop Drawings in accordance with the requirements of the General Provisions of the NYCDOT Standard Highway Specifications. A shop drawing is required showing installation of the complete RPZ assembly, water meter, piping, pipe supports, and the precast concrete structures.

Modified for HWKKP005 on January 3, 2018.

**Catalog Cuts:** The Contractor must submit Catalog Cuts of the RPZ, water meter, meter reading system, control valve, and all connected piping for approval prior to installation.

**Certifications:** The Contractor must be responsible for obtaining all certifications necessary to comply with the NYC Bureau of Water Supply & Wastewater Collection, Cross Connection Control Unit & the NYS Department of Health regulations for R.P.Z.'s (after installation), including Certification by Backflow Prevention Device Tester; Certification of Master Plumber responsible for the R.P.Z. installation, and a Professional Engineer's or Registered Architect's Certification that the installation is in accordance with the approved Plans. The Contractor must prepare and submit copies of New York State Department of Health, (NYSDOH) Form Gen. 215B to the NYS Department of Health & NYC Cross Connection Control Unit of the Bureau of Water Supply & Wastewater Collection. NYCDPR shall receive copies in triplicate of all such submittals. The DPR Design Division; Environmental Engineering Section shall be copied on all such submittals. In summation, the Contractor must be held completely responsible to ensure that all Work is in compliance with NYS DOH, Form Gen. 215B.

**PK-143- MEASUREMENT AND PAYMENT:** The quantity of EACH size of the RPZ & WATER METER WITH REMOTE AND STRUCTURE, to be paid for under this item shall be the number of each size of the RPZ & WATER METER WITH REMOTE AND STRUCTURE actually installed at the site to the satisfaction of the Engineer. The price bid shall be a unit price for EACH size RPZ and Water Meter with Remote and Structure and shall include the cost of all labor, materials, equipment, insurance, and any incidental expenses necessary including, but not limited to, certifications, all plumbing work within the structure, connection to the water service at the structure; furnishing and installing precast concrete structure, including concrete, reinforcing steel, excavation, temporary sheeting, broken stone, brick masonry, rungs, and access doors; all in accordance with the plans, the specifications, and the directions of the Engineer.

Copper tubing and all water service beyond the exterior face of the concrete structure shall be paid for under separate contract items.

Payment will be made under:

Item No.	Item	Pay Unit
PK-143	RPZ & WATER METER WITH REMOTE & STRUCTURE -2" DIA.	EACH

**SECTION: NYC-665.16000011****FURNISH AND INSTALL BOLLARDS****DESCRIPTION**

Under this item, the Contractor shall furnish and install the new cast iron bollards and pipe supports in locations shown on the plans, in accordance with the Contract Drawings, these specifications and as directed by the Engineer.

**SUBMITTALS**

Product Data: Submit product data of the cast iron bollard, steel pipe, steel plate, anchor bolts, concrete and paint.

The Contractor shall submit shop drawings for approval before fabricating the bollards. The shop drawings shall include the proposed bollard locations, installation details of the cast iron bollard that show the steel pipe, steel plate, anchor bolts, and concrete foundation.

**MATERIALS**

Materials shall meet the following requirements:

Cast Iron Bollards	ASTM A48 Grade 30-B Gray Cast Iron in color selected for this project. Bollard shall have a minimum wall thickness of 0.37 in and a minimum weight, 220 lb.
Pipe, Carbon Steel, Seamless	ASTM A106, Extra Strength, galvanized, 6 in. outside diameter, concrete filled.
Steel Plate	Subsection 715-01 of the NYS DOT Standard Specifications
Concrete	Subsection 501, Class A of the NYS DOT Standard Specifications
Portland Cement	Subsection 701-01 of the NYS DOT Standard Specifications
Paint	Subsections 708-03 and 708-08 of the NYS DOT Standard Specifications

**CONSTRUCTION DETAILS**

Bollards shall be furnished and installed according to the details and at locations shown on the plans, complete with pipe supports, base plates and anchor bolts.

Modified for HWKKP005 on January 3, 2018.

Pipe supports and base plates shall be coated with dull orange primer and asphalt-base emulsion prior to setting.

Install pipe supports, anchor bolts, base plates and bollards and foundations as detailed on the drawings and as directed by the Engineer. The Contractor shall carefully coordinate the inner dimensions of the bollard with the outside diameter of the pipe support.

#### **METHOD OF MEASUREMENT**

The quantity to be paid for under this item will be the number of bollards actually installed at the site, to the satisfaction of the Engineer.

#### **BASIS OF PAYMENT**

The price bid for Bollard shall be a unit price per EACH and shall include the cost of all labor, materials, equipment, insurance, and incidental expenses including, but not limited to, furnishing and installing the bollards, complete with pipe supports, anchor bolts, base plates and concrete foundations necessary to complete the work; all in accordance with Contract Drawings, the specifications and the direction of the Engineer.

*Payment will be made under:*

Item No.	Item	Pay Unit
NYC-665.16000011	FURNISH AND INSTALL BOLLARDS	EACH

**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)

**TABLE OF CONTENTS**

<b>ARTICLE</b>	<b>DESCRIPTION</b>	<b>PAGE NO.</b>
A.	LINES AND GRADES	S-1
B.	SPECIFIC TRAFFIC STIPULATIONS	S-1
C.	HOLIDAY CONSTRUCTION EMBARGO	S-1
D.	9/11 EMBARGO, BIKE RACE ROUTE AND OTHER SPECIAL EVENTS	S-2
E.	PRIVATE UTILITIES FACILITIES WORK	S-2
F.	DISPOSAL OF EXCESS EXCAVATED MATERIAL	S-3
G.	N.Y.C. TRANSIT INSURANCE	S-3
H.	CONTRACT ITEMS THAT INCLUDE BACKFILL AS A PART OF THEIR WORK	S-6
I.	SCHEDULING PRESENTATION	S-6
J.	ACCELERATED PROJECT SCHEDULE AND COMBINATION OF STAGES	S-7
K.	NOISE CONTROL	S-15
L.	UNDER-SIDEWALK VAULTS	S-15
M.	NO EXTENSION OF TIME FOR WINTER SHUT-DOWN	S-15
N.	OVERRUNS OF UNIT PRICE ITEMS	S-15
O.	PRIVATE UTILITY HARDWARE ADJUSTMENTS	S-15
P.	RESTORATION OF ADJACENT AREAS	S-16
Q.	USE OF CITY WATER	S-16
R.	ARCHAEOLOGICAL DISCOVERIES	S-16
S.	FUEL COST	S-17
T.	SPECIAL PERMIT AND INSPECTION	S-17
U.	DPR CONSTRUCTION PERMITS	S-17
V.	START OF CONTRACT WORK	S-18
W.	SPECIFICATIONS FOR ABATEMENT OF ASBESTOS-CONTAINING MATERIALS ASSOCIATED WITH VAULT PROGRAM	S-18
X.	PRICES TO INCLUDE	S-18

OCMC TRAFFIC STIPULATIONS

S-19

INTERPRETIVE MEMORANDUM # 2

S-23

## SPECIAL PROVISIONS

The following shall become a part of and apply to the Contract:

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 the 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 Contract Drawings, 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 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>

- 
- \* 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>

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 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 subsequent 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. 9/11 EMBARGO, BIKE RACE ROUTE AND OTHER SPECIAL EVENTS. In order to facilitate the movement of vehicles and pedestrians on the 9/11 Memorial Day, the City reserves the right to shut down the project and the restrictions specified under Article C. HOLIDAY EMBARGO, above, shall apply to all work performed under this contract starting from 12:01 AM of September 9 through 11:59 PM September 11.

In addition, the Contractor will be precluded from proceeding with work at any of the following locations where the Contractor cannot complete such work three (3) days prior to the date of the scheduled activity and the Holiday Embargo restrictions under Article C, above, shall apply:

AMERICAN HEART ASSOCIATION WALL STREET RUN (on or about May)  
The Summer Street Events, street fairs

No extension of time due to the above mentioned shutdown periods will be granted to the Contractor for completion of the work.

However, where the Contractor is notified of a Special Unscheduled Event, such as a civic parade or other official activity, party, etc. not listed above, then the Holiday Embargo restrictions under Article C, above, shall apply. Temporary restoration of the streets and sidewalks and subsequent removal thereof for City work, if required, for those Special Unscheduled Event periods will be paid for under the appropriate scheduled items and the Contractor will be granted an extension of time, for the completion of the work, equal to the duration of the ordered shut-down.

E. PRIVATE UTILITY FACILITIES WORK. The Contractor is advised that this project contains private Utility Facilities work. Unit Price Items that are listed in the Bid Schedule and the Contingency Item List, that begin with "JB" are to be done in accordance with the corresponding "JB" specifications contained in the "JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR LOWER MANHATTAN"

document issued August 1, 2005. In addition, each "JB" item contains one of the following suffixes to denote the Utility Company that the work is chargeable to: "(CE)" for Consolidated Edison Company of New York, Inc.; "(VERZ)" for Verizon"; "(NG)" for National Grid"; and, "(TW)" for Charter Spectrum (former Time Warner Entertainment Company, L.P.) (e.g.: JB 200(CE) refers to Section JB 200 in the "JB" specifications for work that is chargeable to Consolidated Edison Company of New York).

F. 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.

G. 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 Permitter 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 Permitter/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 Permitter naming:

New York City Transit Authority (NYCTA), the Manhattan and Bronx Surface Transit Operating Authority (MaBSTOA), the Staten Island Rapid Transit Operating Authority (SIROA), 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 Permitter is required if Permittee's vehicle enters Permitter property. The insurance must be in the name of the Permittee or its contractor entering the Permitter property with limits of liability in the amount specified in 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.
- (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 sub-contractor 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 Permittor 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 permittor:

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 Permittor 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 Permittor/MTA, and also that the contractor's policies, primary and excess, must be exhausted before implicating any Permittor/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 Permitter, 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 Permitter 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 Permitter, the Permitter 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.

#### H. 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.

I. SCHEDULING PRESENTATION. The Contractor shall submit construction schedule in the form of a bar chart using "Microsoft Project 2010" or latest version, 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

Contract Drawings 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.

J. ACCELERATED PROJECT SCHEDULE AND COMBINATION OF STAGES.

Contractor shall plan and/or stage his/her 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.

K. 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 ( $\pm 1.5$  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 8:00 a.m. and 10:00 p.m. and weekends 10:00 a.m. 10:00 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.

L. UNDER-SIDEWALK VAULTS. The Contractor is hereby advised that this contract includes the work required to abandon existing under-sidewalk vaults. A number of existing under-sidewalk vaults have been identified and are indicated in the contract documents along with related work items for the vault abandonment. There are also existing under-sidewalk vaults within the project limits that will be abandoned by contractors working for individual property owners. A number of locations have been noted as possible existence of under-sidewalk vaults.

The final design details and permitting process to abandon the under-sidewalk vaults included in this contract will be completed by Consultants working for the City before construction begins. Additional information related to the under-sidewalk vault vaults is included in the contract documents.

M. 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.

N. OVERRUNS OF UNIT PRICE ITEMS. If the quantity of any unit price item necessary to complete the Work exceed one hundred twenty-five (125) percent of the estimated quantity for that item set forth in the bid schedule, the Contractor will not be subject to negotiating a new unit price for such item as per the requirements of Sub-Article 26.1 in the Standard Construction Contract. Overruns of unit item quantities will be paid at the bid price times the multiplier bid by the Contractor (e.g. no renegotiation at 125%).

O. PRIVATE UTILITY HARDWARE ADJUSTMENTS will be performed by the owning utility company or its agent, at its expense. The Contractor

must notify the utility company 72 hours prior to start of work at each location where its hardware requires adjustment.

P. RESTORATION OF ADJACENT AREAS. The Contractor must be required to remove all form work. The Contractor must 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.

Q. USE OF CITY WATER. The Contractor is notified that for use of City water under this project the Contractor shall be required to obtain all necessary permits from the Department of Environmental Protection, at no cost to the Contractor in accordance with the NYC Department of Environmental Protection, STANDARD SEWER AND WATER MAIN SPECIFICATIONS, dated July 1, 2014, Section 12.04 "TEMPORARY USE OF CITY WATER ON CONSTRUCTION PROJECTS."

R. ARCHAEOLOGICAL DISCOVERIES. The Contractor is notified that if requested by the Resident Engineer and the City, the Contractor will be required retain the services of an Archaeologist (the "City's Archaeologist") for this project.

The City's Archaeologist shall be notified in advance and shall be present on site during sub-surface excavations as he deems necessary. The City's Archaeologist shall be authorized to halt construction at any time in order to record and/or recover any archaeological resources encountered during excavations, and to stabilize in place any human remains encountered. For the purpose of evaluating and recording archaeological resources, the City's Archaeologist shall be allowed to enter trenches provided all standard safety requirements are met. It is understood that some construction down time may be necessary.

In the event that human remains and/or other significant archaeological deposits are encountered during construction or archaeological investigations, Landmarks Preservation Commission (LPC) shall be notified as directed by the City's Archaeologist and the State Historic Preservation Office (SHPO) requires that the following protocol is implemented:

- At all times human remains must be treated with the utmost dignity and respect. Should human remains be encountered work in the general area of the discovery will stop immediately and the location will be immediately secured and protected from damage and disturbance.
- Human remains or associated artifacts will be left in place and not disturbed. No skeletal remains or materials associated with

the remains will be collected or removed until appropriate consultation has taken place and a plan of action has been developed.

- The County coroner and local law enforcement as well as the SHPO and the involved agency will be notified immediately. The coroner and local law enforcement will make the official ruling on the nature of the remains, being either forensic or archeological. If the remains are archeological in nature, a bio-archaeologist will confirm the identification as human.
- If human remains are determined to be Native American, the remains will be left in place and protected from further disturbance until a plan for their protection or removal can be generated. The involved agency will consult SHPO and appropriate Native American groups to determine a plan of action that is consistent with the Native American Graves Protection and Repatriation Act (NAGPRA) guidance.
- If human remains are determined to be Euro-American, African-American, etc., the remains will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated. Consultation with the SHPO and other appropriate parties will be required to determine a plan of action.

Should extra work be ordered by the Resident Engineer as a result of any archaeological discoveries, it shall be paid for from the Fixed Sum included in, and in accordance with Item HW-908 Allowance For Extra Work Due To Archaeological Discoveries.

S. 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 1<sup>st</sup>, April 1<sup>st</sup>, July 1<sup>st</sup> and September 1<sup>st</sup>) 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.

T. SPECIAL PERMIT AND INSPECTION. Portions of work required special permit and inspection under this contract are subject to the provisions of the New York City Construction Codes, as noted on the contract drawings and contract documents.

U. DPR CONSTRUCTION PERMITS. Permits are required for all work on parkland or on sidewalks adjacent to parks or other areas maintained by DPR.

V. START OF CONTRACT WORK. The Contractor is notified that a Notice To Proceed (NTP) date will be issued for work to commence within 21 to 30 Days of Contract Registration.

W. SPECIFICATIONS FOR ABATEMENT OF ASBESTOS-CONTAINING MATERIALS ASSOCIATED WITH UNDER-SIDEWALK VAULTS. Contractor shall comply with all requirements described in the attached "Specifications for Abatement of Asbestos-Containing Materials" as prepared by Liro Engineers, Inc. for the NYC Department of Design Construction, July 2017 Version and all subsequent revisions. Costs for asbestos abatement, if required, shall be covered by the Fixed Sum in Item HW-900-AVW Allowance for Additional Vault Related Work

X. 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.



## Department of Transportation

POLLY TROTTENBERG, Commissioner

**OCMC TRAFFIC STIPULATIONS**

11/18/2016

**OCMC FILE NO:** BNEC-16-112  
**CONTRACT NO:** HWKPP005  
**PROJECT:** RECONSTRUCTION OF DUMBO D.M.A./VINEGAR HILL AREA  
**LOCATION(S):** VARIOUS

PERMISSION IS HEREBY GRANTED TO THE NYCDOT AND ITS DULY AUTHORIZED AGENT, TO ENTER UPON AND RESTRICT THE FLOW OF TRAFFIC AT THE LOCATION(S) BELOW FOR THE PURPOSE OF CARRYING OUT THE ABOVE NOTED PROJECT, SUBJECT TO THE FOLLOWING STIPULATIONS:

**I. SPECIAL STIPULATIONS**

- A. **EMBARGOES** – A CONSTRUCTION EMBARGO WILL APPLY TO THOSE LOCATIONS BELOW WHICH FALL WITHIN THE **HOLIDAY EMBARGO** OR ANY OTHER SPECIAL EVENT EMBARGOES PUBLISHED BY THE BUREAU OF PERMIT MANAGEMENT AND CONSTRUCTION CONTROL.
- B. **BIKE LANES** – IF WORK IS IN OR AFFECTING A BIKE LANE, THE PERMITEE MUST POST ADVANCE WARNING SIGNS 350 FEET AND 200 FEET PRIOR TO THE WORK ZONE STATING "CONSTRUCTION IN BIKE LANE AHEAD PROCEED WITH CAUTION", AND ALSO POST A SIGN AT THE WORK ZONE STATING "CONSTRUCTION IN BIKE LANE PROCEED WITH CAUTION". SUCH SIGNS SHALL BE ORANGE, 3' X 3', DIAMOND-SHAPED WITH 4" BLACK LETTERING. SIGNS SHALL BE POSTED IN ACCORDANCE WITH THE FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- C. **BIKE SHARE STATIONS**: THE PERMITEE SHALL NOT REMOVE, RELOCATE, DAMAGE OR DISRUPT THE OPERATION OF EXISTING BIKE SHARE STATIONS WITHOUT FIRST CONTACTING NYC BIKE SHARE AT 855-245-3311 FOR THEIR REQUIREMENTS PRIOR TO COMMENCING WORK.
- D. **CITYBENCH**: THE PERMITEE SHALL NOT REMOVE, RELOCATE, DAMAGE OR DISRUPT AN EXISTING CITYBENCH WITHOUT FIRST CONTACTING NYC DOT AT 212-839-6569, OR VIA EMAIL AT [CITYBENCH@DOT.NYC.GOV](mailto:CITYBENCH@DOT.NYC.GOV) PRIOR TO COMMENCING WORK.
- E. **PROTECTION OF NYC DEP GREEN INFRASTRUCTURE**: THE PERMITEE SHALL TAKE PRECAUTION OF NYC DEP GREEN INFRASTRUCTURE IN THE RIGHT-OF-WAY. THE PERMITEE MUST PROTECT NYC DEP GREEN INFRASTRUCTURE DOWNSTREAM OF THE WORK OR WITHIN FIVE (5) FEET OF THE WORK AREA. THE PERMITEE MUST EMAIL NYC DEP AT [SUSTAINABILITY@DEP.NYC.GOV](mailto:SUSTAINABILITY@DEP.NYC.GOV) FOR PROTECTION REQUIREMENTS PRIOR TO COMMENCING WORK. THE PERMITEE IS RESPONSIBLE FOR RESTORATION OF DAMAGED NYC DEP INFRASTRUCTURE AS DIRECTED BY NYC DEP.
- F. **BUS STOPS** – THE PERMITEE 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.
- G. **STREET LIGHTS / TRAFFIC SIGNALS**: THE PERMITEE SHALL NOT REMOVE OR RELOCATE EXISTING STREET LIGHTS OR TRAFFIC SIGNALS WITHOUT FIRST OBTAINING APPROVAL FROM NYCDOT STREET LIGHTING / TRAFFIC SIGNALS UNIT.
- H. **TRAFFIC CAMERAS, DETECTION/COMMUNICATION EQUIPMENT**: IF AT ANY TIME DURING THE APPROVED WORK, THE PERMITEE ENCOUNTERS TRAFFIC SURVEILLANCE CAMERAS, DETECTION EQUIPMENT OR ANY TYPE OF COMMUNICATION EQUIPMENT (WIRELESS OR HARD-WIRED) ON ANY NYC DOT FACILITY, THAT IS NOT INCLUDED ON THE DESIGN/BUILD DRAWINGS, THE PERMITEE SHALL IMMEDIATELY NOTIFY NYC DOT TRAFFIC MANAGEMENT BY PHONE AT 718-433-3390 OR 718-433-3340 AND VIA EMAIL AT [TMC@DOT.NYC.GOV](mailto:TMC@DOT.NYC.GOV) AND AWAIT DIRECTION PRIOR TO CONTINUING WORK.
- I. **METERS** – THE PERMITEE SHALL NOT REMOVE OR RELOCATE PARKING METERS WITHOUT FIRST OBTAINING APPROVAL FROM NYCDOT PARKING METER DIVISION AT 718-894-8651.
- J. **TEST PITS** – THE BELOW TRAFFIC STIPULATIONS DO NOT APPLY TO TEST PIT WORK RELATED TO THIS CONTRACT. WORK HOURS AND OTHER REQUIREMENTS FOR TEST PIT OPERATIONS MAY DIFFER FROM THE STIPULATIONS IDENTIFIED BELOW. THE PERMITEE SHALL BE REQUIRED TO OBTAIN SEPARATE PERMITS RELATED TO TEST PITS.
- K. **TEMPORARY PARKING REGULATIONS/PAVEMENT MARKINGS** – THE PERMITEE IS REQUIRED TO INSTALL, MAINTAIN AND REMOVE ALL NECESSARY TEMPORARY PARKING AND REGULATORY SIGNS AND PAVEMENT MARKINGS, AND RESTORE THEIR ORIGINAL CONDITION PER NYC DOT STANDARDS, PRIOR TO EXPIRATION OF THEIR PERMITS. THE PERMITEE OR AGENCY PERFORMING PUBLIC OUTREACH SHALL POST AND MAINTAIN ADVISORY SIGNS A MINIMUM OF 48 HOURS PRIOR TO CHANGING EXISTING PARKING REGULATION SIGNS TO APPROVED TEMPORARY CONSTRUCTION PARKING REGULATION SIGNS. THE ADVISORY SIGNS SHOULD BE POSTED ON ALL POLES AND DRIVE RAILS ON THE SEGMENT AFFECTED, INDICATING THE DATE OF THE CHANGE, THE NEW REGULATIONS AND A TELEPHONE NUMBER TO OBTAIN MORE INFORMATION.
- L. **ACCESS TO ADJUTING PROPERTIES** – THE PERMITEE SHALL COORDINATE ALL ACTIVITIES WITH ADJUTING PROPERTY OWNERS TO ENSURE ACCESS IS PROVIDED TO/FROM ENTRANCES/DRIVEWAYS AT ALL TIMES.
- M. **AUTHORIZED PARKING** – PRIOR TO PERFORMING WORK WHICH IMPACTS AUTHORIZED PARKING, THE PERMITEE SHALL SUBMIT IN WRITING, AND COPY OCMC-STREETS, A REQUEST TO OCCUPY SPACE CURRENTLY USED BY AUTHORIZED VEHICLES. APPROVAL MUST BE RECEIVED FROM AUTHORIZED PARKING PRIOR TO OCCUPYING THESE AREAS.

NYC Department of Transportation  
 Bureau of Permit Management and Construction Control  
 55 Water Street - 7<sup>th</sup> Floor, New York, NY 10041  
 T: 212.839.9637 F: 212.839.8970  
[www.nyc.gov/dot](http://www.nyc.gov/dot)

OCMC FILE NO: BNEC-16-112  
 CONTRACT NO: HWKKP005  
 PROJECT: RECONSTRUCTION OF DUMBO D.M.A./VINEGAR HILL AREA

11/18/2016  
 Page 2 of 4

- N. **NOTIFICATION** – THE PERMITEE 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.
- O. **CONSTRUCTION INFORMATIONAL SIGNS** – THIS PROJECT REQUIRES A CONSTRUCTION PROJECT INFORMATIONAL SIGN (CPIS) IN ACCORDANCE WITH NYCDOT HIGHWAY RULE SECTION 2-02 (4) AND (5). CRITERIA AND A PROTOTYPE FOR THIS SIGN MAY BE FOUND ON THE NYCDOT WEBSITE AT:

[HTTP://WWW.NYC.GOV/HTML/DO1/DOWNLOADS/PDF/DO1\\_CPIS\\_DIRECTIONS.PDF](http://www.nyc.gov/html/dot/downloads/pdf/dot_cpis_directions.pdf)

- P. **ENHANCED MITIGATIONS**
- o **ENHANCED MITIGATIONS FOR PEDESTRIAN FLOW**, INCLUDING METAL FENCING, SHALL BE PROVIDED TO ENSURE PEDESTRIANS STAY WITHIN THEIR DESIGNATED PATH/ROUTE. PEDESTRIAN MANAGERS SHALL BE PROVIDED TO ASSIST WITH PEDESTRIANS AT THE DESIGNATED CROSSWALK AREAS.
  - 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.

## II. MAINTENANCE AND PROTECTION OF TRAFFIC

### A. ANCHORAGE PLACE, BETWEEN PEARL STREET AND PLYMOUTH STREET

1. Work hours shall be as follows: 7AM-6PM MONDAY-FRIDAY AND SATURDAY-SUNDAY 8AM-6PM.
2. The contractor may close the entire width of the street for the duration of the project.
3. The contractor may close one sidewalk at a time and may send pedestrians to the opposite sidewalk by posting signs meeting NYCDOT specification.

### B. WATER STREET, BETWEEN DOCK STREET AND HUDSON AVENUE

### C. PEARL STREET, BETWEEN FRONT STREET AND JOHN STREET

### D. PLYMOUTH STREET, BETWEEN MAIN STREET AND JAY STREET

### E. JOHN STREET, BETWEEN ADAMS STREET AND JAY STREET

### F. ADAMS STREET, BETWEEN PLYMOUTH STREET AND JOHN STREET

### G. MAIN STREET, BETWEEN FRONT STREET AND PLYMOUTH STREET

### H. FRONT STREET, BETWEEN MAIN STREET AND PEARL STREET

### I. WASHINGTON STREET, BETWEEN FRONT STREET AND PLYMOUTH STREET

1. Work hours shall be as follows: 7AM-6PM MONDAY-FRIDAY AND SATURDAY-SUNDAY 8AM-6PM.
2. During the test pits, removal of rail tracks, water and sewer mains, catch basins, roadway and rail track reconstruction work, the contractor shall maintain a minimum of one 11ft lane for traffic. The contractor may close one sidewalk at a time and may send pedestrians to the opposite sidewalk by posting signs meeting NYCDOT specification.
3. When working on sidewalk, curb, and street light construction the contractor shall maintain a minimum 5ft wide sidewalk for pedestrians and may occupy 8ft width of the roadway adjacent to the curb.

### J. ADAMS STREET, BETWEEN PLYMOUTH STREET AND FRONT STREET

### K. JAY STREET, BETWEEN WATER STREET AND JOHN STREET

### L. GOLD STREET, BETWEEN FRONT STREET AND PLYMOUTH STREET

### M. WASHINGTON STREET, BETWEEN FRONT STREET AND YORK STREET

1. Work hours shall be as follows: 7AM-6PM MONDAY-FRIDAY AND SATURDAY-SUNDAY 8AM-6PM.
2. During the test pits, removal of rail tracks, water and sewer mains, catch basins, roadway and rail track reconstruction work, during working hours, the contractor shall maintain a minimum of one 11ft lane for two-way traffic (with flaggers assisting traffic). After working hours, the contractor shall maintain a minimum of two 11ft lanes for traffic (one lane in each direction). The contractor may close one sidewalk at a time and may send pedestrians to the opposite sidewalk by posting signs meeting NYCDOT specification.
3. When working on sidewalk, curb, and street light construction the contractor shall maintain a minimum 5ft wide sidewalk for pedestrians and may occupy 8ft width of the roadway adjacent to the curb.

OCCM FILE NO: BNEC-16-112  
 CONTRACT NO: HWKPP005  
 PROJECT: RECONSTRUCTION OF DUMBO D.M.A./VINEGAR HILL AREA

11/18/2016  
 Page 3 of 4

**N. INTERSECTIONS OF ONE WAY STREETS (excluding the plaza intersections)**

1. Work hours shall be as follows: 7AM-6PM MONDAY-FRIDAY AND SATURDAY-SUNDAY 8AM-6PM.
2. During the test pits, removal of rail tracks, water and sewer mains, catch basins, roadway and rail track reconstruction work, during working hours, the contractor shall maintain a minimum of one 11ft lane for traffic. After working hours, full width of the intersection shall be opened to traffic. In case concrete curing is required, then part of the intersection may be closed for a period no longer than 48 hours, by maintaining a minimum of one 11ft lane for traffic on both streets.

**O. INTERSECTIONS OF ONE WAY STREETS WITH TWO-WAY STREETS (excluding the plaza intersections)**

1. Work hours shall be as follows: 7AM-6PM MONDAY-FRIDAY AND SATURDAY-SUNDAY 8AM-6PM.
2. During the test pits, removal of rail tracks, water and sewer mains, catch basins, roadway and rail track reconstruction work, during working hours, the contractor shall maintain a minimum of one 11ft lane for traffic on both streets (one on two-ways streets the contractor shall maintain one 11ft lane for two-way traffic, with the assistance of flagmen). After working hours, full width of the intersection shall be opened to traffic. In case concrete curing is required, then part of the intersection may be closed for a period no longer than 48 hours, by maintaining a minimum of one 11ft lane for traffic on one-way streets and two 11ft lanes on two-way-streets (one lane in each direction).

Granite block pavements and sidewalks within the entire project limits shall be restored in kind by using the original granite blocks after they have been carefully removed, stored, and cleaned in accordance with the contract documents or as directed by the Commissioner.

The contractor must coordinate with the NYCDOT Special Events division and the DUMBO BID regarding any special events taking place in the area during the construction period.

Any special requests for work requiring a full roadway closure must be associated with a signs and traffic detour plan for the specific locations and dates. The contractor must apply for a full roadway closure request with NYCDOT OCCM-Streets and must issue a 7-day notification to the local community board, DUMBO BID, NYPD, FDNY, EMS, and any nearby schools prior to commencing work.

**III. GENERAL NOTES**

- A. **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.
- B. THE PERMITEE MUST COMPLY WITH ALL CONSTRUCTION EMBARGOS ISSUED BY THE NYCDOT INCLUDING THE HOLIDAY EMBARGO.
- C. THE PERMITEE SHALL COMPLY WITH ALL REQUIREMENTS OF THE NYCDOT SPECIAL EVENTS UNIT AS IDENTIFIED BELOW:
  1. **STREET FAIRS / FESTIVALS**
    - ALL EXCAVATIONS MUST BE PLATED WITH SKID RESISTANT PLATES.
    - PLATES MUST BE RECESSED AND FLUSH WITH PAVEMENT.
    - ALL PAVEMENT DEFECTS MUST BE CORRECTED WITHIN OR ADJACENT TO THE WORK ZONE.
    - THE PERMITEE IS RESPONSIBLE FOR ANY DEFECTS WITHIN THE IMMEDIATE VICINITY IF NYCDOT STREET & ARTERIAL MAINTENANCE CANNOT MAKE REPAIRS DUE TO PROJECT INTERFERENCE (AS DETERMINED BY NYCDOT).
    - ALL EQUIPMENT, TRAILERS AND MATERIAL STORAGE MUST BE REMOVED.
  2. **RUNNING / WALKING / BIKING EVENTS**
    - ALL EXCAVATIONS MUST BE BACKFILLED AND PAVED OR PLATES MUST BE RECESSED AND PAVED OVER FLUSH WITH PAVEMENT.
    - ALL PAVEMENT DEFECTS MUST BE CORRECTED WITHIN OR ADJACENT TO THE WORK ZONE.
    - THE PERMITEE IS RESPONSIBLE FOR ANY DEFECTS WITHIN THE IMMEDIATE VICINITY IF NYCDOT STREET & ARTERIAL MAINTENANCE CANNOT MAKE REPAIRS DUE TO PROJECT INTERFERENCE (AS DETERMINED BY NYCDOT).
    - ALL EQUIPMENT, TRAILERS AND MATERIAL STORAGE MUST BE REMOVED.
  3. **PARADES**
    - ALL EXCAVATIONS MUST BE BACKFILLED AND PAVED OR PLATES MUST BE RECESSED AND PAVED OVER FLUSH WITH PAVEMENT.
    - FORMATION AND DISPERSAL AREA PLATES MUST BE RECESSED AND FLUSH WITH PAVEMENT (PLATES MUST BE SKID RESISTANT).
    - ALL PAVEMENT DEFECTS MUST BE CORRECTED WITHIN OR ADJACENT TO THE WORK ZONE.
    - THE PERMITEE IS RESPONSIBLE FOR ANY DEFECTS WITHIN THE IMMEDIATE VICINITY IF NYCDOT STREET & ARTERIAL MAINTENANCE CANNOT MAKE REPAIRS DUE TO PROJECT INTERFERENCE (AS DETERMINED BY NYCDOT).
    - ALL EQUIPMENT, TRAILERS AND MATERIAL STORAGE MUST BE REMOVED.
  4. **MAYORAL EVENTS**

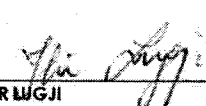


OCMC FILE NO: BNEC-16-112  
 CONTRACT NO: HWKKP005  
 PROJECT: RECONSTRUCTION OF DUMBO D.M.A./VINEGAR HILL AREA

11/18/2016  
 Page 4 of 4

- ALL EXCAVATIONS MUST BE BACKFILLED AND PAVED OR PLATES MUST BE RECESSED AND PAVED OVER FLUSH WITH PAVEMENT.
  - ALL PAVEMENT DEFECTS MUST BE CORRECTED WITHIN OR ADJACENT TO THE WORK ZONE.
  - THE PERMITTEE IS RESPONSIBLE FOR ANY DEFECTS WITHIN THE IMMEDIATE VICINITY IF NYCDOT STREET & ARTERIAL MAINTENANCE CANNOT MAKE REPAIRS DUE TO PROJECT INTERFERENCE (AS DETERMINED BY NYCDOT).
  - ALL EQUIPMENT, TRAILERS AND MATERIAL STORAGE MUST BE REMOVED.
- D. ALL RELOCATION WORK BY THE UTILITIES SUCH AS; CON EDISON, TELEPHONE, GAS AND CABLE COMPANIES SHALL PRECEDE THE PERMITTEE'S START OF WORK ON ALL AFFECTED ROADWAYS IN THE IMPACTED CONTRACT AREA.
- E. THE PERMITTEE IS ADVISED THAT OTHER CONTRACTORS MAY BE WORKING IN THE GENERAL AREA DURING THE TERM OF THIS STIPULATION. IN WHICH EVENT, THE PERMITTEE MAY REQUIRE MODIFICATIONS BY THE OCMC-STREETS.
- F. THE PERMITTEE 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 PERMITTEE'S RESPONSIBILITY TO DETERMINE THE PROPERTY OWNER AND OBTAIN THE WRITTEN APPROVAL.
- G. THE PERMITTEE 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 PERMITTEE'S ACTIVITIES OCCUR WITHIN A LIMITED ACCESS ARTERIAL HIGHWAY RIGHT - OF - WAY.
- H. 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.
- I. FOR ANY CONSTRUCTION ACTIVITY RESULTING IN THE FULL CLOSURE OF A ROADWAY FOR MORE THAN 180 CONSECUTIVE CALENDAR DAYS, THE PERMITTEE MUST PRODUCE AND SUBMIT A COMMUNITY REASSESSMENT, IMPACT AND AMELIORATION (CRIA) STATEMENT TO NYCDOT PLANNING AND OBTAIN THEIR APPROVAL BEFORE APPLYING FOR PERMITS, IN COMPLIANCE WITH THE PROVISIONS OF LOCAL LAW 24 STREET CLOSURE LAW.
- J. FOR THIS PROJECT THE PERMITTEE 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.
- K. THE PERMITTEE SHALL BE RESPONSIBLE FOR IDENTIFYING HIS CONSTRUCTION SIGNAGE. THE IDENTIFICATION SHALL INCLUDE THE PERMITTEE'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.
- L. 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.

  
 DUANE BARRA  
 DIRECTOR  
 OCMC-STREETS

  
 ILIR WAJJI  
 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

Bureau of Legal Affairs  
44 Beaver Street  
New York, NY 10004  
Telephone (212) 837-8110  
FAX (212) 837-8243

## Department of Sanitation Rules and Regulations Governing Non-Putrescible Solid Waste Transfer Stations

### 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.

**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 wherever the Item No. "6.52" and words "flagger", "flagperson" and "flagman" are used in the contract documents and drawings it shall mean the Item No. "6.52 CG" and the words "Crossing Guard", respectively. The Contractor is advised that until the Comptroller of the City of New York sets a prevailing wage rate for crossing guards, there are no prevailing wage rates for crossing guards.
- (8) 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 1<sup>st</sup>, April 1<sup>st</sup>, July 1<sup>st</sup> and September 1<sup>st</sup>) 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.
- (9) 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.

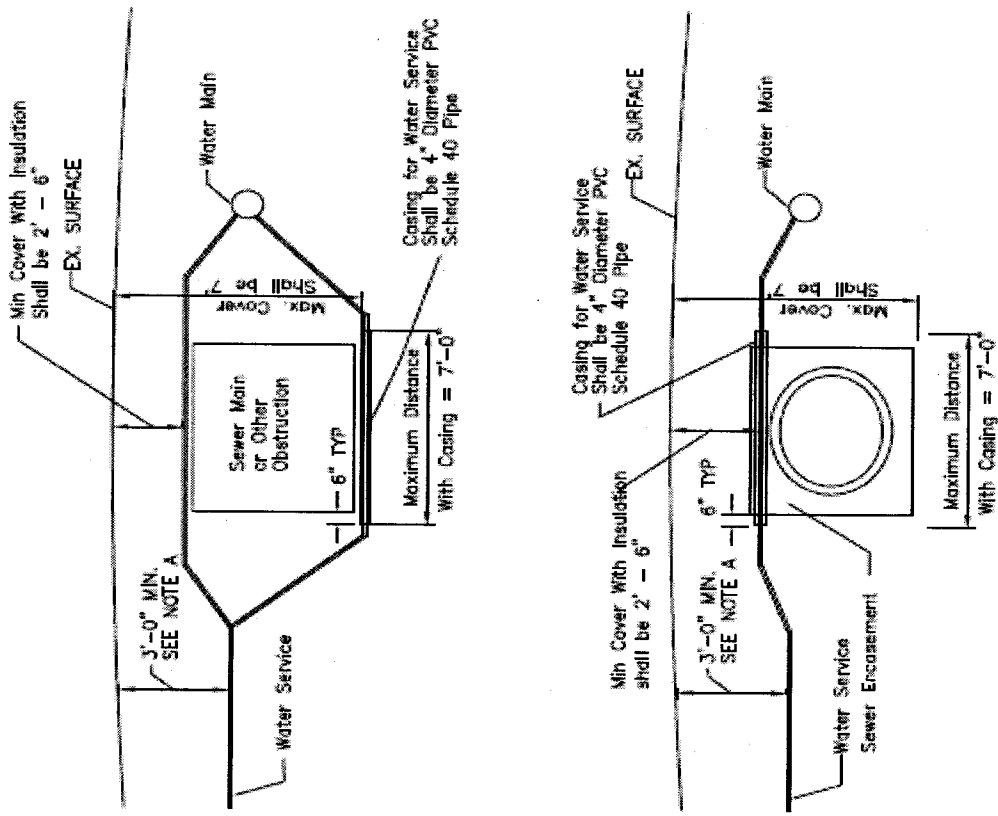
- (10) The contractor is notified that where ever ductile iron pipe is installed within the project scope, especially in soil environments that are considered to be potentially corrosive to ductile iron pipe, that the Engineer may direct the Contractor to test the soil and other conditions that affect the corrosion rate of ductile iron pipe in accordance with "AWWA C105/A21.5, Appendix A" to determine the necessity of polyethylene encasement of pipe. The rate of testing shall not exceed two tests per block. The Engineer reserves the right to witness all sampling and testing of the soil. The cost for testing the soil, including all labor, materials and equipment, shall be included in the prices bid for laying ductile iron pipe and fittings per Section 60.12 of the Standard Sewer and Water Main Specifications. If the soil is found corrosive for the ductile iron pipe, the Contractor shall encase the new ductile iron pipe and appurtenances in an approved loose 8-mil thick polyethylene sleeve in accordance with item 65.21 PS - "FURNISHING AND PLACING POLYETHYLENE SLEEVE", or as ordered by the Engineer. The payment for all labor, materials and equipment, etc., complete, required for the encasing the ductile iron pipe shall be deemed included in the price bid for the item 65.21 PS - "FURNISHING AND PLACING POLYETHYLENE SLEEVE" and no separate payment shall be made.
- (11) The Contractor is advised that existing masonry and/or all types of concrete may be encountered at certain locations within the project limits and the existing masonry/concrete shall be excavated, removed and disposed of during excavation. The cost of the above work, including but not limited to, investigations, test pit work, labor, materials, equipment, insurance, etc., and incidentals required to complete the work shall be deemed included in the price bid for contract Item No. 6.02 AAN - UNCLASSIFIED EXCAVATION.
- (12) At locations throughout this project where unsatisfactory soil bearing capacities are found at subgrade as determined by the Resident Engineer, the Contractor shall excavate below subgrade to the depth required to remove the unsatisfactory soil (maximum five (5) foot depth below subgrade). The trench shall then be backfilled to subgrade with stone ballast as described in Section 5.18 of the Specifications. Payment shall be made under the item No. 73.31AE0 - ADDITIONAL EARTH EXCAVATION and item No. 70.71SB - STONE BALLAST. Sheeting and Bracing required for excavating below subgrade shall be deemed included in the price bid for "ADDITIONAL EARTH EXCAVATION".
- (13) All existing house connections shall be maintained and supported during construction. The Contractor shall replace any existing house connections damaged as a result of the Contractor's construction operations or as ordered by the Resident Engineer at no cost to the City. The cost to reconnect existing sanitary house connection drains shall include all excavation inside and outside of the trench. The cost shall be deemed included in the price bid for contract Item No. 52.41V06R - 6" E.S.V.P. HOUSE CONNECTION DRAIN ON CONCRETE CRADLE (RECONNECTION), HOUSE CONNECTION DRAIN ON CONCRETE CRADLE (RECONNECTION)
- (14) Proposed sewers shall be installed matching invert elevations and locations of the connecting existing sewers. The locations and invert elevations of the existing sewers shall be surveyed and verified in the field prior to the start of construction. No additional or separate payment will be made for the aforementioned survey work. The cost thereof shall be deemed included in the prices bid for all scheduled items of work.
- (15) The Contractor is required to reconnect all existing sewers to the proposed manholes in this contract. The said manholes shall be fabricated to provide openings for the existing sewers at the specified invert elevations as shown on the contract drawings. The cost of reconnecting existing sewer pipes to new manholes, including concrete collar with steel reinforcements and/or grouting around the existing sewer pipes at the openings and all work necessary to complete the pipe reconnection, to

the satisfaction of the Resident Engineer shall be deemed included in the prices bid for all items of work. No additional payment shall be made.

- (16) The Contractor may elect to use, at his/her discretion for expediting the work within project limits, precast box sewer as an alternate to the proposed storm sewer. The redesign work shall include, but not limit to the equivalent size of the box sewer, new manholes and new chambers. The Contractor shall submit redesign and working drawings to the Engineer for review and approval at least thirty (30) days prior to the start of construction. No additional or separate payment shall be made to the Contractor for the above-mentioned work which shall include, but not be limited to, all substitution redesign work of precast box sewer, manholes, chambers, investigations, test pit work, additional labor, materials, equipment, insurance, etc., required to complete the substitution work. The Contractor will be paid for only the original items of work specified.

**(NO FURTHER TEXT ON THIS PAGE)**

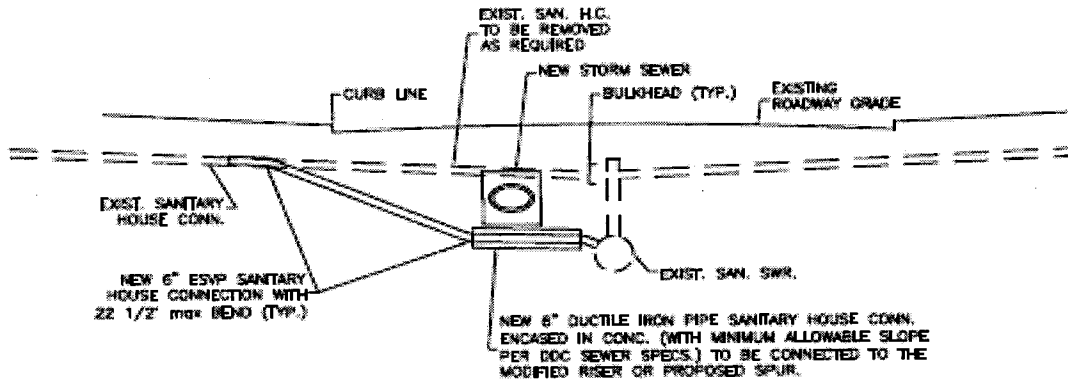
TYPICAL SKETCH FOR INSTALLATION OF WATER SERVICE CONNECTIONS WITH SHALLOW COVER



NOTES:

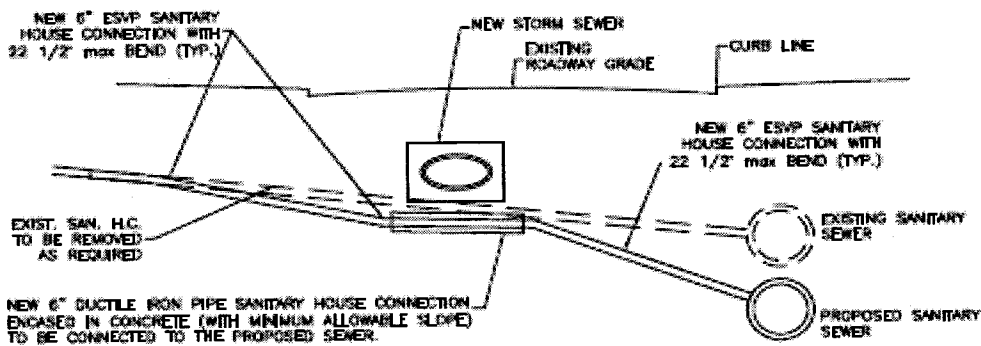
- (A) THE MINIMUM COVER PERMITTED ON ANY NON-INSULATED WATER SERVICE CONNECTION SHALL BE 3'-0".
  - (B) THE MINIMUM COVER PERMITTED ON INSULATED WATER SERVICE CONNECTIONS SHALL BE 2'-6".
- IF THE WATER SERVICE IS CROSSING OVER THE PROPOSED SEWER THROUGH THE ENCASEMENT, THEN WATER SERVICE CONNECTIONS SHALL BE INSTALLED WITH A 4" DIA. PVC CASING AS SHOWN ON DETAIL "A".
- (C) IF THE COVER IS LESS THAN 2'-6", THEN WATER SERVICE CONNECTIONS SHALL BE INSTALLED WITH A 4" DIA. PVC CASING, CROSSING UNDER THE PROPOSED SEWER (OR OTHER OBSTRUCTION) AS SHOWN ON THE SKETCH.
  - (D) THE INSULATION SHALL BE FOAMGLAS TYPE MANUFACTURED, IN ACCORDANCE WITH ASTM C552, BY PITTSBURGH CORNING OR WITH EQUIVALENT INSULATING MATERIAL SUITABLE FOR BURIAL, WHICH MUST BE APPROVED IN WRITING BY THE RESIDENT ENGINEER. THE INSULATION, WHEREVER POSSIBLE, SHALL BE FABRICATED IN HALF SECTIONS AND SHALL BE FACTORY JACKETED WITH PIT WRAP SS JACKETING-A 70 MIL (1.7 mm) THICK SELF-SEALING HIGH POLYMER ASPHALTIC MEMBRANE OR APPROVED EQUAL. ALL WORK REQUIRED FOR OFFSETTING AND WRAPPING SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF NYC DDC AND AS DIRECTED BY THE RESIDENT ENGINEER.
  - (E) THE COST OF AFOREMENTIONED WORK INCLUDING ALL MATERIALS AND LABOR NECESSARY TO COMPLETE THIS WORK SHALL BE DEEMED INCLUDED IN THE PRICE BID FOR ALL ITEMS OF WORK. NO SEPARATE PAYMENT SHALL BE MADE.

DETAIL "A"



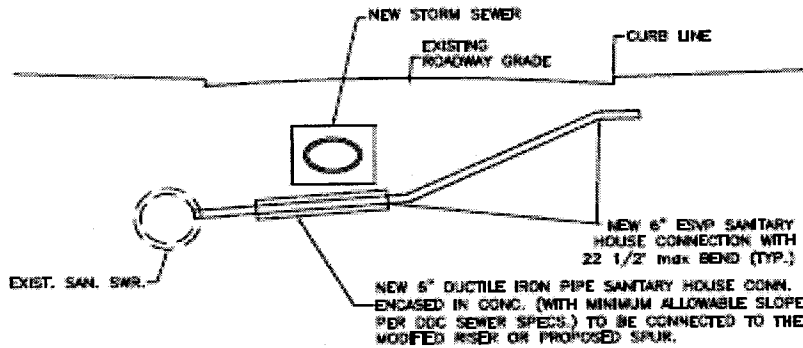
TYPICAL H.C. CROSS-SECTION - I

NOT TO SCALE



TYPICAL H.C. CROSS-SECTION - II

NOT TO SCALE



TYPICAL H.C. CROSS-SECTION - III

NOT TO SCALE

NOTES:

THE CONTRACTOR IS ADVISED THAT AT CERTAIN LOCATIONS WITHIN THE PROJECT LIMIT, HOUSE CONNECTION DRAINS SHALL BE ENCASED AS REQUIRED AS SHOWN ABOVE IN TYPICAL H.C. CROSS SECTIONS I, II, AND III, OR AS DIRECTED BY THE RESIDENT ENGINEER. WHERE NO INTERFERENCE EXISTS, THE STORM SEWER SHALL BE INSTALLED ABOVE THE EXISTING HOUSE SEWER CONNECTION WHICH SHALL BE ENCASED IN CONCRETE PRIOR TO STORM SEWER INSTALLATION. THE COST OF ALL AFOREMENTIONED WORK SHALL BE DEEMED INCLUDED IN THE PRICE BID FOR ITEM LABELED "ADDITIONAL CONCRETE" AND THE D.I.P. HOUSE CONNECTION SHALL BE PAID UNDER BID ITEM 52.41V06R - 6" E.S.V.P. HOUSE CONNECTION DRAIN AND NO ADDITIONAL OR SEPARATE PAYMENT SHALL BE MADE.

**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) N.Y.C. DEPARTMENT OF TRANSPORTATION

The Contractor shall notify Mr. Michael Lofesse/Ghanshyam Patel - Signal/Street Lighting Operations, 34-02 Queens Blvd., Long Island City, N.Y. 11101 at (212) 839-3799/ (212) 839-3359, at least seventy-two (72) hours prior to the start of construction.

- (5) **Refer to Subsection 40.02.15 - Disposal Of Water From Trenches, Page IV-9:**  
**Add** the following to **Subsection 40.02.15:**

(A) The Department of Design and Construction has **not** filed application for Dewatering Permit with the New York State Department of Conservation (NYSDEC), under the Environmental Conservation Law (ECL), Title 15 of Article 15, for a Temporary Well Point System Permit. However, it is anticipated that the criteria for rate of pumping specified herebefore in this section will be exceeded in areas of construction; the Contractor shall be responsible for applying and obtaining the necessary dewatering permit prior to the dewatering of trenches within the scope of this project.

As part of the permit application the Contractor will be required to comply with all the requirements of **Section 40.14** of this section.

Copies of all materials submitted to NYSDEC shall be sent to the New York City Department of Design and Construction (NYCDDC), Infrastructure/Design.

The following minimum requirements set forth by the New York Department of Environmental Conservation shall be complied with prior to the start of work in areas of construction requiring dewatering permit:

- (1) An analysis must be made of water samples taken. The results are to be submitted to the Regional Permit Administrator. An analysis shall be made for BOD, salinity, oil, and grease. The samples shall be analyzed by a laboratory certified by the New York State Health Department and the results are to be submitted directed to the New York State Department of Environmental Conservation by the laboratory.
- (2) Prior to setting any wells, wellpoints or header pipes, the Contractor shall submit to the NYSDEC a layout of the complete dewatering system including the location of the discharge point. When permitted by the NYSDEC, discharge of groundwater on the beach areas shall be done in such a manner as to eliminate any erosion or siltation and will require the installation of splash blocks and/or settling basins.

The Contractor is advised that all work required in obtaining a permit, must be submitted to, and approved by the NYSDEC prior to the commencement of any work in areas of construction requiring dewatering permit. No payment for any item of work will be made, and no shop drawing shall be approved for the areas of construction until such time that a written approval is obtained from the NYSDEC.

(B) The Contractor is advised that all work shall be governed by the provisions and requirements of the obtained permit, and their said provisions and requirements shall be made a part of the contract and the Contractor shall be responsible for strict adherence thereto.

The cost of all work required for applying, complying and obtaining required dewatering permits including the cost for any required updating of permits shall be deemed included in the prices bid for all item of this contract. No additional or separate payment will be made for any work required in order to comply with these requirements.

- (6) Refer to Page IV-34:  
Add the following new **Section 40.14**:

**SECTION 40.14  
DEWATERING PERMITS**

**40.14.1 DESCRIPTION**

Under this contract, and at locations where groundwater will be present in the trenches and excavations, the Contractor is required to install, maintain and operate a temporary dewatering system of sufficient size and capacity to control ground and surface water flow into the excavation and to allow all work to be accomplished in the "dry condition".

The Contractor shall be required to obtain the following permits in order to operate a temporary dewatering system.

- (A) A Dewatering/Discharge Permit from the New York City Department of Environmental Protection (NYCDEP);
- (B) A Long Island Well Permit from the New York State Department of Environmental Conservation (NYSDEC), under the Environmental Conservation Law (ECL), Title 15 of Article 15, implemented by 6NYCRR Part 601 - Water Supply and Part 602 - Long Island Well. This permit is required only in the Boroughs of Brooklyn and Queens to withdraw water using a well point or deep well system where the total capacity of such well or wells is in excess of 45-gallons per minute (or 64,800-gallons per day); and,
- (C) An Industrial State Pollutant Discharge Elimination System (SPDES) or a Non-Jurisdictional Determination Letter in compliance with Title 8 and 7 of Article 17 of the Environmental Conservation Law of New York State, respectively.

The Contractor is advised that the provisions and requirements of the aforementioned permits shall govern all work, and the said provisions and requirements are hereby made a part of the sewer contract and the Contractor shall be responsible for strict adherence thereto.

No dewatering work shall commence until the above-mentioned Permits have been obtained for this project.

The Contractor is advised that in order to comply with all the permits requirements, the Contractor will be required to submit maps, test data, etc. prior to the start of work. In order to expedite the processing of the permit and its requirements, the Contractor shall be required to obtain the services of an independent Environmental Scientist as herein described below in **Subsection 40.14.2** to perform this work and act as liaison with NYSDEC and NYCDEP.

**40.14.2 QUALIFICATIONS**

The Environmental Scientist utilized to perform the work required under this section must have adequate experience in work of this nature (obtaining Long Island Well Permit/Dewatering Permit) and must have previous experience in working with the NYSDEC and the NYCDEP, designing equivalent dewatering systems, and have successfully obtained the type of permits required under this contract. Prior to the start of work, the Contractor will be required to submit the name and resume of the Environmental Scientist for approval.

**40.14.3 NYSDEC DEWATERING PERMITS**

The dewatering system shall be designed by the Environmental Scientist using accepted and professional methods of design and engineering consistent with the best modern practices.

The material to be submitted shall include, but not be limited to the following:

- (1) Site Plan - Scaled, showing construction activity (e.g. excavation, pathway of the pipe, new outfalls, etc.) locations of well points, header pipes and pumps, and all staging and storage areas.

Also included herein shall be a layout of the complete dewatering system including the location of the discharge point. When permitted by the NYSDEC, discharge of groundwater on beach areas shall be done in such a manner as to prevent any erosion or siltation and will require the design and installation of splash blocks and/or settling basins.

- (2) Dewatering System Specifications:

- |                               |                             |
|-------------------------------|-----------------------------|
| (a) Number of Well Points     | (h) Total Volume Pumped     |
| (b) Diameter of Well Points   | (i) Number of Pumps         |
| (c) Spacing of Well Points    | (j) Capacity of Pumps       |
| (d) Length to Screen          | (k) Duration of Pumping     |
| (e) Depth to Bottom of Screen | (l) Initial and Average GPM |
| (f) Static Water Level        | (m) Estimated Daily Pumpage |
| (g) Drawdown Required         | (n) Flow Meter              |

- (3) Cross Section - Scaled, showing well points, riser, header, annular material (if used) and other equipment associated with each point. A typical construction style drawing may be utilized. Should the Contractor be permitted to use a deep well system, all information regarding it must be submitted.

- (4) Drawdown Contour Map - Based upon a review of the surrounding area affected by the dewatering and upon boring within the project area and characteristics of the soils, the depth and pumping rate of dewatering system and the duration of the pumping, the Environmental Scientist shall submit both a narrative and diagram showing the anticipated maximum cone of depression which shall be shown from both above and in cross section on scaled diagrams. Contour lines on diagrams shall be labeled to show depth from land surface.

- (5) Description of Site and Adjacent Areas - A short narrative shall be prepared describing the land use in the area paying attention to any potential sources of groundwater contamination that may migrate into the well's cone of depression, such as gas stations, chemical plants, wrecking yards, sanitary landfills, etc. Latest map of the area shall be included in the narrative.

- (6) Groundwater Analysis - The Environmental Scientist shall develop and submit a sampling and analysis program subject to NYSDEC Approval (a minimum of one groundwater sample from a site well shall be collected and analyzed). A laboratory certified by the New York State Health Department shall analyze the samples. The sampling and analysis program must include but is not limited to the following:

**NYSDEC REGION 2 - DEWATERING PROJECTS SAMPLING INFORMATION**

NO.	PARAMETERS	TYPE	EPA METHOD	DETECTION
1	pH	Grab	150.1	EPA min
2	Temperature	°F	After Pumping	EPA min
3	Fecal Coliform	Grab	5-Tubes/3-Dilutions	2-MPN/100-ml
4	Oil & Grease	Grab	413.1	EPA min
5	BOD5	Grab	405.1	EPA min
6	Total Suspended Solids	Grab	160.2	EPA min
7	Settleable Solids	Grab	160.5	EPA min
8	Chlorides	Grab	325.1-325.3	EPA min
9	Benzene	Grab	602	EPA min
10	Toluene	Grab	602	EPA min
11	Xylenes	Grab	602	EPA min
12	Ethylbenzene	Grab	602	EPA min
13	PCB's	Grab	608	(See Note 1)
14	Pesticides	Grab	608	EPA min
15	13 Priority Metals	Grab	200 series	EPA min
16	Acids Base/Neutrals	Grab	625-GC/MS	EPA min
17	Halogenated Volatiles	Grab	601-GC	EPA min
18	Nitrate/Nitrite	Grab	300 or 353.3	EPA min
19	Aromatic Volatiles	Grab	602-GC	EPA min
20	Cyanide (total or amenable)	Grab	335.1/335.2	EPA min

**NOTE:**

- (1) List each individual aroclor found and report the concentration of each aroclor tested. Use the N.Y.S. detection limit, which is 0.065-µg/l.

Small dewatering projects with a total estimated pumped volume up to 15-Million Gallons (MG) require sampling analysis for parameters No.'s 1 through 12.

Medium dewatering projects with a total estimated pumped volume between 15-MG and 60-MG require sampling analysis for parameters No.'s 1 through 14.

Large dewatering projects with a total estimated pumped volume greater than 60-MG require sampling analysis for parameters No.'s 1 through 20.

Samples are to be collected after development of the well by a licensed well driller.

A laboratory certified by the NYS Department of Health must conduct all testing.

Irrespective of the aforementioned sampling requirements based on total estimated pumped volumes, the Department may require sampling of additional parameters if the proposed dewatering site is suspected of being contaminated.

**40.14.4 SUBMISSION OF DEWATERING PLAN**

The Environmental Scientist will be required to submit two (2) copies of the Dewatering Plan (together with all reports, materials, designs, drawings, maps and plans) to the Infrastructure Engineering Support Unit for review and approval. Once approved the Environmental Scientist shall submit in triplicate the Final Dewatering Plan to both the NYSDEC and the NYCDEP. The Dewatering Plan should be bound



and bear the name of the Contractor, NYSDEC Application Number and the Signature of the preparer. All drawings and maps shall be on sheets 27-inches by 40-inches and to scale not less than 1"=30'.

**40.14.5 DAMAGES**

The Contractor shall be responsible for and shall repair at no cost to the City any damage caused by inadequate or improper design and operation of the dewatering system, and any mechanical or electrical failure of the dewatering system.

**40.14.6 SYSTEM REMOVAL**

The Contractor shall remove all dewatering equipment and temporary electrical service from the site. All wells shall be removed or cut off a minimum of three (3) feet below the final ground surface and capped. Holes left from pulling wells or wells that are capped shall be grouted in a manner approved by the Engineer.

**40.14.7 PAYMENTS**

No additional or separate payment will be made for any work described herein. The costs for all labor, materials, equipment, permit fees, samples, tests, reports, services and insurance required or necessary to perform all the work described herein shall be deemed included in the price bid for all items of work.

**(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. HWKKP005.

**(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. HWKKP005.**

**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 eight (8) pages.**

**NO TEXT ON THIS PAGE**

**FEMA - PAGES:**

**FEDERAL EMERGENCY  
MANAGEMENT AGENCY PROJECTS**

---

**(NO TEXT ON THIS PAGE)**

# FEDERAL EMERGENCY MANAGEMENT AGENCY (“FEMA”) 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. The riders and exhibits listed below, and included in this Attachment, are made a part of this contract documents, and the Contractor shall be responsible for compliance with all the provisions contained therein:
  - UNIFORM FEDERAL CONTRACT PROVISIONS RIDER FOR FEDERALLY FUNDED PROCUREMENT CONTRACTS (2/16/2018)
  - FEDERAL EMERGENCY MANAGEMENT AGENCY (“FEMA”) RIDER (10/27/2015)
  - FEMA EXHIBIT 2 (10/27/2015)
  
2. **SCOPE OF WORK SEPERATION.** This project, either in part or in whole, is eligible to receive FEMA disaster assistance funding. As a result, the scopes of work eligible for reimbursement by FEMA will be tracked separately during the construction by the Engineer. Although tracking these FEMA-funded items will be primarily be the responsibility of the Engineer, the contractor will be required to assist the Engineer in this effort.
  
3. **CHANGE ORDERS AND OVERRUNS.** When change orders or overruns pertain to those portions of the project eligible for reimbursement by FEMA, the Contractor must provide detailed documentation to justify the eligibility of the added work, in addition to the requirements of Articles 25 and 26 of the New York City Standard Construction Contract. At a minimum, this documentation shall include the exact location of the work, justification for changing the original scope of work (either new work or quantity changes), field sketches/as-built drawings for the added work and photographs detailing the conditions necessitating the work. The documentation shall be approved by the Engineer.

In addition, change order requests shall be formatted as follows:

- a. If contract covers work at multiple facilities and/or sites, change order requests shall identify the facility and/or site to which they apply.
- b. Change order requests shall identify the component scope to which the change applies.

**(NO TEXT THIS PAGE)**

## UNIFORM FEDERAL CONTRACT PROVISIONS RIDER FOR FEDERALLY FUNDED PROCUREMENT CONTRACTS

(Version 02.16.2018)

*[Instructions to Agencies: This Uniform Federal Contract Provisions Rider for Federally Funded Procurement Contracts (“Rider”) must be attached to all federally funded procurement contracts (of any dollar amount) that are subject to 2 CFR Part 200 (Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards). This Rider does not apply to subrecipient or subaward agreements. Procurement contracts funded by the U.S. Department of Housing and Urban Development CDBG Program or CDBG-DR Program must also include the CDBG or CDBG-DR Rider, as applicable.]*

**A. Definitions.** As used in this Rider:

- (1) “Awarding Entity” means the entity awarding the Contract. The Awarding Entity may be the City or a contractor at any tier.
- (2) “City” means the City of New York.
- (3) “Commissioner” means the head of the City agency entering into this Contract.
- (4) “Construction” means the building, rehabilitation, alteration, conversion, extension, demolition, painting or repair of any improvement to real property.
- (5) “Contract” refers to the contract or the agreement between the Awarding Entity and the Contractor.
- (6) “Contractor” means the entity performing the services pursuant to a Contract.
- (7) “Federal Agency” means the U.S. agency or agencies funding this Contract in whole or in part.
- (8) “Government” means the U.S. government.
- (9) “Rider” means this Uniform Federal Contract Provisions Rider.

**B. Termination and Remedies for Breach of Contract.** The following provisions concerning remedies for breach of contract and termination apply to Contracts between the City and the City’s Contractor.

- (1) **Remedies for Breach of Contract.** If the Contractor violates or breaches the Contract, the City may avail itself of any or all of the remedies provided for elsewhere in this Contract. If there are no remedies provided for elsewhere in this Contract, the City may avail itself of any or all of the following remedies.

After declaring the Contractor in default pursuant to the procedures in paragraph (a) of subdivision (2) of this section (B) below, the City may (i) withhold payment for unsatisfactory services, (ii) suspend or terminate the Contract in whole or in part; and/or



(iii) have the services under this Contract completed by such means and in such manner, by contract procured with or without competition, or otherwise, as the City may deem advisable in accordance with all applicable Contract provisions and law. After completion of the services under this Contract, the City shall certify the expense incurred in such completion, which shall include the cost of procuring that contract. Should the expense of such completion, as certified by the City, exceed the total sum which would have been payable under the Contract if it had been completed by the Contractor, any excess shall be promptly paid by the Contractor upon demand by the City. The excess expense of such completion, including any and all related and incidental costs, as so certified by the City may be charged against and deducted out of monies earned by the Contractor.

(2) **Termination.** The City shall have the right to terminate the Contract in whole or in part for cause, for convenience, due to force majeure, or due to reductions in federal funding. If the Contract does not include termination provisions elsewhere, the following termination provisions apply:

a. **Termination for Cause.** The City shall have the right to terminate the Contract, in whole or in part, for cause upon a determination that the Contractor is in default of the Contract. Unless a shorter time is determined by the City to be necessary, the City shall effect termination according to the following procedure:

- i. *Notice to Cure.* The City shall give written notice of the conditions of default signed by the Commissioner, setting forth the ground or grounds upon which such default is declared ("Notice to Cure"). The Contractor shall have ten (10) days from receipt of the Notice to Cure or any longer period that is set forth in the Notice to Cure to cure the default. The Commissioner may temporarily suspend services under the Contract pending the outcome of the default proceedings pursuant to this section.
- ii. *Opportunity to be Heard.* If the conditions set forth in the Notice to Cure are not cured within the period set forth in the Notice to Cure, the Commissioner may declare the Contractor in default. Before the Commissioner may exercise his or her right to declare the Contractor in default, the Contractor must be given an opportunity to be heard upon not less than five (5) business days' notice. The Commissioner may, in his or her discretion, provide for such opportunity to be in writing or in person. Such opportunity to be heard shall not occur prior to the end of the cure period but notice of such opportunity to be heard may be given prior to the end of the cure period and may be given contemporaneously with the Notice to Cure.
- iii. *Notice of Termination.* After an opportunity to be heard, the Commissioner may terminate the Contract, in whole

or in part, upon finding the Contractor in default. The Commissioner shall give the Contractor written notice of such termination ("Notice of Termination"), specifying the applicable provision(s) under which the Contract is terminated and the effective date of termination. If no date is specified in the Notice of Termination, the termination shall be effective either 10 calendar days from the date the notice is personally delivered or 15 calendar days from the date Notice of Termination is sent by another method. The Notice of Termination shall be personally delivered, sent by certified mail return receipt requested, or sent by fax and deposited in a post office box regularly maintained by the United States Postal Service in a postage pre-paid envelope.

iv. *Grounds for Default.* The City shall have the right to declare the Contractor in default:

1. Upon a breach by the Contractor of a material term or condition of this Contract, including unsatisfactory performance of the services;

2. Upon insolvency or the commencement of any proceeding by or against the Contractor, either voluntarily or involuntarily, under the Bankruptcy Code or relating to the insolvency, receivership, liquidation, or composition of the Contractor for the benefit of creditors;

3. If the Contractor refuses or fails to proceed with the services under the Contract when and as directed by the Commissioner;

4. If the Contractor or any of its officers, directors, partners, five percent (5%) or greater shareholders, principals, or other employee or person substantially involved in its activities are indicted or convicted after execution of the Contract under any state or federal law of any of the following:

a. a criminal offense incident to obtaining or attempting to obtain or performing a public or private contract;

b. fraud, embezzlement, theft, bribery, forgery, falsification, or destruction of records, or receiving stolen property;

c. a criminal violation of any state or federal antitrust law;

d. violation of the Racketeer Influence and Corrupt Organization Act, 18 U.S.C. § 1961 et seq., or the Mail Fraud Act, 18

U.S.C. § 1341 et seq., for acts in connection with the submission of bids or proposals for a public or private contract;

e. conspiracy to commit any act or omission that would constitute grounds for conviction or liability under any statute described in subparagraph (d) above; or

f. an offense indicating a lack of business integrity that seriously and directly affects responsibility as a City vendor.

5. If the Contractor or any of its officers, directors, partners, five percent (5%) or greater shareholders, principals, or other employee or person substantially involved in its activities are subject to a judgment of civil liability under any state or federal antitrust law for acts or omissions in connection with the submission of bids or proposals for a public or private contract; or

6. If the Contractor or any of its officers, directors, partners, five percent (5%) or greater shareholders, principals, or other employee or person substantially involved in its activities makes or causes to be made any false, deceptive, or fraudulent material statement, or fail to make a required material statement in any bid, proposal, or application for City or other government work.

v. *Basis of Settlement.* The City shall not incur or pay any further obligation pursuant to this Contract beyond the termination date set by the City in its Notice of Termination. The City shall pay for satisfactory services provided in accordance with this Contract prior to the termination date. In addition, any obligation necessarily incurred by the Contractor on account of this Contract prior to receipt of notice of termination and falling due after the termination date shall be paid by the City in accordance with the terms of this Contract. In no event shall such obligation be construed as including any lease or other occupancy agreement, oral or written, entered into between the Contractor and its landlord.

b. **Termination for Convenience.** The City shall have the right to terminate the Contract for convenience, by providing written notice ("Notice of Termination") according to the following procedure. The Notice of Termination shall specify the applicable provision(s) under which the Contract is terminated and the effective date of termination, which shall be not less than 10 calendar days from the date the notice is personally delivered or 15 days from the date the Notice of Termination is sent by another method. The Notice of Termination shall be personally

delivered, sent by certified mail return receipt requested, or sent by fax and deposited in a post office box regularly maintained by the United States Postal Service in a postage pre-paid envelope. The basis of settlement shall be as provided for in subparagraph (iv) of paragraph (a) of subdivision (2) of this section (B), above.

**c. Termination due to Force Majeure**

- i. For purposes of this Contract, a force majeure event is an act or event beyond the control and without any fault or negligence of the Contractor ("Force Majeure Event"). Force Majeure Events may include, but are not limited to, fire, flood, earthquake, storm or other natural disaster, civil commotion, war, terrorism, riot, and labor disputes not brought about by any act or omission of the Contractor.
- ii. In the event the Contractor cannot comply with the terms of the Contract (including any failure by the Contractor to make progress in the performance of the services) because of a Force Majeure Event, then the Contractor may ask the Commissioner to excuse the nonperformance and/or terminate the Contract. If the Commissioner, in his or her reasonable discretion, determines that the Contractor cannot comply with the terms of the Contract because of a Force Majeure Event, then the Commissioner shall excuse the nonperformance and may terminate the Contract. Such a termination shall be deemed to be without cause.
- iii. If the City terminates the Contract due to a Force Majeure Event, the basis of settlement shall be as provided for in subparagraph (iv) of paragraph (a) of subdivision (2) of this section (B), above.

**d. Termination due to Reductions in Federal Funding**

- i. This Contract is funded in whole or in part by funds secured from the Federal government. Should the Federal government reduce or discontinue such funds, the City shall have, in its sole discretion, the right to terminate this Contract in whole or in part, or to reduce the funding and/or level of services of this Contract caused by such action by the Federal government, including, in the case of the reduction option, but not limited to, the reduction or elimination of programs, services or service components; the reduction or elimination of contract-reimbursable staff or staff-hours, and corresponding reductions in the budget of this Contract and in the total amount payable under this Contract. Any reduction in funds pursuant to this

paragraph shall be accompanied by an appropriate reduction in the services performed under this Contract.

- ii. In the case of the reduction option referred to in subparagraph (i), above, any such reduction shall be effective as of the date set forth in a written notice thereof to the Contractor, which shall be not less than 30 calendar days from the date of such notice. Prior to sending such notice of reduction, the City shall advise the Contractor that such option is being exercised and afford the Contractor an opportunity to make within seven calendar days any suggestion(s) it may have as to which program(s), service(s), service component(s), staff or staff-hours might be reduced or eliminated, provided, however, that the City shall not be bound to utilize any of the Contractor's suggestions and that the City shall have sole discretion as to how to effectuate the reductions.
- iii. If the City reduces funding pursuant to this paragraph (c), the basis of settlement shall be as provided for in subparagraph (iv) of paragraph (a) of subdivision (2) of this section (B), above.

**C. Standard Provisions.** The Contractor shall comply with, include in its subcontracts, and cause its subcontractors to comply with the following provisions, as applicable:

- (1) *Reporting.* Contractor shall be required to produce and deliver such reports relating to the services performed under the Contract as may be required by the Awarding Entity, City or any other State or Federal governmental agency with jurisdiction.
- (2) *Non-Discrimination.* Contractor shall not violate any Federal, State, or City law prohibiting discrimination concerning employment, the provision of services, and, if applicable, housing, funded by this Contract.
- (3) *Environmental Protection.* If the Contract is in excess of \$150,000, the Contractor shall comply with all applicable standards, orders, or regulations issued under the Clean Air Act (42 U.S.C. § 7401-7671q), Federal Water Pollution control Act (33 U.S.C. §§ 1251-1387) Section 508 of the Clean Water Act (33 U.S.C. § 1368), Executive Order 11738, and Environmental Protection Agency regulations (provisions of 40 CFR Part 50 and 2 CFR Part 1532 related to the Clean Air Act and Clean Water Act). Violations must be reported to the Federal Agency and the Regional Office of the Environmental Protection Agency (EPA). The Contractor shall include this provision in all subcontracts.
- (4) *Energy Efficiency.* The Contractor shall comply with mandatory standards and policies relating to energy efficiency that are contained in the New York State energy conservation plan issued in compliance with the Energy Policy Conservation Act (Pub. L. 94-163).
- (5) *Debarment.* The Contractor certifies that neither it nor its principals is currently in a state of debarment, suspension, or other ineligible status as a result of prior performance, failure, fraud, or violation of City laws. The Contractor further certifies that neither it nor

its principals is debarred, suspended, otherwise excluded from or ineligible for participation in Federal assistance programs. The City reserves the right to terminate this Contract if knowledge of debarment, suspension or other ineligibility has been withheld by the Contractor.

- (6) *Lobbying.* The Contractor certifies, to the best of its knowledge and belief, that:
- (a) No Federal appropriated funds have been paid or will be paid, by or on behalf of it, to any person 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 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 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, it will complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," (which is available on the HUD website or here: <https://www.hudexchange.info/resources/documents/HUD-Form-Sflll.pdf>) in accordance with its instructions; and
  - (c) It will require that the language of this Section (C)(6) be included in the award documents for all subcontracts at all tiers.
  - (d) 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.
- (7) *Solid Waste Disposal Act.* Pursuant to 2 CFR § 200.322, Contractor must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (codified at 42 USC § 6962). The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$ 10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$ 10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.
- (8) *Documentation of Costs.* All costs shall be supported by properly executed payrolls, time records, invoices, or vouchers, or other official documentation evidencing in proper detail the nature and propriety of the charges. All checks, payrolls, invoices, contracts,

vouchers, orders or other accounting documents, pertaining in whole or in part to the Agreement, shall be clearly identified and regularly accessible.

- (9) *Records Retention.* The Contractor shall retain all books, documents, papers, and records relating to the services performed under the Contract for three years after final payment under the Contract is made and all other pending matters are closed.
- (10) *Records Access.* The Contractor shall grant access to the City, State or any other pass-through entity, the Federal Agency, Inspectors General, and/or the Comptroller General of the United States, or any of their duly authorized representatives, to any books, documents, papers, and/or records of the Contractor that are pertinent to the Contract for the purpose of making audits, examinations, excerpts, and transcripts. The right also includes timely and reasonable access to the Contractor's personnel for the purpose of interview and discussion related to such documents. The rights of access in this section are not limited to the required retention period but last as long as the records are retained.
- (11) *Small Firms, M/WBE Firms, and Labor Surplus Area Firms.* Contractor shall take the following affirmative steps in the letting of subcontracts, if subcontracts are to be let, in order to ensure that minority firms, women's business enterprises, and labor surplus area firms are used when possible:
- a. Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
  - b. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
  - c. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
  - d. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; and
  - e. Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce.
- (12) *Intangible Property.*
- a. Pursuant to 2 CFR § 200.315(d), the Government reserves a royalty-free, non-exclusive, and irrevocable right to obtain, reproduce, publish, or otherwise use, and to authorize others to use, for Government purposes: (a) the copyright in any work developed under the Contract or subcontract; and (b) any rights of copyright to which a Contractor purchases ownership with grant support.

- b. Any reports, documents, data, photographs, deliverables, and/or other materials produced pursuant to the Contract (“Copyrightable Materials”), and any and all drafts and/or other preliminary materials in any format related to such items produced pursuant to the contract, shall upon their creation become the exclusive property of the City. The Copyrightable Materials shall be considered “work-made-for-hire” within the meaning and purview of Section 101 of the United States Copyright Act, 17 U.S.C. § 101, and the City shall be the copyright owner thereof and of all aspects, elements and components thereof in which copyright protection might exist. To the extent that the Copyrightable Materials do not qualify as “work-made-for-hire,” the Contractor hereby irrevocably transfers, assigns and conveys exclusive copyright ownership in and to the Copyrightable Materials to the City, free and clear of any liens, claims, or other encumbrances. The Contractor shall retain no copyright or intellectual property interest in the Copyrightable Materials. The Copyrightable Materials shall be used by the Contractor for no purpose other than in the performance of this Contract without the prior written permission of the City. The City may grant the Contractor a license to use the Copyrightable Materials on such terms as determined by the City and set forth in the license.
- c. The Contractor acknowledges that the City may, in its sole discretion, register copyright in the Copyrightable Materials with the United States Copyright Office or any other government agency authorized to grant copyright registrations. The Contractor shall fully cooperate in this effort, and agrees to provide any and all documentation necessary to accomplish this.
- d. The Contractor represents and warrants that the Copyrightable Materials: (i) are wholly original material not published elsewhere (except for material that is in the public domain); (ii) do not violate any copyright law; (iii) do not constitute defamation or invasion of the right of privacy or publicity; and (iv) are not an infringement, of any kind, of the rights of any third party. To the extent that the Copyrightable Materials incorporate any non-original material, the Contractor has obtained all necessary permissions and clearances, in writing, for the use of such non-original material under this Contract, copies of which shall be provided to the City upon execution of this Contract.
- e. The Contractor shall promptly and fully report to the City any discovery or invention arising out of or developed in the course of performance of this Contract and the Contractor shall promptly and fully report to the Government to make a determination as to whether patent protection on such invention shall be sought and how the rights in the invention or discovery,



including rights under any patent issued thereon, shall be disposed of and administered in order to protect the public interest.

- f. If the Contractor publishes a work dealing with any aspect of performance under this Agreement, or with the results of such performance, the City shall have a royalty-free, non-exclusive irrevocable license to reproduce, publish, or otherwise use such work for City governmental purposes.

**D. Special Provisions for Construction Contracts.** If this Contract involves Construction work, design for Construction, or Construction services, all such work or services performed by the Contractor and its subcontractors shall be subject to the following requirements in addition to those set forth above in paragraphs (A), (B), and (C):

(1) *Federal Labor Standards.* The Contractor will comply with the following:

- a. The Davis-Bacon Act (40 U.S.C. §§ 3141-3148): If required by the federal program legislation, in Construction contracts involving an excess of \$2000, and subject to any other federal program limitations, all laborers and mechanics must be paid at a rate not less than those determined by the Secretary of Labor to be prevailing for the City, which rates are to be provided by the City. These wage rates are a federally mandated minimum only, and will be superseded by any State or City requirement mandating higher wage rates. The Contractor also agrees to comply with Department of Labor Regulations pursuant to the Davis-Bacon Act found in 29 CFR Parts 1, 3, 5 and 7 which enforce statutory labor standards provisions.
- b. If required by the federal program legislation and subject to any other federal program limitations, Sections 103 and 107 of the Contract Work Hours and Safe Standards Act (40 U.S.C. §§ 3701-3708), which provides that no laborer or mechanic shall be required or permitted to work more than eight hours in a calendar day or in excess of forty hours in any workweek, unless such laborer or mechanic is paid at an overtime rate of 1½ times his/her basic rate of pay for all hours worked in excess of these limits, under any Construction contract costing in excess of \$2000. In the event of a violation of this provision, the Contractor shall not only be liable to any affected employee for his/her unpaid wages, but shall be additionally liable to the United States for liquidated damages.
- c. The Copeland “Anti-Kickback” Act (18 U.S.C. § 874), as supplemented by the regulations contained in 29 CFR Part 3, requiring that all laborers and mechanics shall be paid unconditionally and not less often than once a week, and prohibiting all but “permissible” salary deductions.

- d. If this Contract involves Construction work, design for Construction, or Construction services, a more complete detailed statement of Federal Labor Standards annexed hereto as FEDERAL EXHIBIT 2.

(2) *Equal Employment Opportunity*. Executive Order 11246, as amended by Executive Order 11375, and as supplemented in Department of Labor regulations (41 CFR chapter 60) for Construction contracts or subcontracts in excess of \$10,000. The Contractor shall include the notice found at FEDERAL EXHIBIT I in all Construction subcontracts. For the purposes of the Equal Opportunity Construction Contract Specifications and Clause below, the term "Construction Work" means the construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction .

**Standard Federal Equal Employment Opportunity Construction Contract Specifications for Contracts and Subcontracts in Excess of \$10,000.**

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 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 areas 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 organization's 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 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 on-site 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.

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 non-segregated 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 supervisor's 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 work force 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, 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 or suspended or is otherwise excluded from or ineligible for participation in federal assistance programs.

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 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 hiring of local or other areas residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

(3) **Equal Opportunity Clause** (for contracts for Construction Work) required by 41 CFR § 60-1.4(b).

During the performance of this contract, the Contractor agrees as follows:

(1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. 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. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.

(4) The Contractor will send to each labor union or representative of workers with which he 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 under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said 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 Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering

agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that 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 administering agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

**E. Rights to Inventions. [Special Provisions For Contracts Involving Experimental, Developmental, or Research Work.]**

(1) If this Contract involves the performance of experimental, developmental, or research work by the Contractor or its subcontractors, and the entity performing such work is a Nonprofit Organization or Small Business Firm as defined below, the following provisions apply in addition to those set forth above in paragraphs (A), (B), and (C), unless the Contract specifically states that this provision is superseded:

*a. Definitions.* The following definitions apply to this section (D).

- i. "Invention" means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the United States Code, or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. § 2321 *et seq.*).
- ii. "Subject invention" means any invention of the Contractor conceived or first actually reduced to practice in the performance of work under this Contract, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d)) must also occur during the period of Contract performance.
- iii. "Practical Application" means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or government regulations, available to the public on reasonable terms.
- iv. "Made" when used in relation to any invention means the conception or first actual reduction to practice of such invention.
- v. "Small Business Firm" means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business



concerns involved in government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3-12, respectively, will be used.

- vi. "Nonprofit Organization" means a university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c) and exempt from taxation under section 501(a) of the Internal Revenue Code (25 U.S.C. 501(a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.
- b. *Allocation of Principal Rights.* The Contractor may retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this clause and 35 U.S.C. 203. With respect to any subject invention in which the Contractor retains title, the Federal government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.
  - c. *Invention Disclosure, Election of Title and Filing of Patent Application by Contractor.*
    - i. The Contractor will disclose each subject invention to the City and the Federal Agency within two months after the inventor discloses it in writing to Contractor personnel responsible for patent matters. Such disclosure shall be in the form of a written report and shall identify the contract under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of the disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after such disclosure, the Contractor will promptly notify the City and the Federal Agency of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Contractor.
    - ii. The Contractor will elect in writing whether or not to retain title to any such invention by notifying the City and the Federal Agency within two years of disclosure to the City and the Federal Agency. However, in any case

where publication, on sale or public use has initiated the one year statutory period wherein valid patent protection can still be obtained in the United States, the period for election of title may be shortened by the Federal Agency to a date that is no more than 60 days prior to the end of the statutory period.

- iii. The Contractor will file its initial patent application on a subject invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. The Contractor will file patent applications in additional countries or international patent offices within either ten months of the corresponding initial patent application or six months from the date permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications where such filing has been prohibited by a Secrecy Order.
- iv. Requests for extension of the time for disclosure, election, and filing under subparagraphs (1), (2), and (3) may be granted at the discretion of the Federal Agency.

*d. Conditions When the Government May Obtain Title*

The Contractor will convey to the Federal Agency, upon written request, title to any subject invention --

- i. If the Contractor fails to disclose or elect title to the subject invention within the times specified in (c), above, or elects not to retain title; provided that the Federal Agency may only request title within 60 calendar days after learning of the failure of the Contractor to disclose or elect within the specified times.
- ii. In those countries in which the Contractor fails to file patent applications within the times specified in (c) above; provided, however, that if the Contractor has filed a patent application in a country after the times specified in (c) above, but prior to its receipt of the written request of the Federal Agency, the Contractor shall continue to retain title in that country.
- iii. In any country in which the Contractor decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in reexamination or opposition proceeding on, a patent on a subject invention.

e. Minimum Rights to Contractor and Protection of the Contractor Right to File

- i. The Contractor will retain a nonexclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the Contractor fails to disclose the invention within the times specified in (c), above. The Contractor's license extends to its domestic subsidiary and affiliates, if any, within the corporate structure of which the Contractor is a party and includes the right to grant sublicenses of the same scope to the extent the Contractor was legally obligated to do so at the time the Contract was awarded. The license is transferable only with the approval of the Federal Agency except when transferred to the successor of that party of the Contractor's business to which the invention pertains.
- ii. The Contractor's domestic license may be revoked or modified by the funding Federal Agency to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR Part 404 and agency licensing regulations (if any). This license will not be revoked in that field of use or the geographical areas in which the Contractor has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the funding Federal Agency to the extent the Contractor, its licensees, or the domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.
- iii. Before revocation or modification of the license, the funding Federal Agency will furnish the Contractor a written notice of its intention to revoke or modify the license, and the Contractor will be allowed thirty calendar days (or such other time as may be authorized by the funding Federal Agency for good cause shown by the Contractor) after the notice to show cause why the license should not be revoked or modified. The Contractor has the right to appeal, in accordance with applicable regulations in 37 CFR Part 404 and Federal Agency regulations (if any) concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of the license.

f. Contractor Action to Protect the Government's Interest

- i. The Contractor agrees to execute or to have executed and promptly deliver to the Federal Agency all instruments necessary to (i) establish or confirm the rights the Government has throughout the world in those subject inventions to which the Contractor elects to retain title, and (ii) convey title to the Federal Agency when requested under paragraph (d) above and to enable the Government to obtain patent protection throughout the world in that subject invention.
- ii. The Contractor agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Contractor each subject invention made under contract in order that the Contractor can comply with the disclosure provisions of paragraph (c), above, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by (c)(1), above. The Contractor shall instruct such employees through employee agreements or other suitable educational programs on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.
- iii. The Contractor will notify the Federal Agency of any decisions not to continue the prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than thirty calendar days before the expiration of the response period required by the relevant patent office.
- iv. The Contractor agrees to include, within the specification of any United States patent applications and any patent issuing thereon covering a subject invention, the following statement, "This invention was made with government support under (identify the contract) awarded by (identify the Federal Agency). The government has certain rights in the invention."

g. Subcontracts

- i. The Contractor will include this clause, suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental or research work to be performed by a small business firm or domestic nonprofit organization. The subcontractor

will retain all rights provided for the Contractor in this clause, and the Contractor will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.

- ii. The Contractor will include in all other subcontracts, regardless of tier, for experimental developmental or research work the patent rights clause required by 2 CFR § 200.315(c) and Appendix II to 2 CFR Part 200.
- h. *Reporting on Utilization of Subject Inventions.* The Contractor agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Contractor or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Contractor, and such other data and information as the Federal Agency may reasonably specify. The Contractor also agrees to provide additional reports as may be requested by the Federal Agency in connection with any march-in proceeding undertaken by the Federal Agency in accordance with paragraph (j) of this clause. As required by 35 U.S.C. § 202(c)(5), the Federal Agency agrees it will not disclose such information to persons outside the Government without permission of the Contractor.
- i. *Preference for United States Industry.* Notwithstanding any other provision of this clause, the Contractor agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject inventions in the United States unless such person agrees that any products embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by the Federal Agency upon a showing by the Contractor or its assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.
- j. *March-in Rights.* The Contractor agrees that with respect to any subject invention in which it has acquired title, the Federal Agency has the right in accordance with the procedures in 37 CFR § 401.6 and any supplemental regulations of the Federal Agency to require the Contractor, an assignee or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Contractor, assignee, or exclusive licensee refuses such a request the Federal Agency has the right

to grant such a license itself if the Federal Agency determines that:

- i. Such action is necessary because the Contractor or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use.
  - ii. Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Contractor, assignee or their licensees;
  - iii. Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Contractor, assignee or licensees; or
  - iv. Such action is necessary because the agreement required by paragraph (i) of this clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.
- k. *Special Provisions for Contracts with Nonprofit Organizations.*  
If the Contractor is a nonprofit organization, it agrees that:
- i. Rights to a subject invention in the United States may not be assigned without the approval of the Federal Agency, except where such assignment is made to an organization which has as one of its primary functions the management of inventions, provided that such assignee will be subject to the same provisions as the Contractor;
  - ii. The Contractor will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when the Federal Agency deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. § 202(e) and 37 CFR § 401.10;
  - iii. The balance of any royalties or income earned by the Contractor with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, will be utilized for the support of scientific research or education; and
  - iv. It will make efforts that are reasonable under the circumstances to attract licensees of subject invention that are Small Business Firms and that it will give a

preference to a Small Business Firm when licensing a subject invention if the Contractor determines that the Small Business Firm has a plan or proposal for marketing the invention which, if executed, is equally as likely to bring the invention to practical application as any plans or proposals from applicants that are not Small Business Firms; provided, that the Contractor is also satisfied that the Small Business Firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the Contractor. However, the Contractor agrees that the Secretary may review the Contractor's licensing program and decisions regarding Small Business Firm applicants, and the Contractor will negotiate changes to its licensing policies, procedures, or practices with the Secretary when the Secretary's review discloses that the Contractor could take reasonable steps to implement more effectively the requirements of this paragraph (k)(iv).

1. *Communication.* The central point of contact at the Federal Agency for communications on matters relating to this clause may be obtained from the City upon request.

**NOTICE TO BIDDERS**

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246, as amended) FOR ALL CONSTRUCTION CONTRACTS AND SUB-CONTRACTS IN EXCESS OF \$10,000.**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract 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 and Timetables for Minorities**

<u>Trade</u>	<u>Goal</u> <u>(percent)</u>	
Electricians .....	9.0 to	10.2
Carpenters .....	27.6 to	32.0
Steamfitters .....	12.2 to	13.5
Metal Lathers .....	24.6 to	25.6
Painters .....	28.6 to	26.0
Operating Engineers .....	25.6 to	26.0
Plumbers .....	12.0 to	14.5
Iron Workers (structural) .....	25.9 to	32.0
Elevator Constructors .....	5.5 to	6.5
Bricklayers .....	13.4 to	15.5
Asbestos Workers .....	22.8 to	28.0
Roofers .....	6.3 to	7.5
Iron Workers (ornamental) .....	22.4 to	23.0
Cement Masons .....	23.0 to	27.0
Glazers .....	16.0 to	20.0
Plasterers .....	15.8 to	18.0
Teamsters .....	22.0 to	22.5
Boilermakers .....	13.0 to	15.5
All Other .....	16.4 to	17.5

**Goals and Timetables for Women**

From April 1, 1980 until the present ..... 6.9

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 contract is to be performed.

4. As used in this Contract, the "covered area" is the City of New York.

**FEDERAL EXHIBIT 2**

**[Insert Exhibit 2 for applicable federal grant program]**

**(NO TEXT THIS PAGE)**

**FEDERAL EMERGENCY MANAGEMENT AGENCY (“FEMA”) RIDER  
(10/27/2015)**

**For use with contracts funded by the FEMA Grant and Cooperative Agreement Programs,  
including the Public Assistance Program**

(This Rider should not be used with contracts funded by the following FEMA Programs: Emergency Management Preparedness Grant Program, Homeland Security Grant Program, Nonprofit Security Grant Program, Tribal Homeland Security Grant Program, Port Security Grant Program, and Transit Security Grant Program. This Rider should be accompanied by the Uniform Federal Contract Provisions Rider for Federally Funded Procurement Contracts.)

1. Suspension and Debarment. Section C(5) of the Uniform Federal Contract Provisions Rider for Federally Funded Procurement Contracts is supplemented with the following provisions:
  - (a) This contract is a covered transaction for purposes of 2 C.F.R. Parts 180 and 3000. As such the Contractor is required to verify that none of the Contractor, its principals (defined at 2 C.F.R. § 180.995), or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935). By entering into this contract, the Contractor certifies that it is in compliance with 2 C.F.R. Parts 180 and 3000.
  - (b) The Contractor must comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C during the term of this contract and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
  - (c) The certification in paragraph (a), above, and section C(5) of the Uniform Federal Contract Provisions Rider for Federally Funded Procurement Contracts is a material representation of fact relied upon by the City of New York. If it is later determined that the Contractor did not comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, in addition to remedies available to the City of New York and, if applicable, the State of New York, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
2. Davis-Bacon Act. For the purposes of Section D(1)(a) of the Uniform Federal Contract Provisions Rider, compliance with the Davis-Bacon Act (40 U.S.C. §§ 3141-3148) is not required of the Contractor pursuant to FEMA regulations. However, if this Contract is funded by another federal funding source (e.g., the U.S. Department of Housing and Urban Development CDBG or CDBG-DR programs), compliance with the Davis-Bacon Act is required to the extent required by law and as set forth in the contract documents.
3. Rights to Inventions Made Under a Contract or Agreement. Section E of the Uniform Federal Contract Provisions Rider for Federally Funded Procurement Contracts does not

apply to the following FEMA Programs: Public Assistance Program, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program.

4. Copeland “Anti-Kickback” Act. The Contractor shall comply with provisions of the Copeland “Anti-Kickback” Act (18 U.S.C. § 874) as delineated in the Uniform Federal Contract Provisions Rider, FEMA Exhibit 2, Section (A).
5. Contract Work Hours and Safety Standards Act. The Contractor shall comply with the provisions of the Contract Work Hours and Safety Standards Act as delineated in the Uniform Federal Contract Provisions Rider, FEMA Exhibit 2, Section (B).
6. Access to Records.
  - (a) The Contractor agrees to provide the City of New York, the FEMA 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.
  - (b) The Contractor agrees to permit any of the foregoing parties to reproduce said documents by any means or to copy excerpts and transcriptions as reasonably needed.
  - (c) The Contractor agrees to provide the FEMA Administrator or his/her authorized representative access to construction or other work sites pertaining to the work being completed under the contract.
7. Logos. The Contractor shall not use DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.
8. Compliance with Law. The Contractor acknowledges that FEMA financial assistance will be used to fund the contract only and agrees to comply with all applicable federal law, regulations, executive orders, FEMA policies, procedures, and directives.
9. Federal Government not a Party. The Contractor acknowledges and understands that the Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the City, Contractor or any other party pertaining to any matter resulting from the contract.
10. False Claims. The Contractor acknowledges that 31 U.S.C. Chap. 38 applies to the Contractor’s actions pertaining to this contract.

**EXHIBIT 2**  
**Federal Labor Standards Provisions (Non-Davis Bacon)<sup>1</sup>**  
**Federal Emergency Management Agency**  
**(10/27/2015)**

**Applicability:** The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

**A. Compliance with the Copeland “Anti-Kickback” Act.**

1. **Contractor.** The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.
2. **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clause in paragraph 1 above and such other clauses as the FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.
3. **Breach.** A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12.

**B. Compliance with the Contract Work Hours and Safety Standards Act.** The provisions of this Section B are applicable where the amount of the prime contract exceeds \$100,000.

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 B the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In

---

<sup>1</sup> This version of Exhibit 2 applies to contracts funded by FEMA Grant and Cooperative Agreement Programs, including the Public Assistance Program. Do not use this version of Exhibit 2 in connection with FEMA programs that are subject to the Davis-Bacon Act; such programs are the Emergency Management Preparedness Grant Program, the Homeland Security Grant Program, Nonprofit Security Grant Program, Tribal Homeland Security Grant Program, Port Security Grant Program, and Transit Security Grant Program.

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 City of New York 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 paragraphs (1) through (4) of this Section B 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 B.
- C. **Health and Safety.** The provisions of this paragraph C are applicable where the amount of the prime contract exceeds \$100,000.
1. No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.
  2. The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.
  3. The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as FEMA or the Secretary of Labor shall direct as a means of enforcing such provisions.

**EP7 (3.0) - PAGES**

**GAS COST SHARING (EP-7)  
STANDARD SPECIFICATIONS**

JOINT BID MULTIPLIER CONTRACTS

---

**NOTICE**

THE PAGES CONTAINED IN THIS SECTION REPRESENT THE GAS COST SHARING WORK THAT SHALL APPLY TO AND BECOME A PART OF THE CONTRACT.



(NO TEXT ON THIS PAGE)

TABLE OF CONTENT**I - NOTICE TO ALL BIDDERS; GAS COST SHARING WORK****II - GENERAL PROVISIONS; GAS COST SHARING WORK**

1. General
2. Gas Interferences And Accommodations
  - 2a. Water Main Accommodations
  - 2b. Sewer Accommodations
3. Quantity Overruns, EP-7 Funded Bid Items
4. Changes And Extra Work
5. Excavation
6. Backfilling And Street Restoration
7. **Non-Responsive Bids "NO TEXT"**
8. Minimum Clearances
9. Work By Facility Operator
10. Materials Furnished By Facility Operator
11. Liability And Insurance
12. Width And Depth Of Excavation
13. Depth And Crossing Angles Of Gas Facilities
14. Maintenance Of Traffic For Gas Work
15. Relocated Gas And Temporary Systems Installation
16. Role Of Company Inspector
17. Coordination With Gas Company

**III - TECHNICAL SECTION**

- SECTION 6.01 - Trench Crossings; Support And Protection Of Gas Facilities And Services.
- SECTION 6.02 - Extra Excavation For The Installation Of Catch Basin Sewer Drain Pipes With Gas Interferences.
- SECTION 6.02.1 - Extra Excavation For The Installation Of Catch Basin Sewer Drain Pipes With Upstream Inverts Greater Than Six (6) Feet.
- SECTION 6.03 - Removal Of Abandoned Gas Facilities. All Sizes.
- SECTION 6.03.1 - Removal Of Abandoned Gas Facilities With Possible Coal Tar Wrap. All Sizes. (For National Grid Work Only)
- SECTION 6.03.1a - Removal Of Abandoned Gas Facilities With Possible Coal Tar Wrap. All Sizes. (For Con Edison Work Only)
- SECTION 6.04 - Adjust Hardware To Grade Using Spacer Rings/Adaptors. (Street Repaving.)
- SECTION 6.05 - Adjust Hardware To Grade By Resetting. (Road Reconstruction.)
- SECTION 6.06 - Special Care Excavation And Backfilling.
- SECTION 6.07 - Test Pits For Gas Facilities.
- SECTION 6.08 - "NO TEXT"**
- SECTION 6.09 - Trench Excavation and Backfill for New Gas Mains and Services  
(For National Grid Work Only)
- SECTION 6.09a - Trench Excavation and Backfill for New Gas Mains and Services  
(For Con Edison Work Only)

**IV - STANDARD SKETCHES; GAS COST SHARING WORK**

- NO. 1 - Support Requirements For Gas Mains And Services Crossing Excavation Greater Than 4'-0" Wide At Any Angle
- NO. 1A - Support Requirements For Gas Mains Over 16" Diameter Up To And Including 48" Diameter Crossing Excavation At Any Angle
- NO. 2 - Typical Methods Of Measurement For Gas Crossings
- NO. 3 - Utility Crossings During Catch Basin Chute Connection Pipe Installation
- NO. 4 - Utility Crossings During Catch Basin Chute Connection Pipe Installation (Extra Depth)
- 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:**

**(THIS SECTION IS NOT APPLICABLE FOR THIS CONTRACT)**

~~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 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 Contractor's 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 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. 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 6.08 - "NO TEXT"**

## **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

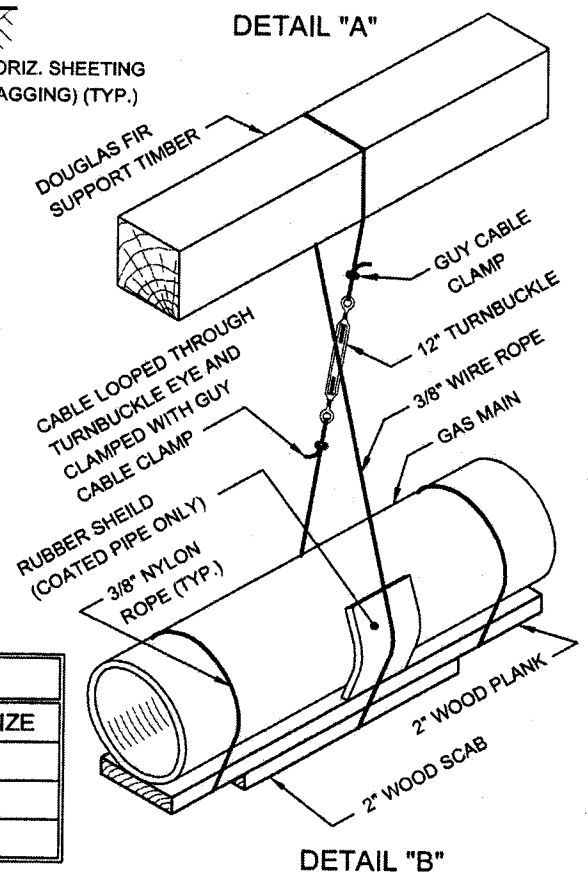
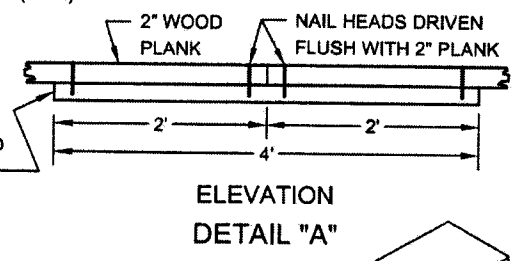
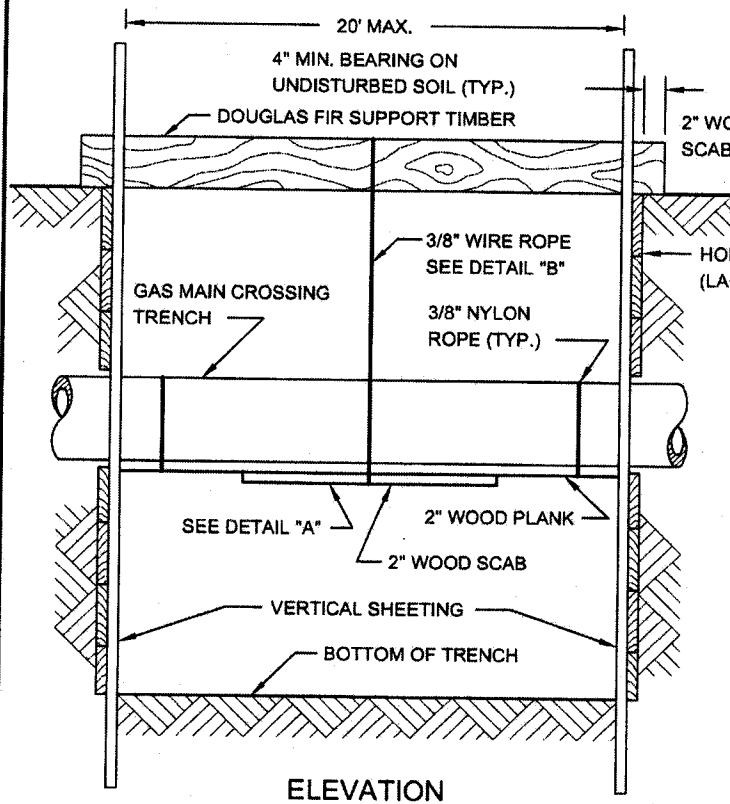
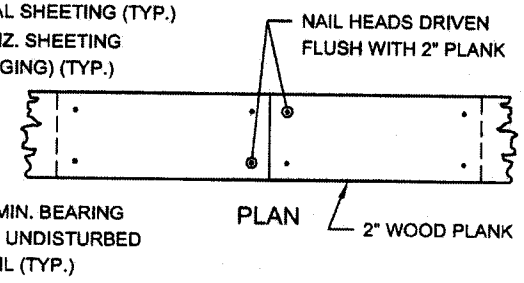
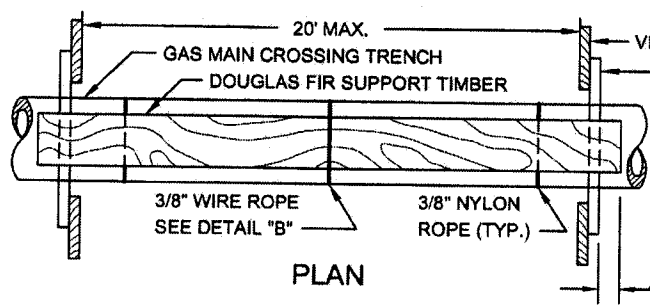
#### **IV - STANDARD SKETCHES; GAS COST SHARING WORK**

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

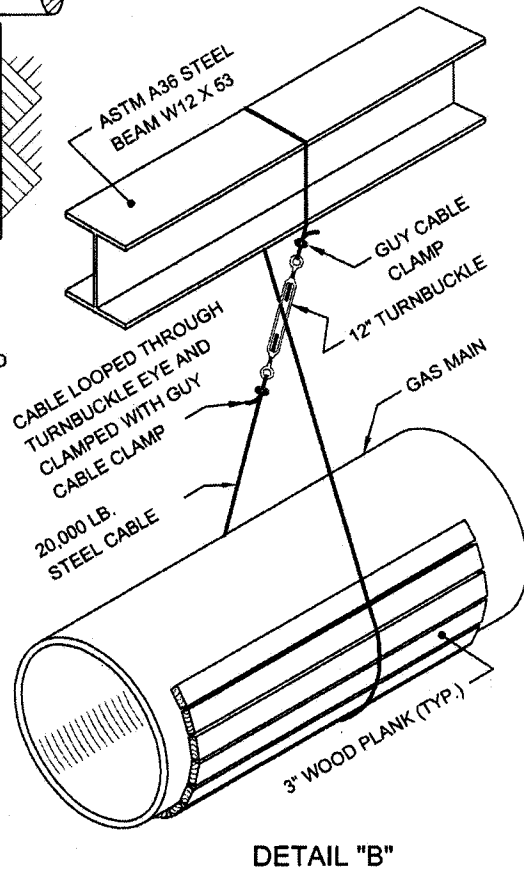
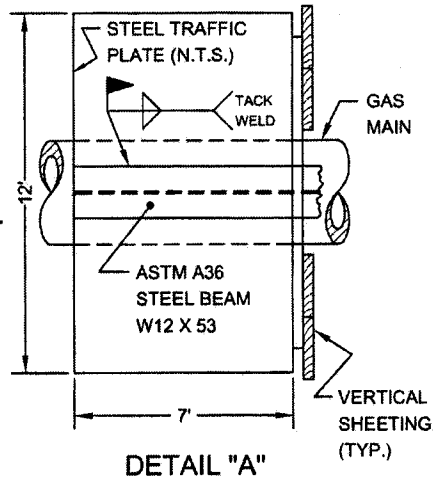
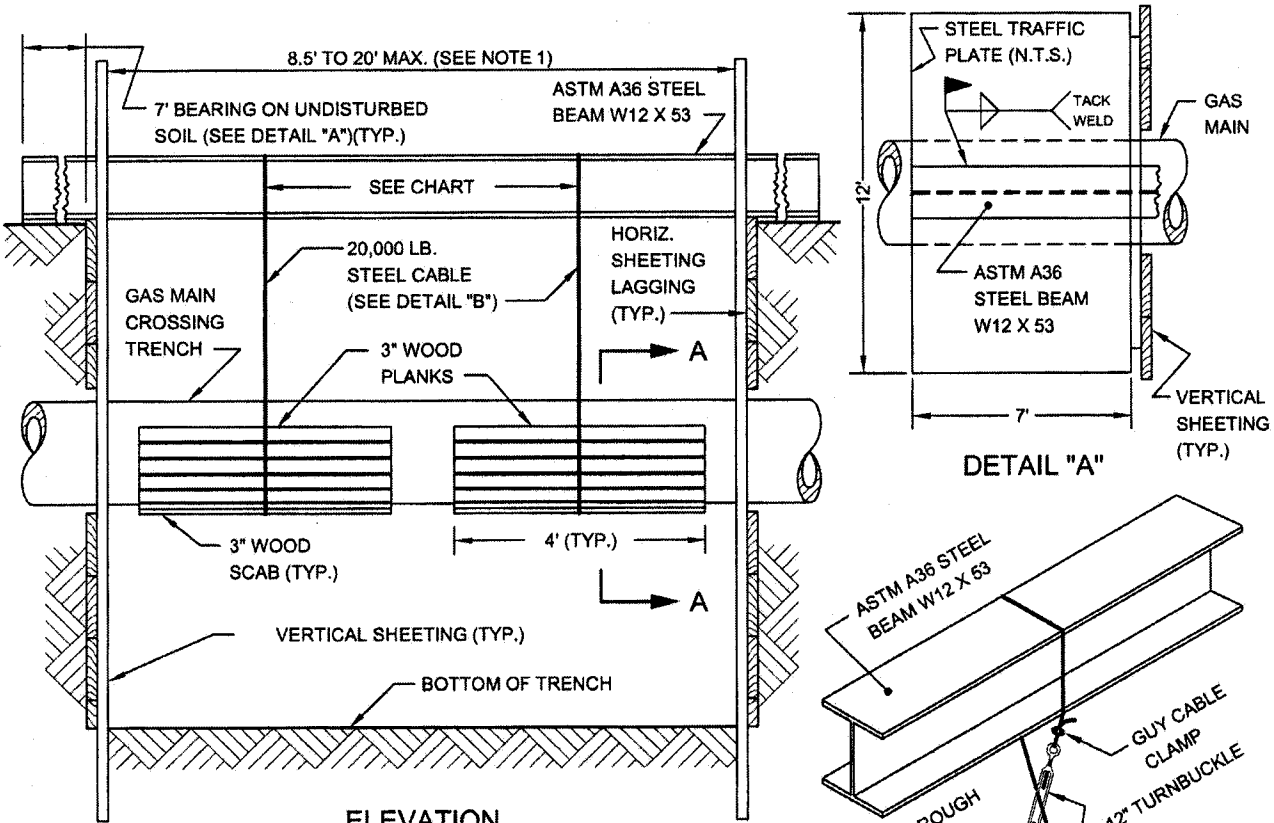


CABLE SUPPORT		TIMBER SUPPORT	
MAIN TYPE	SPACING	MAIN SIZE	TIMBER SIZE
CAST IRON	4' O.C. MAX.	UP TO 6"	6" X 6"
STEEL	10' O.C. MAX.	8" TO 10"	8" X 8"
PLASTIC	10' O.C. MAX.	12" TO 16"	10" X 10"

REVISED OCT. 2004 - J. ADRIEN  
REVISED JUNE 1998 - J. WONG/T.W. PATAKNOOP, INC.

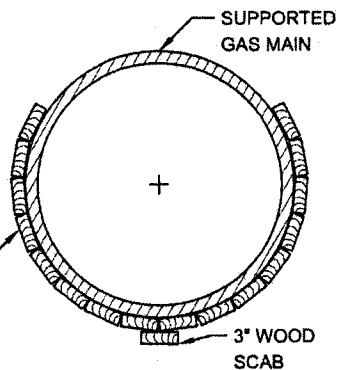
# GAS COST SHARING WORK (SKETCH NO. 1A)

SUPPORT REQUIREMENTS FOR GAS MAINS OVER 16" DIAMETER UP TO AND INCLUDING 48" DIAMETER CROSSING EXCAVATION AT ANY ANGLE



**ELEVATION**

CABLE SUPPORT	
MAIN TYPE	SPACING
CAST IRON	4' O.C. MAX.
STEEL	10' O.C. MAX.



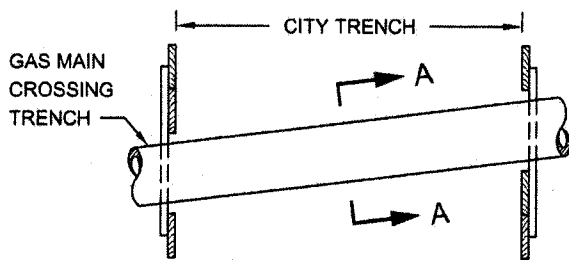
**SECTION A-A**

**NOTES:**

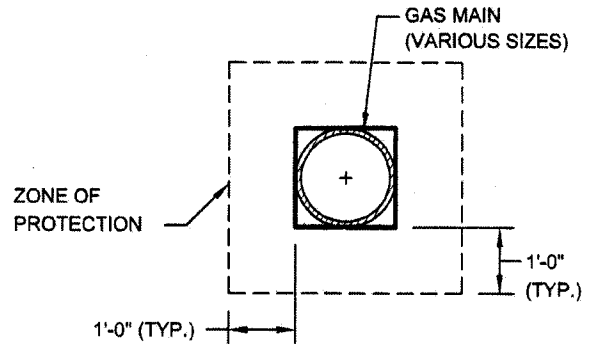
- (1) NO SUPPORT IS REQUIRED FOR GAS MAINS OVER 16" DIA. UP TO AND INCLUDING 48" DIA. CROSSING TRENCHES LESS THAN 8.5' WIDE.
- (2) UNDERMINE A MAXIMUM OF 8.5 L.F. OF CAST IRON GAS MAIN AT A TIME.
- (3) SET STEEL CABLE OVER 3" WOOD PROTECTIVE PLANKS AND PLACE AN ADDITIONAL 3" SCAB ON THE BOTTOM OF THE 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.

# GAS COST SHARING WORK (SKETCH NO. 2)

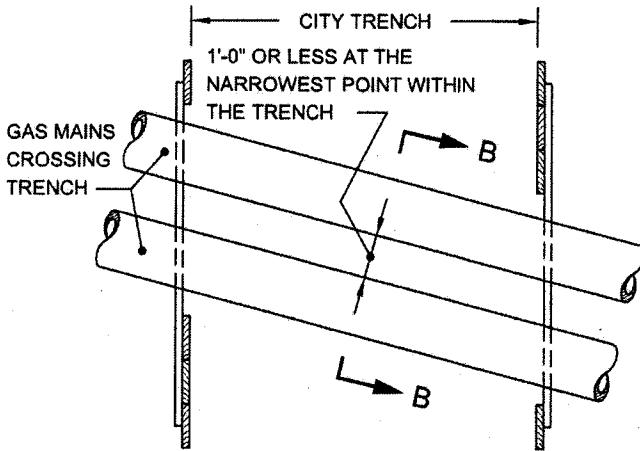
## TYPICAL METHODS OF MEASUREMENT FOR GAS CROSSINGS



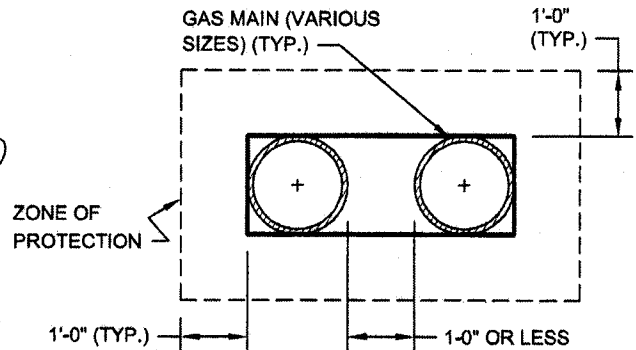
**SINGLE FACILITY CROSSING**



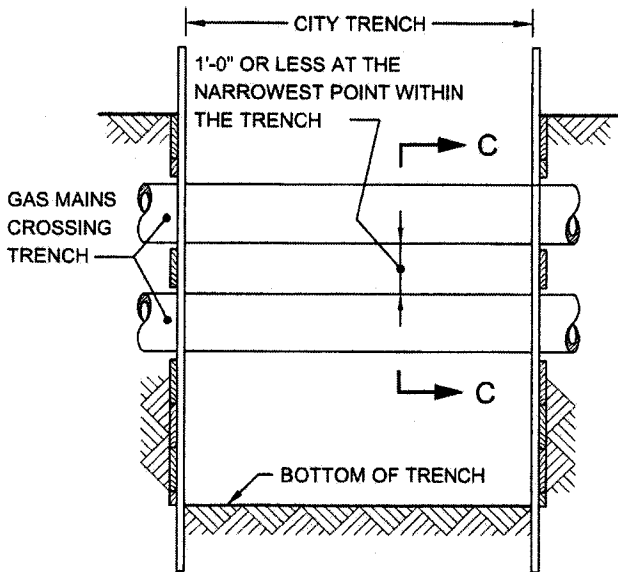
**SECTION A-A**



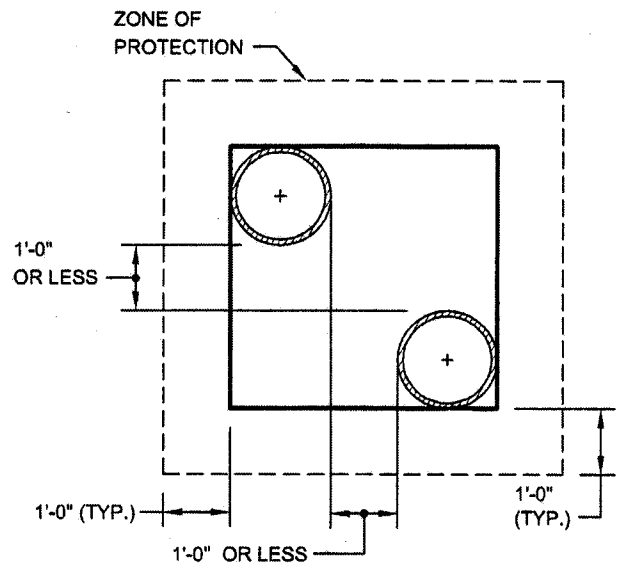
**MULTIPLE FACILITIES  
(GAS MAINS AT SAME ELEVATION)**



**SECTION B-B**



**MULTIPLE FACILITIES  
(ONE CROSSING AT DIFFERENT ELEVATIONS)**



**SECTION C-C**

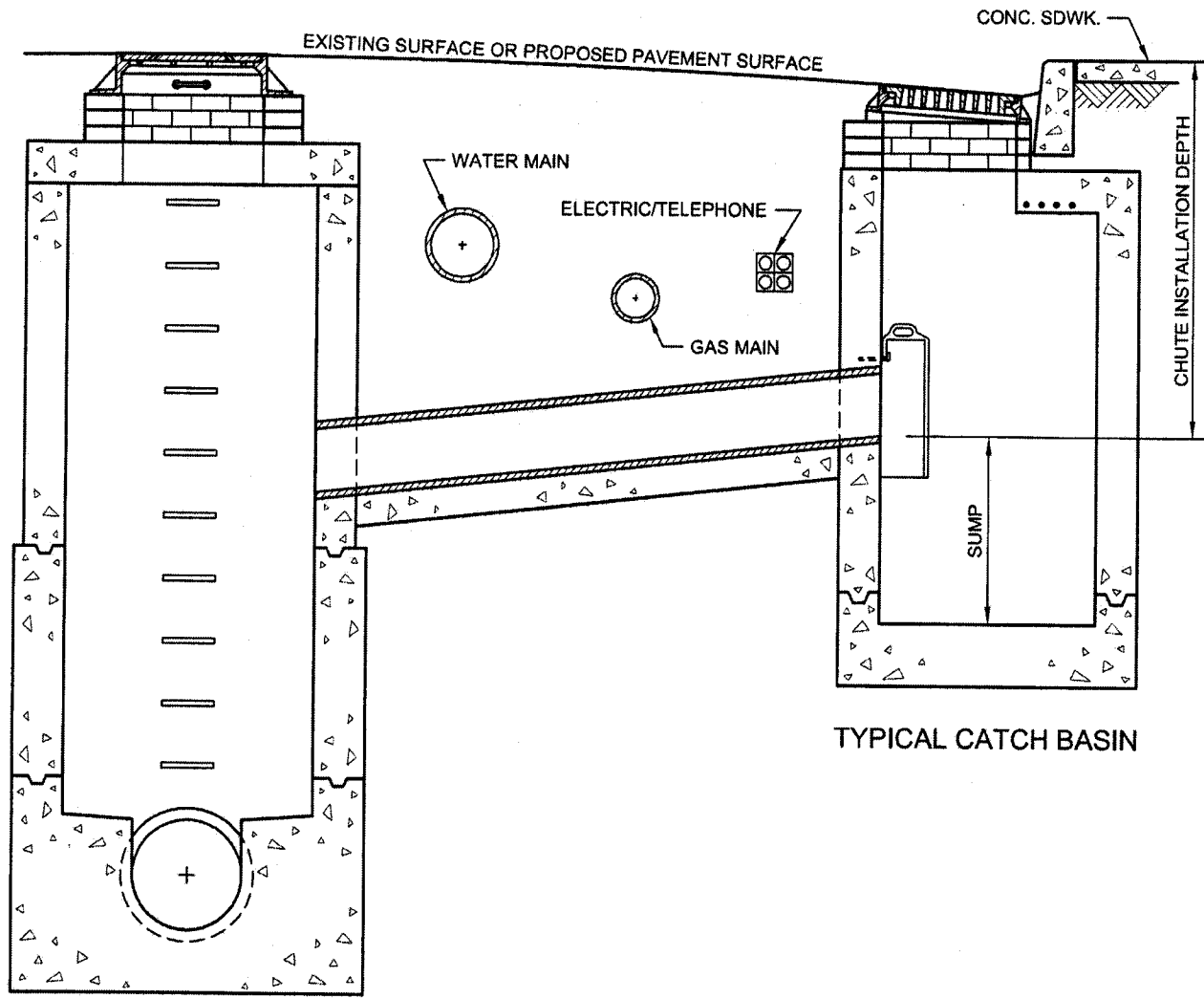
**NOTE:**

GAS MAINS MAY OR MAY NOT BE PARALLEL TO EACH OTHER.

REVISED SEPT. 2004 - L. ADRIEN  
REVISED SEPT. 2004 - J. WONG/M. PATALANOP. MOY

# GAS COST SHARING WORK (SKETCH NO. 3)

## UTILITY CROSSINGS DURING CATCH BASIN CHUTE CONNECTION PIPE INSTALLATION

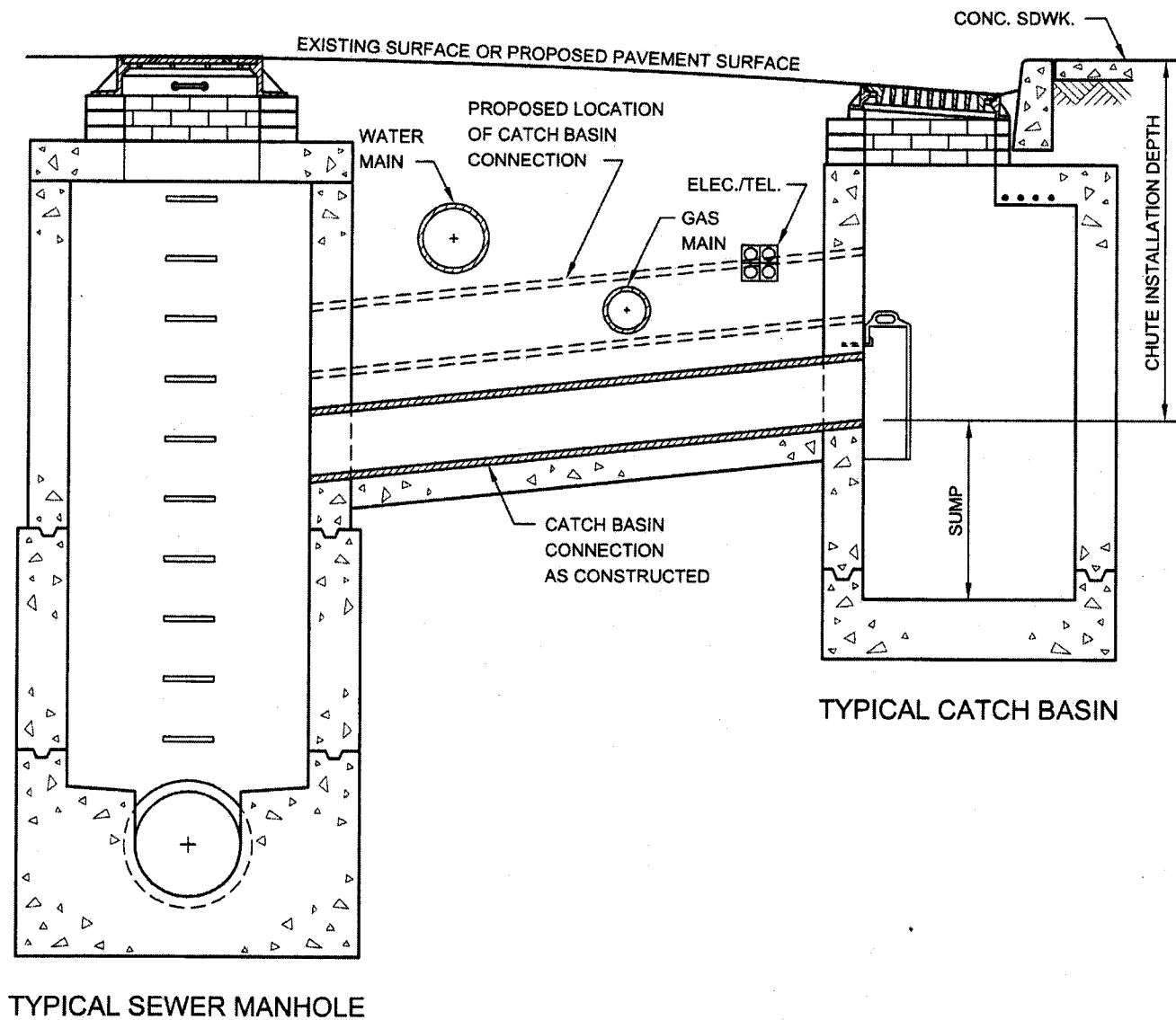


TYPICAL SEWER MANHOLE

TYPICAL CATCH BASIN

REVISED OCT. 2004 - J. ADRIEN  
REVISED OCT. 1998 - J. WONGW. PATALANOP. MOY

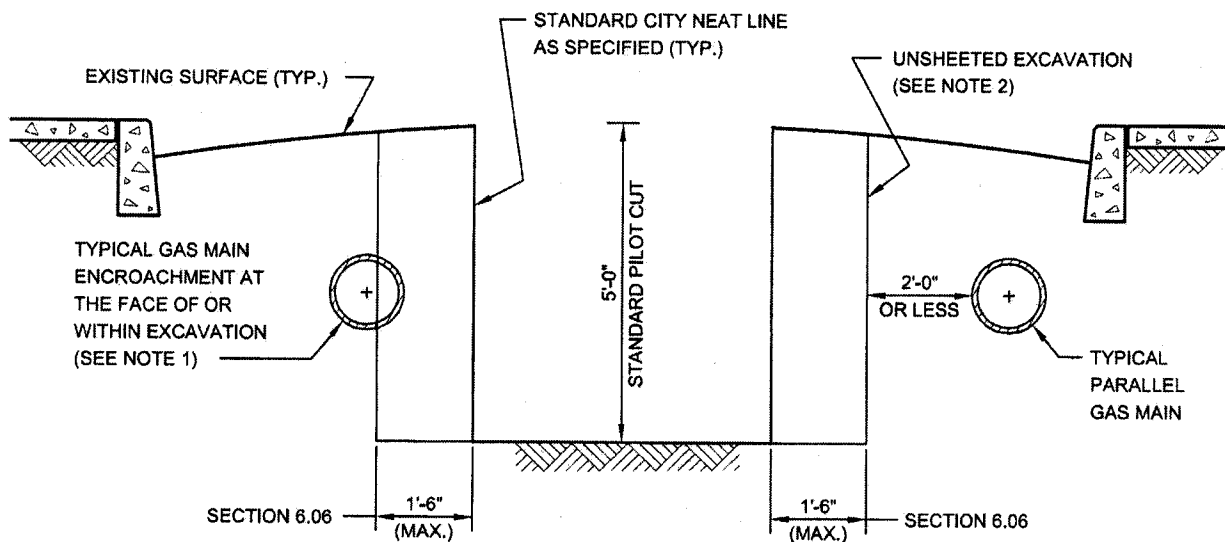
**GAS COST SHARING WORK (SKETCH NO. 4)**  
**UTILITY CROSSINGS DURING CATCH BASIN CHUTE**  
**CONNECTION PIPE INSTALLATION (EXTRA DEPTH)**



REVISED OCT. 2004 - J. ADRIEN  
 REVISED OCT. 1998 - J. WONG & W. PATALANOP, MDY



**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 TO BE PERFORMED BY CITY CONTRACTOR
- IF ADDITIONAL INFORMATION IS NEEDED REGARDING THE FACILITY OPERATOR'S RELOCATION WORK, THE CONTRACTOR IS ADVISED TO CONTACT THE GAS COMPANY REPRESENTATIVE:

Neville Jacobs Jr.  
NationalGrid Energy Delivery  
287 Maspeth Avenue  
Brooklyn, NY 11211  
718-963-5612

(NO TEXT IN THIS AREA, TURN PAGE)

ITEM#	SHEET	ON STREET	SIZE	PRESSURE	MATERIAL	LENGTH	REIM / NON-REIM	ACTIVITY
1	1	GOLD ST	6"	15#	PE	15'	REIM	RET
2	1	GOLD ST	8"	15#	PE	25'	REIM	INST
3	1	GOLD ST	16"	6WC	ST	70'	REIM	RET
4	1	GOLD ST	24"	6WC	ST	65'	REIM	RET
5	1	GOLD ST	8"	6WC	PE	190'	REIM	INST
6	1, 2	WATER ST	6"	15#	ST	340'	REIM	RET
7	2, 3	WATER ST	6"	15#	PE	625'	REIM	RET
8	1	WATER ST	16"	6WC	ST	75'	REIM	RET
9	1 thru 3	WATER ST	20"	6WC	CI	980'	REIM	RET
10	3	WATER ST	12"	6WC	ST	25'	REIM	RET
11	3, 5	WATER ST	20"	6WC	CI	260'	REIM	RET
12	1 thru 3	WATER ST	8"	15#	PE	1,550'	REIM	INST
13	2	BRIDGE ST	20"	6WC	CI	65'	REIM	RET
14	3	JAY ST	6"	6WC	CI	45'	REIM	RET
15	3	JAY ST	8"	6WC	ST	15'	REIM	RET
16	3	JAY ST	6"	6WC	PE	40'	REIM	RET
17	3	JAY ST	8"	6WC	PE	190'	REIM	INST
18	3, 5	WATER ST	8"	15#	PE	215'	REIM	INST
19	3, 4	JAY ST	8"	15#	PE	200'	REIM	INST
20	4	JAY ST	6"	6WC	PE	25'	REIM	RET
21	4	JAY ST	6"	6WC	CI	30'	REIM	RET
22	4	JAY ST	8"	6WC	PE	60'	REIM	INST
23	4	PLYMOUTH ST	8"	6WC	ST	25'	REIM	RET
24	4	PLYMOUTH ST	8"	6WC	PE	25'	REIM	INST
25	4, 5	PLYMOUTH ST	8"	6WC	ST	305'	REIM	RET
26	6	PLYMOUTH ST	12"	6WC	ST	25'	REIM	RET
27	4	PLYMOUTH ST	8"	15#	PE	75'	REIM	INST
28	7	PEARL ST	6"	6WC	ST	15'	REIM	RET
29	7	PEARL ST	6"	6WC	PE	40'	REIM	RET
30	6, 7	PEARL ST	6"	6WC	CI	170'	REIM	RET

FP7-27A1

		CONTRACT #		HWKKP005				
		ORACLE#						
		ENGINEER:		J. HALL				
Cover Sht								
ITEM#	SHEET	ON STREET	SIZE	PRESSURE	MATERIAL	LENGTH	REIM / NON-REIM	ACTIVITY
	2							
31	6	PEARL ST	6"	6WC	ST	40'	REIM	RET
32	5, 6	PEARL ST	20"	6WC	CI	195'	REIM	RET
33	5,6,7,9	PEARL ST	8"	15#	PE	705'	REIM	INST
34	6	ADAMS ST	6"	6WC	ST	30'	REIM	RET
35	6, 7	ADAMS ST	6"	6WC	CI	150'	REIM	RET
36	7	ADAMS ST	6"	6WC	ST	80'	REIM	RET
37	7	ADAMS ST	8"	15#	ST	55'	REIM	RET
38	7	ADAMS ST	8"	15#	PE	105'	REIM	INST
39	7	JOHN ST	8"	15#	PE	290'	REIM	RET
40	7, 8	JOHN ST	6"	6WC	ST	420'	REIM	RET
41	7	JOHN ST	8"	15#	PE	460'	REIM	INST
42	5, 9	PEARL ST	6"	6WC	ST	170'	REIM	RET
43	9	FRONT ST	2"	15#	PE	35'	REIM	INST
44	9	FRONT ST	6"	15#	PE	150'	REIM	RET
45	9	FRONT ST	8"	15#	PE	210'	REIM	INST
46	9	FRONT ST	8"	6WC	ST	160'	REIM	RET
47	9, 10	FRONT ST	8"	6WC	CI	185'	REIM	RET
48	10	FRONT ST	8"	6WC	ST	155'	REIM	INST
49	11, 12	MAIN ST	6"	6WC	CI	100'	REIM	RET
50	11, 12	MAIN ST	8"	15#	PE	240'	REIM	INST
51	12	FRONT ST	6"	6WC	CI	195'	REIM	RET
52	12	FRONT ST	8"	15#	PE	140'	REIM	INST
53	12	FLINT ST	6"	6WC	PE	40'	REIM	RET
54	12	FLINT ST	8"	15#	PE	60'	REIM	INST
55	13	HUDSON AVE	6"	6WC	CI	165'	REIM	RET
56	13	HUDSON AVE	8"	6WC	PE	165'	REIM	INST
57	13	EVANS ST	6"	6WC	CI	50'	REIM	RET
58	13	EVANS ST	8"	6WC	PE	50'	REIM	INST

**\*\*ATTENTION\*\***

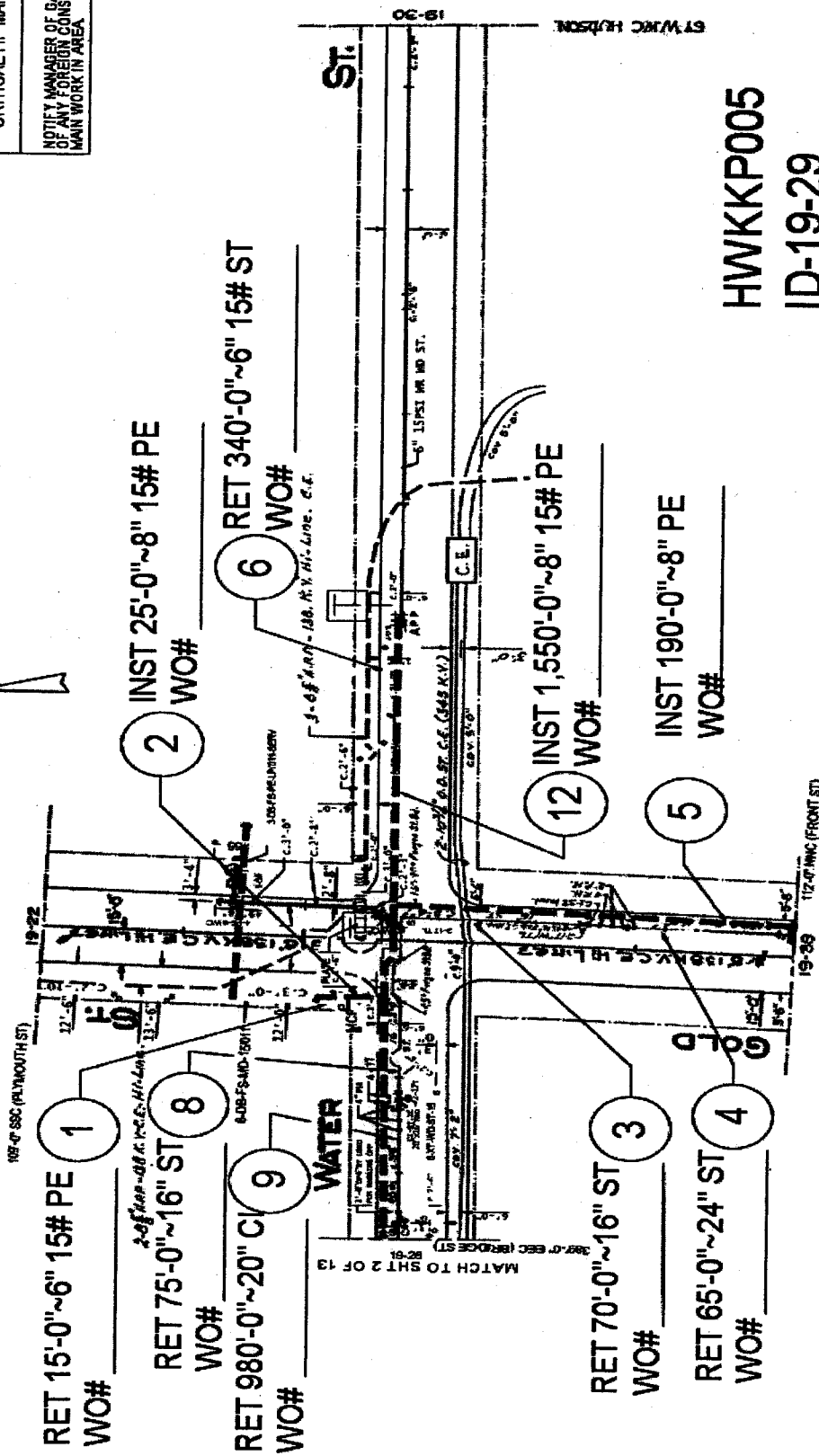
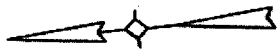
CON EDISON H-LINE  
IN AREA

**\*\*\*ATTENTION\*\*\***

CRITICAL HP MAIN IN AREA

NOTIFY MANAGER OF GAS OPERATIONS  
OF ANY FOREIGN CONSTRUCTION OR  
MAIN WORK IN AREA

nationalgrid

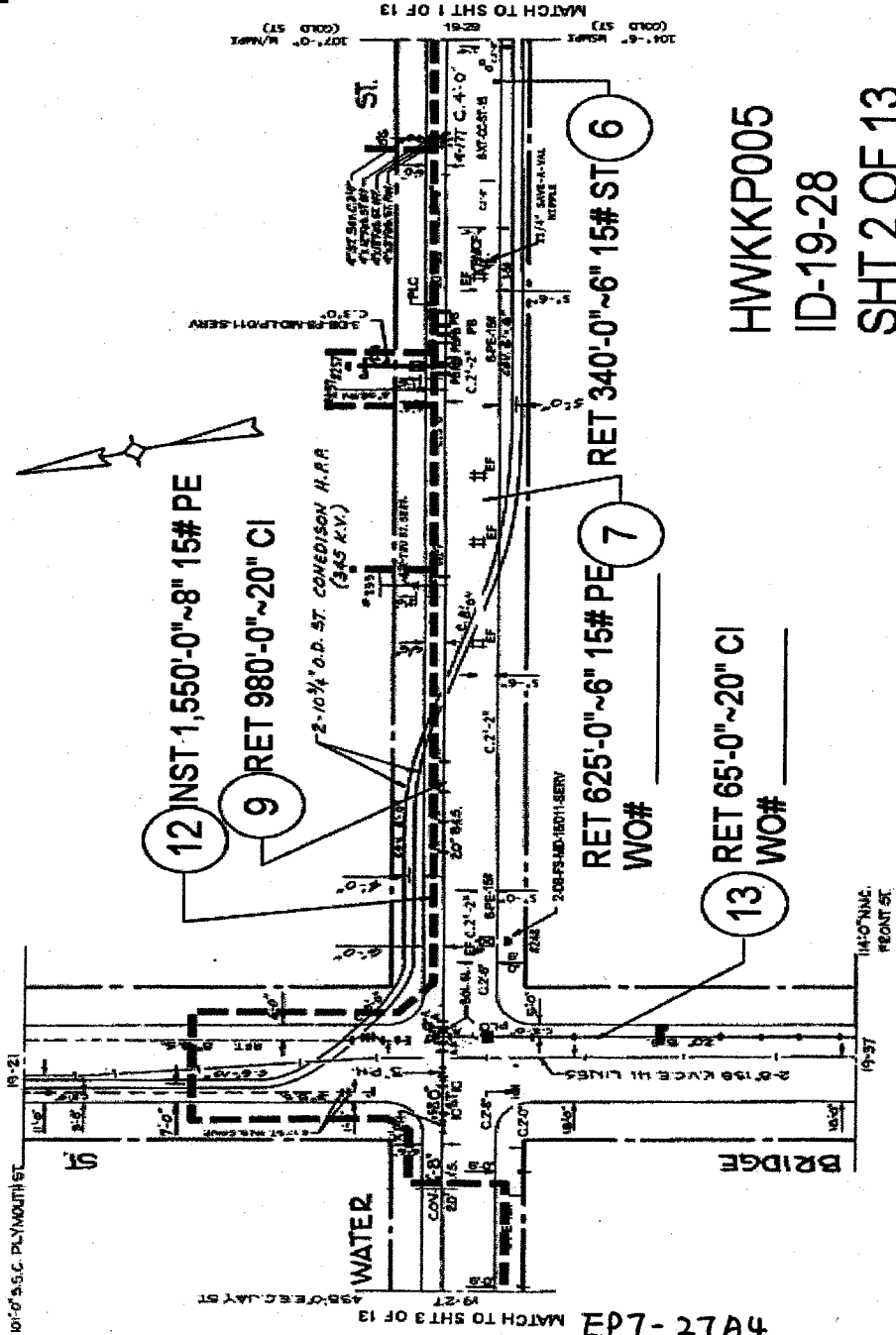


HWKKP005  
ID-19-29  
SHT 1 OF 13

EP7-27A3

**\*\*ATTENTION\*\***  
 CON EDISON H-LINE  
 IN AREA

**\*\*\*ATTENTION\*\*\***  
 CRITICAL HP MAIN IN AREA  
 NOTIFY MANAGER OF GAS OPERATIONS  
 OF ANY FOREIGN CONSTRUCTION OR  
 MAIN WORK IN AREA.

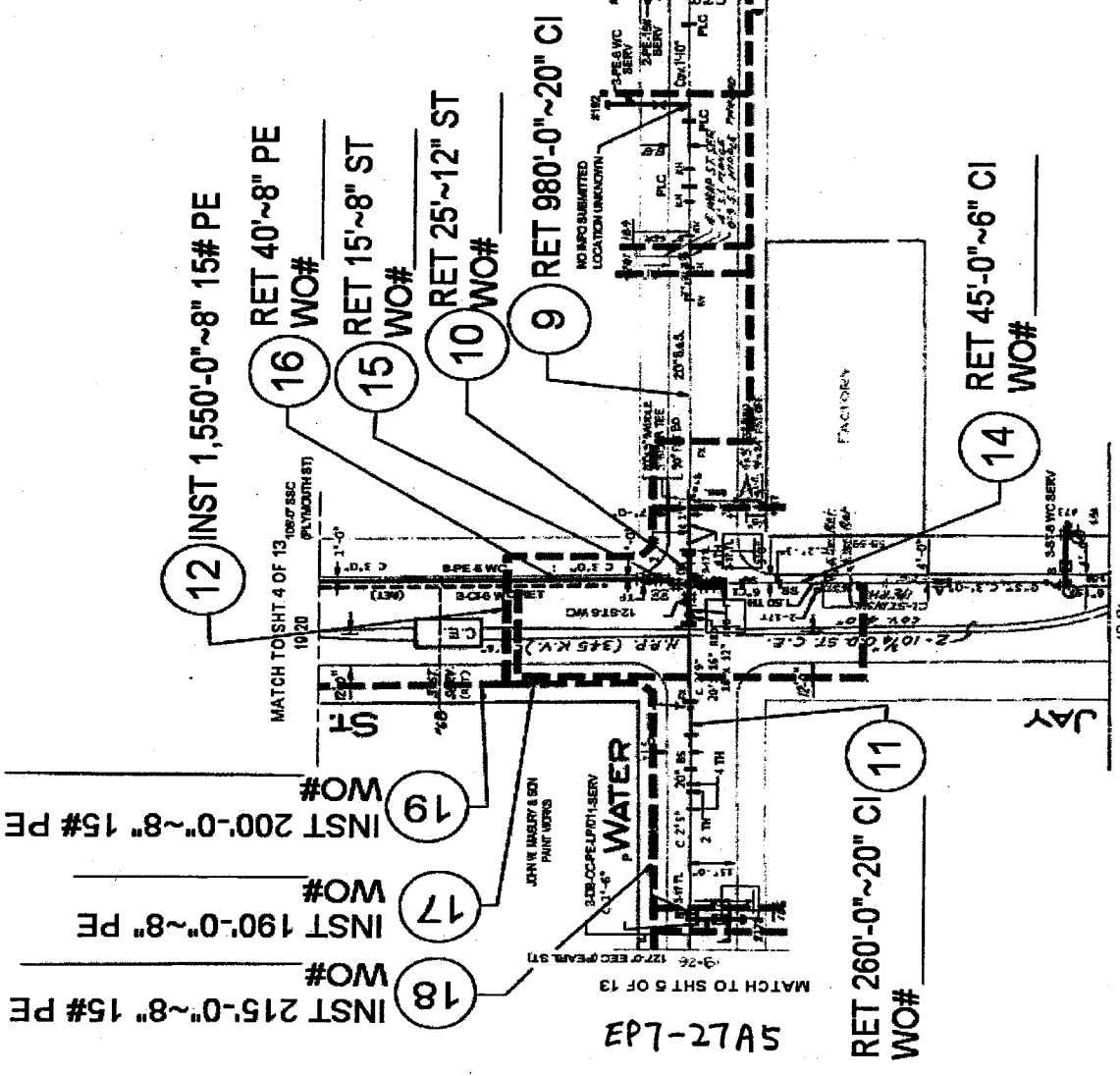
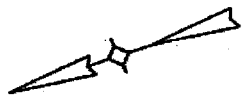


EP7-27A4

HWKKP005  
 ID-19-28  
 SHT 2 OF 13

nationalgrid

**\*\*ATTENTION\*\***  
 CON EDISON HI-LINE  
 IN AREA



MATCH TO SHT 2 OF 13

MATCH TO SHT 5 OF 13

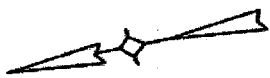
MATCH TO SHT 10 OF 13

RET 625'-0"~6" 15# PE 7

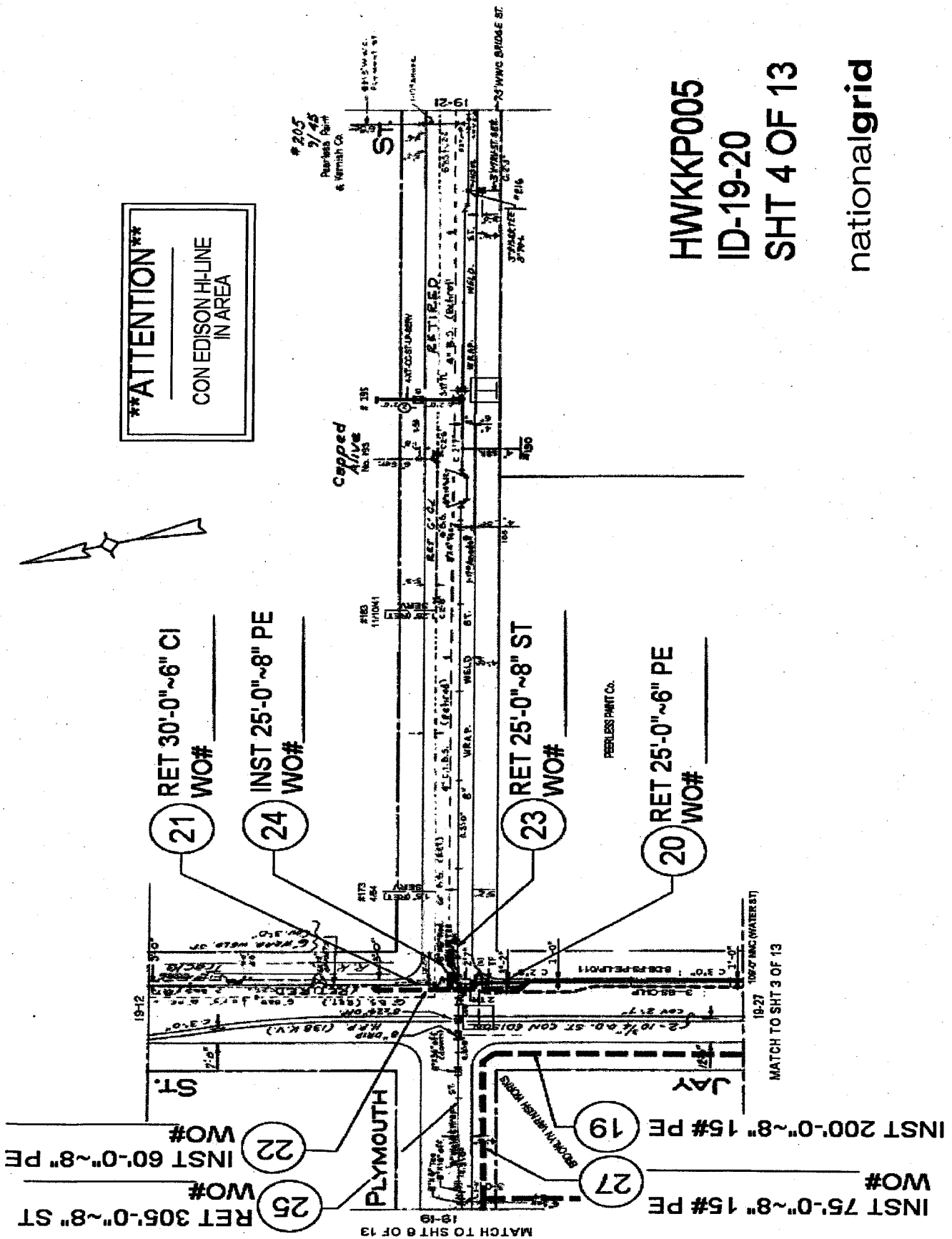
HWKKP005  
 ID-19-27  
 SHT 3 OF 13

nationalgrid

5A7-27A5



**ATTENTION**  
 CON EDISON HI-LINE  
 IN AREA

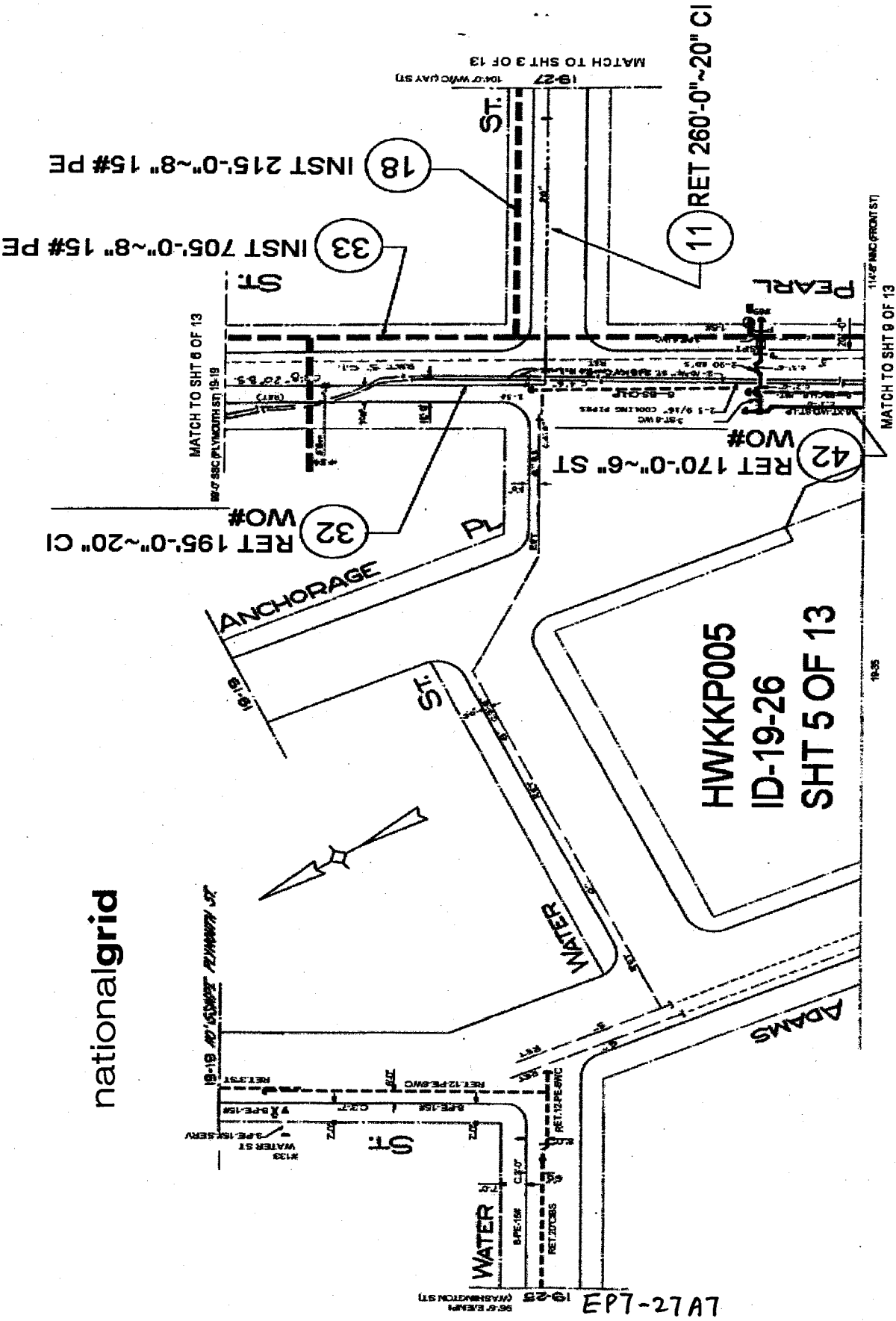


**HWKKP005**  
**ID-19-20**  
**SHT 4 OF 13**  
 nationalgrid

EP7-27A6



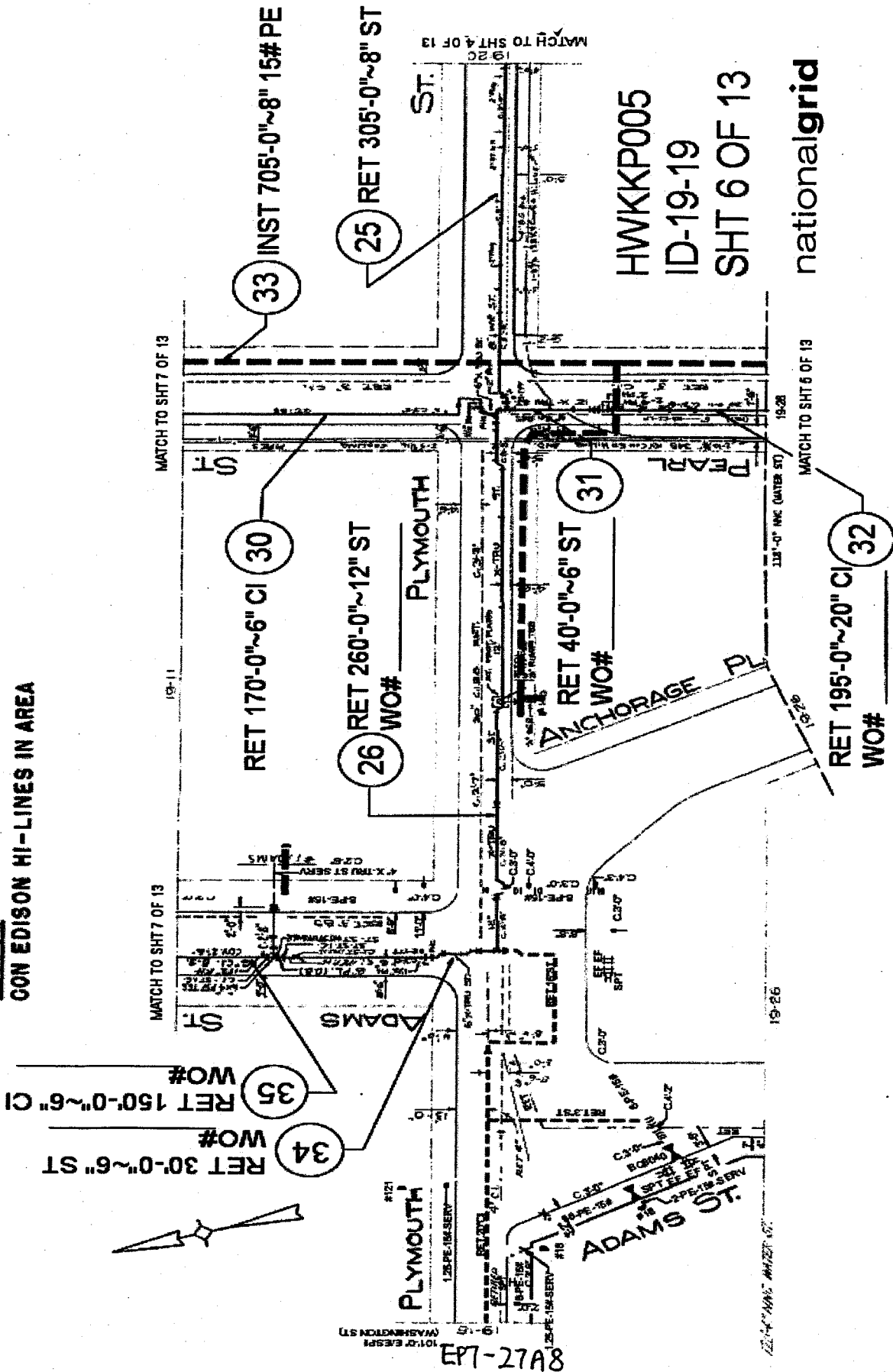
nationalgrid



HWKKP005  
ID-19-26  
SHT 5 OF 13

EPT-27A7

**NOTICE**  
**CON EDISON HI-LINES IN AREA**

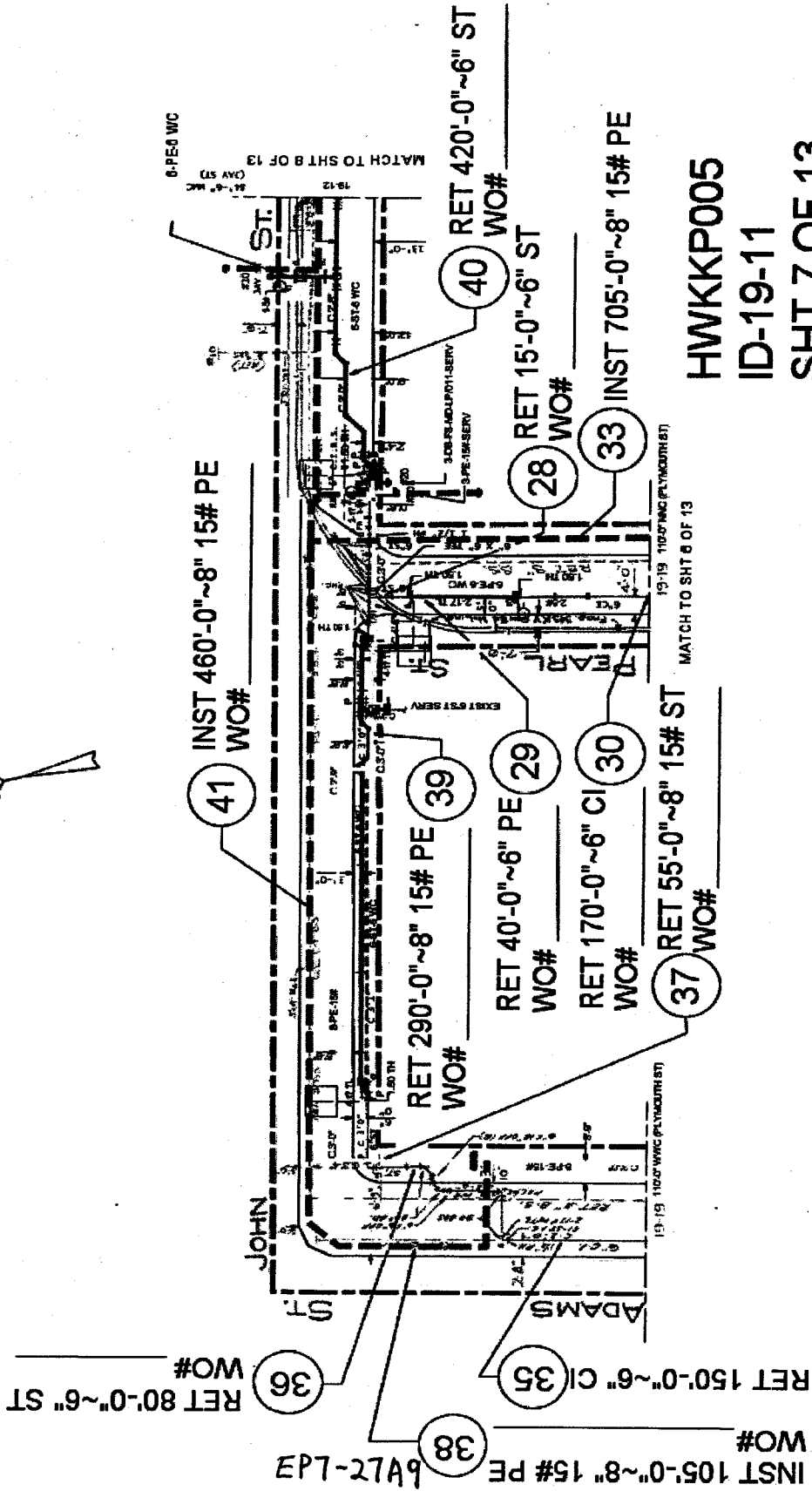
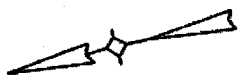


HWKKP005  
 ID-19-19  
 SHT 6 OF 13

national grid

EPT-27A8

nationalgrid



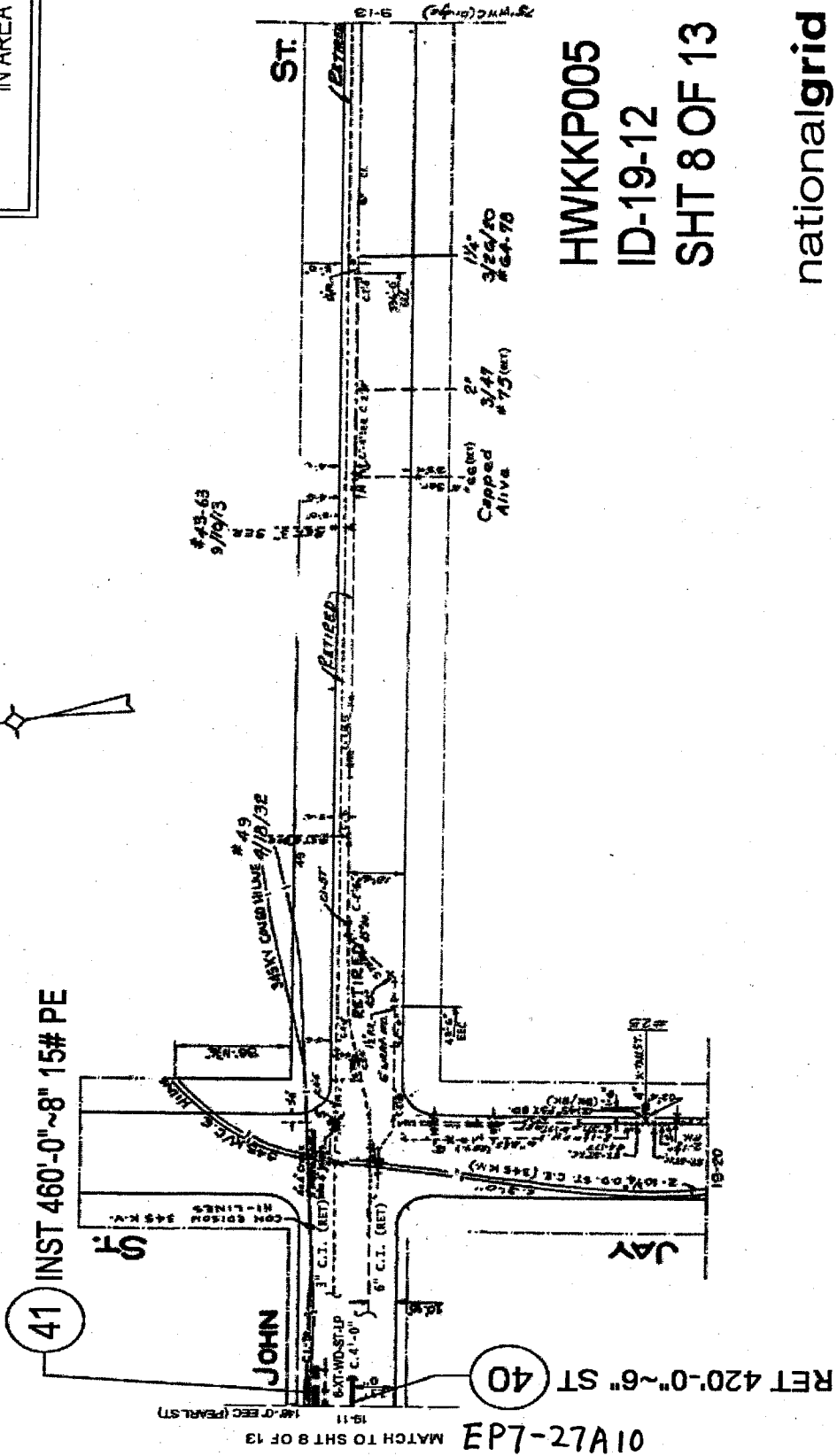
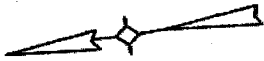
HWKKP005

ID-19-11

SHT 7 OF 13

**\*\*ATTENTION\*\***

CON EDISON H/LINE  
IN AREA



HWKKP005

ID-19-12

SHT 8 OF 13

nationalgrid

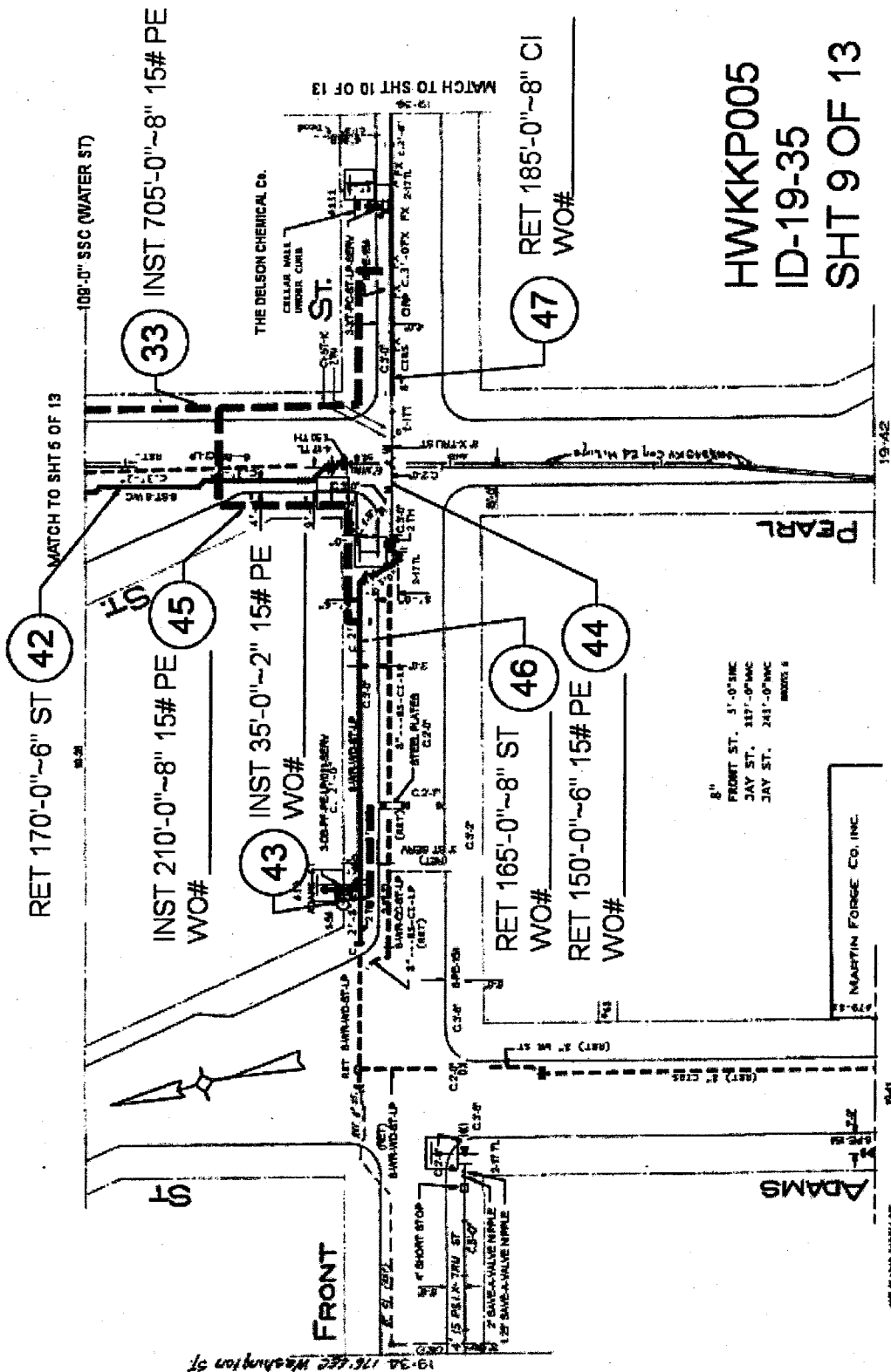
19-11 148'-0" EEC (PEARL ST)

MATCH TO SHT 8 OF 13

01127-7A10

41 INST 460'-0"~8" 15# PE

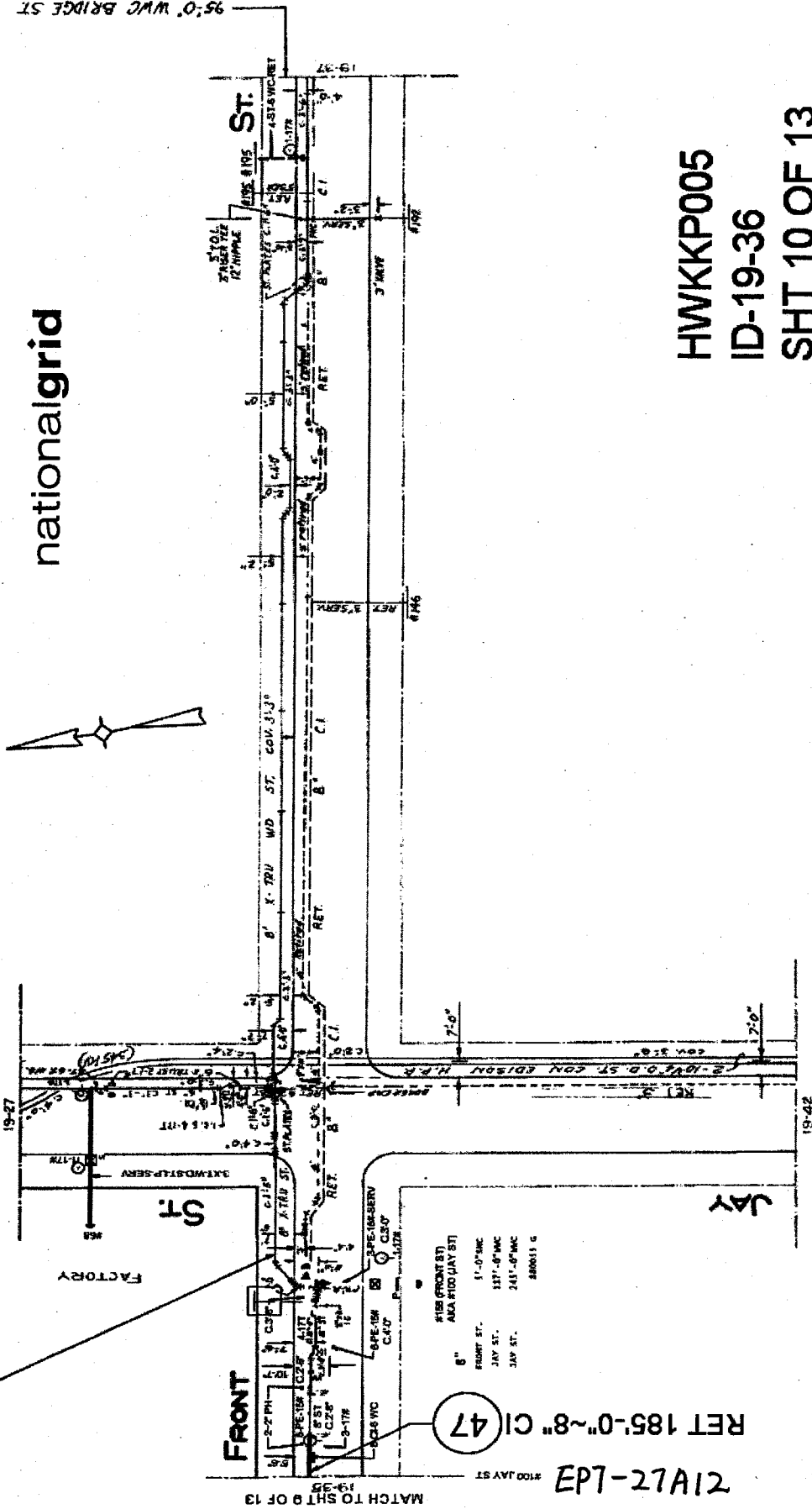
40 RET 420'-0"~6" ST



HWKKP005  
 ID-19-35  
 SHT 9 OF 13

nationalgrid

48 RET 155'-0"~8" ST  
WO#

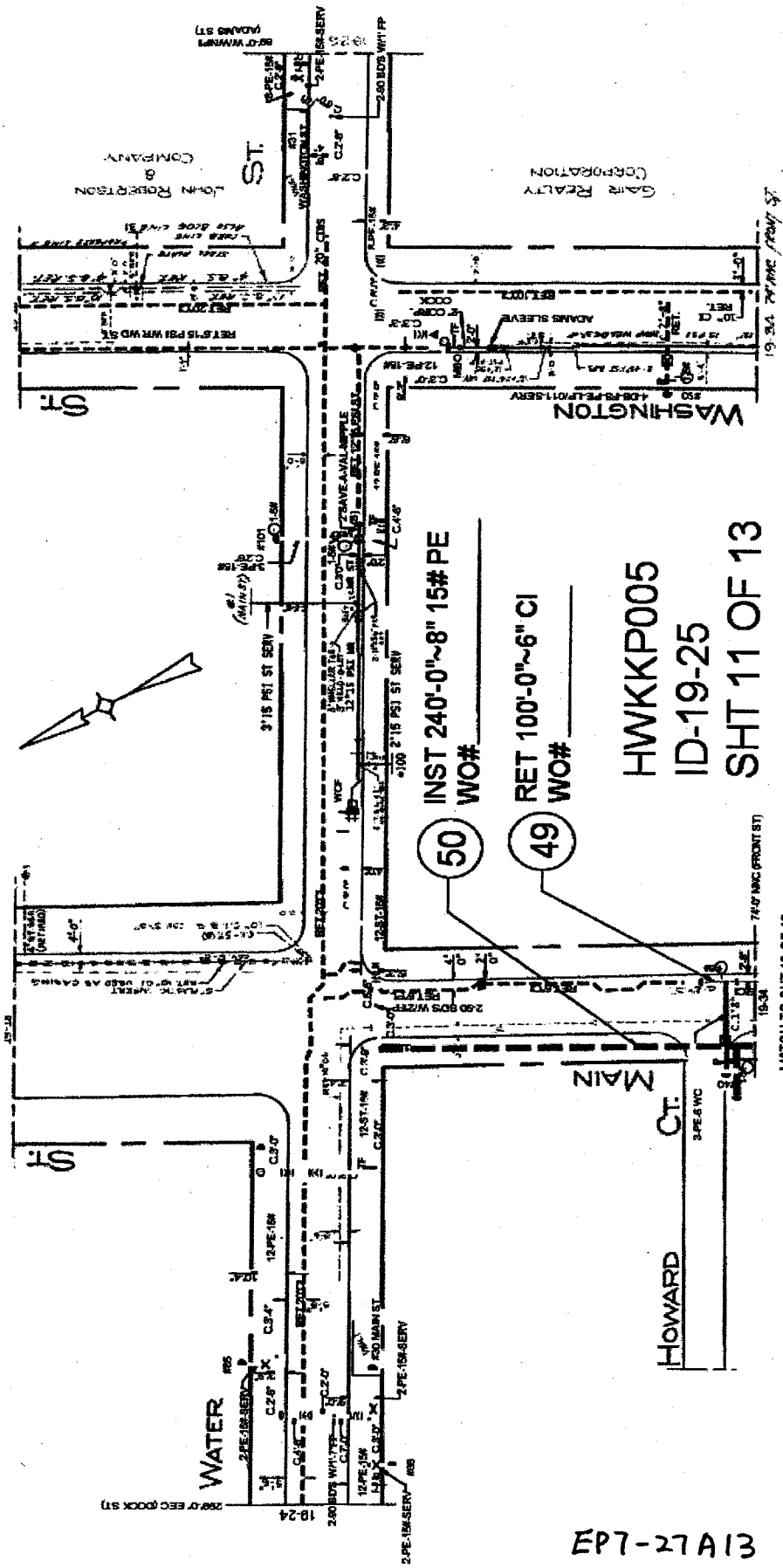


HWKKP005  
ID-19-36  
SHT 10 OF 13

2112-LP7

MATCH TO SHT 9 OF 13

8" FRONT ST  
ANA. R100 (JAY ST)  
JAY ST. 51'-0" MC  
JAY ST. 137'-0" MC  
JAY ST. 241'-0" MC  
280011 G



EP7-27A13

MATCH TO SHT 12 OF 13

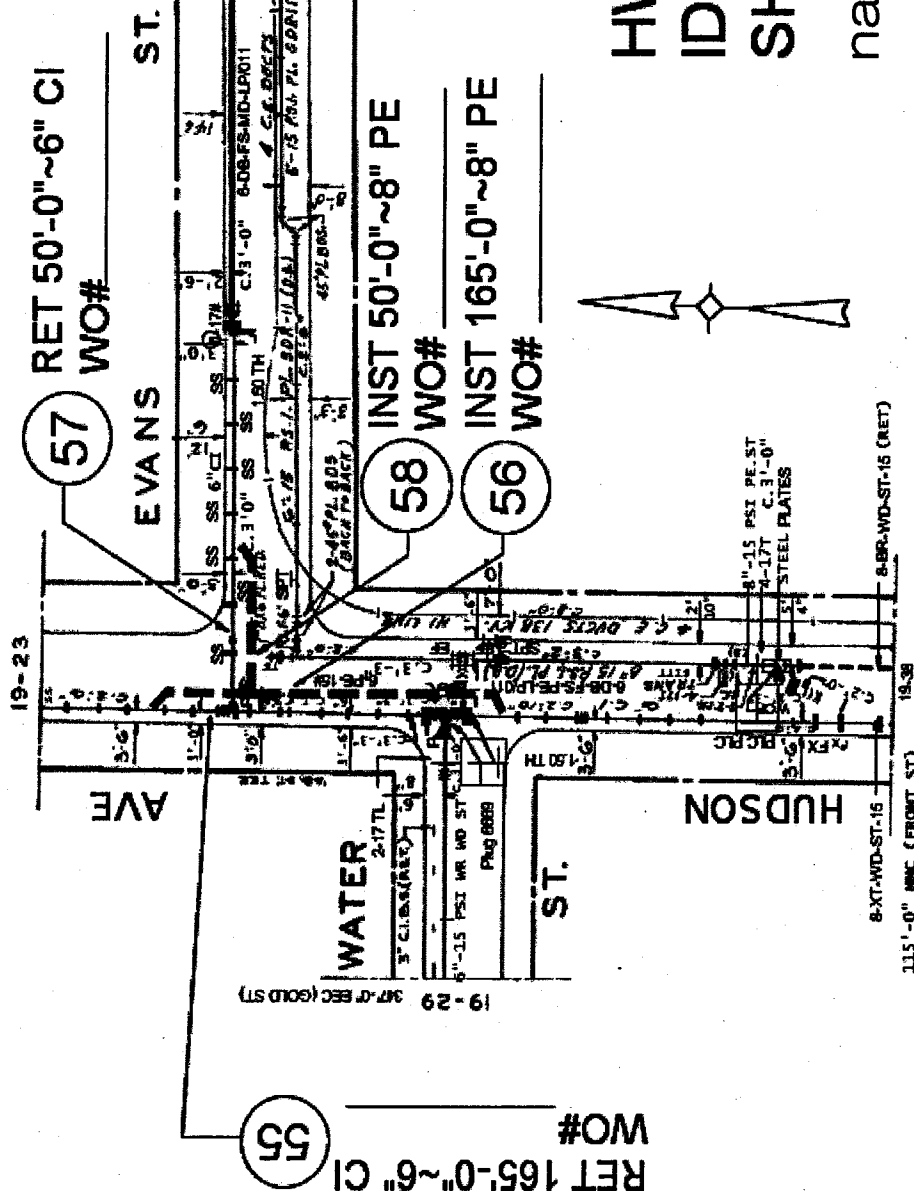
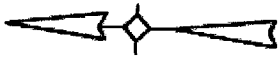
nationalgrid





123'-6" S/WPT (PLYMOUTH ST)  
ST. (TO NAVY YARD)

HWKKP005  
ID-19-30  
SHT 13 OF 13  
nationalgrid



**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 HWKKP005**

The City of New York Department of Design and Construction is proposing 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.

**6.01.1 - Gas Main Crossing Sewer Up To 24" In Diameter. (Ea.)**

2 in Water St bet Jay St & Pearl St.  
1 in Plymouth St @ Pearl St.  
27 in Water St bet Bridge St & Gold St.  
2 in Plymouth St bet Pearl St & Jay St.  
4 in Water St bet Bridge St & Jay St.

**6.01.3 - Gas Main Crossing Sewer 36" Thru 42" In Diameter. (Ea.)**

1 in Pearl St bet Water St & Plymouth St.

**6.01.3D - Gas Main Crossing 3'-6" W x 2'-0" H F.T.R.C. Storm Sewer. (Ea.)**

2 in Pearl St bet Plymouth St & John St.

**6.01.3E - Gas Main Crossing 3'-0" W x 2'-0" H F.T.R.C. Storm Sewer. (Ea.)**

2 in Water St bet Pearl St & Jay St.

**6.01.40 - Gas Main Crossing 4'-6" W x 2'-0" H F.T.R.C. Storm Sewer. (Ea.)**

2 in John St bet Adams St & Pearl St.  
1 in Pearl St bet Plymouth St & John St.

**6.01.5M - Gas Main Crossing 5'-0" W x 2'-0" H F.T.R.C. Storm Sewer. (Ea.)**

1 in John St @ Adams St.

**6.01.8 - Gas Services Crossing Trenches And/Or Excavations. (Ea.)**

20 in Various Locations as Required.

**SCOPE OF WORK  
SUPPORT AND PROTECTION  
FOR CONTRACT HWKKP005**

The City of New York Department of Design and Construction is proposing 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.

**6.01.9 - Gas Main Crossing Water Main Up To 20" In Diameter. (Ea.)**

- 1 in Main St @ Front St.
- 2 in Water St bet Bridge St & Jay St.
- 1 in Plymouth St bet Pearl St & Jay St.
- 2 in Pearl St bet Water St & Plymouth St.
- 1 in Bridge St bet Water St & Plymouth St.
- 2 in Water St bet Jay St & Pearl St.
- 1 in John St bet Pearl St & Adams St.
- 1 in Adams St bet John St & Plymouth St.
- 2 in Pearl St bet Water St & Front St.
- 2 in Adams St @ Plymouth St.
- 3 in Water St @ Gold St.
- 1 in Hudson St @ Water St.
- 1 in John St @ Jay St.

**6.01.11 - Gas Main Crossing Water Main 36" Thru 42" In Diameter. (Ea.)**

- 2 in Water St bet Jay St & Pearl St.
- 2 in Water St bet Bridge St & Jay St.
- 2 in Adams St @ Plymouth St.

**6.02 - Extra Excavation For The Installation Of Catch Basin Sewer Drain Pipes With Gas Interferences. (Ea.)**

6 in Various Locations as Required.

**6.03 - Removal Of Abandoned Gas Facilities. All Sizes. (L.F.)**

4000 in Various Locations as Required.

**6.03.1 - Removal Of Abandoned Gas Facilities With Possible Coal Tar Wrap. All Sizes.(L.F.)  
(For National Grid Work Only)**

400 in Various Locations as Required.

**SCOPE OF WORK  
SUPPORT AND PROTECTION  
FOR CONTRACT HWKKP005**

The City of New York Department of Design and Construction is proposing 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.

**6.04 - Adjust Hardware To Grade Using Spacer Rings/Adaptors (Street Repaving). (Ea.)**

45 in Various Locations as Required.

**6.05 - Adjust Hardware To Grade By Resetting (Road Reconstruction). (Ea.)**

65 in Various Locations as Required.

**6.06 - Special Care Excavation And Backfilling. (C.Y.)**

8500 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.)**

50 in Various Locations as Required.

**6.09 - Trench Excavation And Backfill For Gas Mains And Services.  
Gas Installed By Other. (C.Y.)  
(For National Grid Work Only)**

50 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)

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

**Table of Contents**

ITEM 8.01 C1 HANDLING, TRANSPORTING, & DISPOSAL OF NON-HAZARDOUS  
CONTAMINATED SOILS..... 1

ITEM 8.01 C2 SAMPLING AND TESTING OF CONTAMINATED/ POTENTIALLY  
HAZARDOUS SOIL FOR DISPOSAL PARAMETERS..... 7

ITEM 8.01 H HANDLING, TRANSPORTING, AND DISPOSAL OF HAZARDOUS SOILS ..... 9

ITEM 8.01 S HEALTH AND SAFETY ..... 14

ITEM 8.01 W1 REMOVAL, TREATMENT, AND DISCHARGE/DISPOSAL OF  
CONTAMINATED WATER..... 20

ITEM 8.01 W2 SAMPLING AND TESTING OF CONTAMINATED WATER ..... 26

ATTACHMENT 1: NYCDEP LIMITATIONS FOR DISCHARGE TO STORM,  
SANITARY/COMBINED SEWER..... 29

ATT ..... 32

ATTACHMENT 2: APPLICABLE REGULATIONS ..... 32

ATTACHMENT 3: DEFINITIONS..... 35

ATTACHMENT 4: PHASE II SUBSURFACE CORRIDOR INVESTIGATION REPORT ..... 37



**(NO TEXT ON THIS PAGE)**

**ITEM 8.01 C1 HANDLING, TRANSPORTING, & 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 the Program Management, OEGS for review, a Material Handling Plan (MHP). The MHP must be approved by the Program Management, OEGS, prior to the Contractor's commencement of work. The MHP shall, at a minimum, consist of:

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

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.
2. 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

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

- 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 the Program Management, OEGS.

**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.

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

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.**

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

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 the 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 the 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.

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

- 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:*

ITEM NUMBER	ITEM	PAYMENT UNIT
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 the Program Management, Office of Environmental and Geotechnical Services (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 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



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

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

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

**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 the Program Management, Office of Environmental and Geotechnical Services (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 the Program Management, OEGS for review, a Material Handling Plan (MHP). The MHP must be approved by the 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 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:

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

- 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.

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

- 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.

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

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.

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

- i. **The Contractor shall obtain for the City an EPA hazardous waste generator identification number and a representative of 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 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.

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

**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 Program Management, Office of Environmental and Geotechnical Services (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

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

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 the 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



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

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 Program Management, OEGS for review and comment. The Contractor shall make all necessary revisions required by Program Management, OEGS and resubmit the HASP to the Program Management, OEGS for acceptance. Start-up work for the project will not be permitted until written acceptance has been issued by the 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

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

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

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

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 petroleum-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;

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

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

**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 the Program Management, Office of Environmental and Geotechnical Services (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 CITY OF NEW YORK  
DEPARTMENT OF DESIGN AND CONSTRUCTION  
DIVISION OF INFRASTRUCTURE

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 the Program Management, OEGS for review, a Water Handling Plan (WHP). The WHP must be approved by the 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:

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

- 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.

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

- (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.



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

- 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

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

- (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 the Program Management, OECS, 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

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

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.

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

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.

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

**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

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

**ATTACHMENT 1: NYCDEP LIMITATIONS FOR DISCHARGE TO STORM,  
SANITARY/COMBINED SEWER**

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

**NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTEWATER TREATMENT**

**Limitations for Effluent to Sanitary or Combined Sewers**

Parameter <sup>1</sup>	Daily Limit	Units	Sample Type	Monthly Limit
Non-polar material <sup>2</sup>	50	mg/l	Instantaneous	---
pH	5-11	SU's	Instantaneous	---
Temperature	< 150	Degree F	Instantaneous	---
Flash Point	> 140	Degree F	Instantaneous	---
Cadmium	2	mg/l	Instantaneous	---
	0.69	mg/l	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) <sup>3</sup>	1	ppb	Composite	---
Total Suspended Solids (TSS)	350 <sup>4</sup>	mg/l	Instantaneous	---
CBOD <sup>5</sup>	---	---	Composite	---

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

Chloride <sup>5</sup>	---	---	Instantaneous	---
Total Nitrogen <sup>5</sup>	---	---	Composite	---
Total Solids <sup>5</sup>	---	---	Instantaneous	---

- 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= $\leq$ 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  $<$  10,000gpd, 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.



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

**ATT**  
**ACHMENT 2: APPLICABLE REGULATIONS**

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

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"

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

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.

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

**ATTACHMENT 3: DEFINITIONS**

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

**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.

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

**ATTACHMENT 4: PHASE II SUBSURFACE CORRIDOR INVESTIGATION REPORT**

- FINAL -

**Phase II Subsurface Corridor Investigation Report  
for  
DUMBO/Vinegar Hill Area Reconstruction and Plaza  
Brooklyn, New York**

DDC PROJECT NO. BED794 and HWKKP005

WOL NO. 8683-LBA-3-8100

CONTRACT REGISTRATION NO. 20101417626

Prepared for:



Bureau of Environmental and Geotechnical Services  
30-30 Thomson Avenue, Fifth Floor  
Long Island City, New York 11101

Prepared by:



Louis Berger & Assoc., PC  
48 Wall Street, 16<sup>th</sup> Floor  
New York, NY 10005  
Tel. (212) 612-7900 Fax (212) 363-4341  
PROJECT NO. SPC-870S4

February 18, 2013

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>ES-1</b>
<b>1.0 INTRODUCTION.....</b>	<b>1</b>
1.1 SUMMARY OF PREVIOUS ENVIRONMENTAL INVESTIGATIONS .....	1
1.2 SCOPE OF WORK .....	4
<b>2.0 CORRIDOR INFORMATION.....</b>	<b>6</b>
2.1 CORRIDOR LOCATION, DESCRIPTION AND USE .....	6
2.2 DESCRIPTION OF SURROUNDING PROPERTIES .....	7
2.3 CORRIDOR AND REGIONAL TOPOGRAPHIC SETTING.....	7
2.4 CORRIDOR AND REGIONAL GEOLOGY.....	7
2.5 CORRIDOR AND REGIONAL HYDROGEOLOGY.....	8
<b>3.0 CORRIDOR EVALUATION .....</b>	<b>9</b>
3.1 SOIL QUALITY INVESTIGATION .....	9
3.2 GROUNDWATER QUALITY INVESTIGATION .....	13
3.3 LABORATORY ANALYSES.....	13
3.4 DATA EVALUATION .....	13
<b>4.0 FINDINGS .....</b>	<b>15</b>
4.1 FIELD SCREENING .....	15
4.2 SOIL AND GROUNDWATER LABORATORY ANALYTICAL RESULTS .....	15
4.2.1 <i>Volatile Organic Compounds (VOCs) in Soil</i> .....	15
4.2.2 <i>Semi-Volatile Organic Compounds (SVOCs) in Soil</i> .....	15
4.2.3 <i>Target Analyte List Metals (TAL Metals) in Soil</i> .....	16
4.2.4 <i>Pesticides and Herbicides in Soil</i> .....	16
4.2.5 <i>PCBs in Soil</i> .....	16
4.2.6 <i>Waste Classification of Soil</i> .....	16
4.2.7 <i>Analysis of NYCDEP Parameters in Groundwater</i> .....	17
<b>5.0 CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>18</b>
<b>6.0 STATEMENT OF LIMITATIONS .....</b>	<b>21</b>



<b><u>Tables</u></b>	1	Summary of Environmental Boring Data
	2	Summary of TCL VOCs Detected in Soil
	3	Summary of TCL SVOCs Detected in Soil
	4	Summary of TAL Metals Detected in Soil
	5	Summary of Pesticides Detected in Soil
	6	Summary of Herbicides Detected in Soil
	7	Summary of PCBs Detected in Soil
	8	Summary of Waste Classification Parameters Detected in Soil
	9	Groundwater Quality Compared to NYC DEP Sewer Effluent Parameters
<b><u>Figures</u></b>	1	Topographic Corridor Location Map
	2	Sample Location Plan
<b><u>Appendices</u></b>	A	Boring Location Plan
	B	Geologic Boring Logs
	C	Laboratory Analytical Results (Included on CD)

## EXECUTIVE SUMMARY

On behalf of the New York City Department of Design and Construction (NYCDDC), Louis Berger & Associates, P.C. (LBA) conducted a Phase II Subsurface Corridor Investigation (SCI) in the DUMBO/Vinegar Hill area of Brooklyn, New York (hereinafter referred to as the "Corridor"). Excavation for the installation and replacement of high level storm sewers and water mains is proposed along the Corridor. The approximate linear length of the Corridor is 8,281 feet (1.6 miles) and comprises the following eleven (11) street segments:

- Water Street between Main Street and Hudson Avenue – 2,645 feet
- Plymouth Street between Main and Jay Streets – 1,141 feet
- Front Street between Main and Pearl Streets – 852 feet
- John Street between Adams and Pearl Streets – 261 feet
- Main Street between Plymouth and Front Streets – 496 feet
- Washington Street between Plymouth and Front Streets – 496 feet
- Adams Street between John and Front Streets – 722 feet
- Pearl Street between John and Front Streets – 722 feet
- Anchorage Place – 463 feet
- Jay Street between Plymouth and Water Streets – 237 feet
- Gold Street between Water and Front Streets – 246 feet

The Phase II SCI was conducted to determine if the Corridor's environmental condition might impact proposed construction activities.

LBA prepared a Phase I Corridor Assessment Report (Phase I CAR) dated August 2012, 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 65 final sites that had a potential "High" risk, 6 final sites that had a potential "Moderate" risk to impact the subsurface (soil and/or groundwater) of the Corridor, and recommended the completion of a Phase II SCI. The objective of the Phase II SCI was to assess the presence of subsurface contamination that may potentially impact proposed construction activities. The Phase II SCI consisted of the following components:

- The advancement of 24 soil borings (SB01 through SB05, SB07 through SB15, and SB17 through SB26) to a maximum depth of twenty (20) feet below ground surface (ft bgs). Twenty-six borings were initially proposed but due to access issues and multiple refusals, soil borings SB06 and SB16 were abandoned. All borings were initially pre-cleared using a vactron and air-knife to 6 ft bgs. The borings were then advanced using a Geoprobe® direct push drill rig. Soil samples were collected using 5-foot long, 2-inch diameter Macro Core stainless steel samplers equipped with acetate sleeves. Three (3) temporary well points (TWPs) were installed in soil borings SB07, SB11, and SB18. For the installation of the TWPs, the Geoprobe® unit was advanced to a maximum depth of 20 ft bgs, approximately ten (10) feet below the encountered water table. Each TWP consisted of a 20-foot length screen section of one-inch diameter schedule 40 PVC. A groundwater sample was collected

from each TWP for screening and laboratory analysis via dedicated Teflon tubing and a peristaltic pump;

- 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) and Munsell Rock Color charts. 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 borings. The composite samples taken from the soil borings were comprised of soil from the entire boring column. The grab samples were collected from the 6-inch interval exhibiting the highest evidence of contamination, the 6-inch interval above the water table, or if groundwater was not encountered, the bottom 6-inch interval of the boring;
- Composite samples were analyzed for: (1) Target Compound List (TCL) base neutral/acid (BN/A) extractable semi-volatile organic compounds (SVOCs) by United States Environmental Protection Agency (EPA) Method 8270; (2) Target Analyte List (TAL) metals by EPA Method 6010B; (3) TCL herbicides and pesticides by EPA Method 8151A and 8081A; and (4) TCL polychlorinated biphenyls (PCBs) by EPA Method 8082. The grab samples were analyzed for TCL volatile organic compounds (VOCs) by EPA Method 8260;
- The collection of six (6) composite waste characterization soil samples (TCLP01 through TCLP06). Composite sample TCLP01 was created by compositing aliquots from samples SB02, SB05, and SB09; TCLP02 was collected from SB01, SB03, SB04, SB07, and SB08; TCLP03 was collected from SB10, SB11, SB12, SB13, and SB14; TCLP04 was collected from SB15, SB17, and SB18; TCLP05 was collected from SB19, SB20, SB21, and SB22; and TCLP06 was collected from SB23, SB24, SB25, and SB26. The waste characterization samples were analyzed for: (1) the EPA Full Toxicity Characteristics Leaching Procedure (TCLP) parameters by EPA Method SW846; and (2) the Resource Conservation and Recovery Act (RCRA) Characteristics (ignitability, reactivity and corrosivity) by EPA Method SW846;
- The collection of three (3) groundwater samples (TWP07, TWP11, and TWP18) from the TWPs and the laboratory analysis of the samples for the parameters published by the New York City Department of Environmental Protection (NYCDEP) as Limitations for Effluent to Sanitary or Combined Sewers (NYCDEP Sewer Discharge Criteria); and
- The preparation of this report, which include 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 subsurface soil quality, laboratory analytical results of grab and composite soil samples were compared with regulatory standards identified in: (1) New York State Department of Environmental Conservation (NYSDEC) Subpart 375-6: Remedial Program

Unrestricted, Residential, and Commercial Use (Track 1 and Track 2) Soil Cleanup Objectives (SCOs) and (2) NYSDEC CP-51 Soil Cleanup Guidance Supplemental Soil Cleanup Objectives (SSCOs) to NYSDEC Subpart 375-6. The laboratory analytical results of the waste classification soil samples were compared with the Toxicity Characteristic Regulatory Levels for Hazardous Waste published in RCRA and NYSDEC Part 371. The analytical results of the groundwater samples were compared to the NYCDEP Sewer Discharge Criteria.

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:

- Visual and olfactory evidence of petroleum contamination was observed in soil borings SB05 and SB10. In addition, PID readings of 23.5 parts per million (ppm) were observed in soil boring SB05 and PID readings of 11.7 were observed in soil boring SB10. A slight petroleum odor was also observed in SB05 and SB10. Both SB05 and SB10 were advanced in the vicinity of "High" risk sites with a history of industrial operations and current or former underground storage tanks (USTs). The visual and olfactory evidence of petroleum contamination may be related to historic operations within the vicinity of SB05 and SB10;
- The Corridor was found to be underlain by at least five (5) to 20 feet of non-native fill material or reworked native soils at all soil boring locations. The fill layer and the reworked native soils consist mostly of moderate yellowish brown to dusky yellowish brown coarse to fine sand with some silt and little medium to fine gravel. Construction debris in the form of brick, concrete, glass, and wood pieces were observed within the fill layer. Native soils along the Corridor are comprised mostly of dusky yellowish brown or olive gray silty sand and were observed beneath the fill layer at depths ranging from 5 to 20 ft bgs. Bedrock was not encountered during this Phase II SCI;
- Laboratory results indicate concentrations of acetone in samples SB05 and SB12 in excess of the Unrestricted Use (Track 1) SCOs. Acetone is a common laboratory contaminant and the exceedance of acetone in samples SB05 and SB12 may be partially attributed to laboratory usage. In addition, low levels of acetone, benzene, tetrachloroethene, trichloroethene, and methylene chloride were observed in several soil samples collected throughout the Corridor;
- Several SVOC compounds were detected at concentrations above regulatory standards in soil sample SB23. Most exceedances are in the form of polycyclic aromatic hydrocarbons (PAHs) which are commonly found in asphalt, vehicle exhaust and petroleum byproducts and are common contaminants in urban fill material. Benzo(a)pyrene exceeded Commercial Use (Track 2), Residential Use (Track 2), and Unrestricted Use (Track 1) SCOs in sample SB23. In addition, benzo(a)anthracene, benzo(b)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene exceeded Residential Use (Track 2) and Unrestricted Use (Track 1) SCOs;
- Several metals were detected at concentrations above regulatory standards in soil samples SB05, SB12, SB21, and SB26. Lead in sample SB05; lead and zinc in sample SB12; arsenic, copper, lead, nickel, and zinc in sample SB21; and nickel in sample SB26 exceeded



Unrestricted Use (Track 1) SCOs. Exceedances for lead were detected at concentrations between 210 and 340 ppm. TCLP analysis on composite waste classification samples TCLP01 through TCLP06 indicates that soil beneath the surface of the Corridor is nonhazardous;

- The composite waste classification samples TCLP01 through TCLP06 were analyzed for USEPA RCRA hazardous waste characteristics including corrosivity, ignitability, reactivity and toxicity. Results of these analyses indicate that the soil beneath the Corridor does not exhibit evidence of hazardous waste characteristics; and
- The groundwater samples TWP07, TWP11, and TWP18 were analyzed for the parameters required by the NYCDEP Limitations for Effluent to Sanitary or Combined Sewers (Daily Limit). Total Suspended Solids (TSS) was detected above the NYCDEP Sewer Discharge Limit of 350 mg/L in samples TWP07 and TWP11. The exceedances of TSS are likely attributed to increased turbidity of the sample from conventional grab sampling procedures. In addition, groundwater samples exhibited numerous exceedances for metals which are typical given the increased turbidity of the groundwater during sampling procedures. Metals exceeding the NYCDEP Sewer Discharge Limit include lead in sample TWP07 and copper, lead, nickel, and zinc in samples TWP11 and TWP18. Based on the results for TSS and metals, groundwater does not meet NYCDEP Sewer Discharge criteria and may require pre-treatment prior to discharge.

Based on the results of the field investigation and laboratory analytical results, LBA recommends the following:

- The Contract documents should identify provisions for managing, handling, transporting, and disposing of SVOC, metals, and petroleum-impacted non-hazardous soil. As a contingency, contract documents should include specifications for transporting hazardous 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. The Contractor may implement dust control measures to minimize potential airborne contaminants released into the ambient environment as a direct result of construction activities. A Community Air Monitoring Plan (CAMP) should be developed in accordance with NYSDEC DER-10 Regulations. The CAMP requires real-time monitoring for 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 area of the surrounding community located downwind from the potential release of airborne contaminants. Specific requirements should be reviewed for each situation and coordinate with the New York State Department of Health (NYSDOH) to ensure proper applicability;

- Based on the observed depth to groundwater (10 to 12 ft bgs) dewatering may be necessary during construction activities in the Corridor. Total suspended solids were detected in groundwater samples TWP07 and TWP11 and several metals were detected in samples TWP07, TWP11, and TWP18 at concentrations exceeding the NYCDEP Sewer Discharge Limitations and groundwater may require pretreatment prior to discharge to sanitary or combined sewers; however, the contractor will be required to obtain a NYCDEP sewer discharge permit and perform sampling and laboratory analysis prior to discharge into sanitary and combined sewers;
- In addition, if discharge into storm sewers is required during 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 should submit a site-specific health and safety plan (HASP) that will meet the requirements set forth by the Occupational, Safety and Health Administration (OSHA), the 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 for metals).

## 1.0 INTRODUCTION

On behalf of the New York City Department of Design and Construction (NYCDDC), Louis Berger & Associates, P.C. (LBA) conducted a Phase II Subsurface Corridor Investigation (SCI) in the DUMBO/Vinegar Hill area of Brooklyn, New York (hereinafter referred to as the "Corridor"). Excavation for the installation and replacement of high level storm sewers and water mains is proposed along the Corridor. The Corridor location is identified on the Topographic Map on Figure 1. The approximate linear length of the Corridor is 8,281 feet (1.6 miles) and comprises the following eleven (11) street segments:

- Water Street between Main Street and Hudson Avenue – 2,645 feet
- Plymouth Street between Main and Jay Streets – 1,141 feet
- Front Street between Main and Pearl Streets – 852 feet
- John Street between Adams and Pearl Streets – 261 feet
- Main Street between Plymouth and Front Streets – 496 feet
- Washington Street between Plymouth and Front Streets – 496 feet
- Adams Street between John and Front Streets – 722 feet
- Pearl Street between John and Front Streets – 722 feet
- Anchorage Place – 463 feet
- Jay Street between Plymouth and Water Streets – 237 feet
- Gold Street between Water and Front Streets – 246 feet

The Phase II SCI was conducted to determine if the Corridor's environmental condition might impact proposed construction activities.

### 1.1 Summary of Previous Environmental Investigations

LBA prepared a Phase I Corridor Assessment Report (CAR) for the Corridor in August 2012. LBA's Phase I CAR included the area comprising the Corridor and 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 144 initial "High" risk sites, which may have the potential to impact the subsurface of the Corridor. Based on modifying information, LBA recommended that 5 of the 144 initial "High" risk sites be reclassified as "Moderate" risk sites and 74 of the initial 144 "High" risk sites be reclassified as "Low" risk sites.

The sites identified in the Phase I CAR were re-classified because they were found to be outside of the Corridor limits or were identified on one or more of the regulatory agency databases but modifying information or professional judgment indicated a lower risk to the Corridor. Modifying information included sites with spills that had been closed by the New York State Department of Environmental Conservation (NYSDEC), sites identified on one or more

databases with no evidence or records of spills or other concerns, or older sites that were redeveloped or located such that they no longer posed significant risks to proposed activities within the Corridor.

Therefore, the final evaluation has identified 65 final “High” risk sites and 6 final “Moderate” risk sites with respect to potential impact on the project Corridor. The final “High” and “Moderate” risk sites are listed below:

### HIGH RISK SITES

- 1) Abraham & Straus, 1-11 John Street (Map ID G201)
- 2) 121 Plymouth Street (Map ID G46 and G100)
- 3) 96 Plymouth Street (Map ID G72)
- 4) 140 Plymouth Street (Map ID G84)
- 5) City of New York Parks and Recreation – Brooklyn Bridge Park (Map ID E21)
- 6) 123 – 137 Plymouth Street (Map ID F59)
- 7) Hawthorn Village LLC / Maret Realty Company, 220 Water Street (Map IDs A1, A4, A51, A69 and 220)
- 8) Toll NY IV, L.P., 205 Water Street (Map IDs A7, A15 and A19)
- 9) 247 Water Street (Map ID A8)
- 10) Water Street Sub-Station / B-Phase Pothead / Gold St Purs, 299 Water Street (Map IDs B11, B34, B37, B39, B41, B62, B64, B81 and B105)
- 11) Watchtower Bible and Tract Society / Flexo-Craft-Prints, 200 Water Street (Map IDs A12, J144 and J235)
- 12) Safeway Removal Service, 290 Water Street (Map IDs B22 and B57)
- 13) 179 – 181 Water Street (Map IDs F73 and F110)
- 14) Ben Foreman & Sons, Inc., 201 Water Street (Map IDs J74 and F87)
- 15) 177 Water Street (Map ID F80)
- 16) 255 Water Street (Map ID L98)
- 17) 155 Water Street (Map ID M107)
- 18) Horizon Steel Products Inc., 223 Water Street (Map IDs AA316 and AA318)
- 19) 178 – 194 Water Street (Identified during the Sanborn review)
- 20) 156 – 176 Water Street (Identified during the Sanborn review)
- 21) 244 – 268 Water Street (Identified during the Sanborn review)
- 22) 306 – 310 Water Street (Identified during the Sanborn review)
- 23) 237 – 245 Water Street (Identified during the Sanborn review)
- 24) 127 – 137 Water Street (Identified during the Sanborn review)
- 25) 167 Water Street (Identified during the Sanborn review)
- 26) 257 – 265 Water Street (Identified during the Sanborn review)
- 27) Precise Corporate PR/Panda Wall Coverings Corp/Jones, Jones, Larkin & O'Connell (Suite 1101) / Eye Beam Administration Office (12th Floor) / Washington Group, LLC.





- / Prestone Press LLC, 75 Front Street (Map IDs E27, E35, E36, E128, E129, E130, E131, K140, K141, K142 and K143)
- 28) Vacant Lot/84 Front St, LLC., 84 Front Street (Map IDs H52 and H68)
  - 29) Lot 9, Taxblock 53 , 126 Front Street (Map IDs C60 and C114)
  - 30) Lot 115, Taxblock 45, 66 Front Street (Map ID K82)
  - 31) Watchtower Bible & Tract Society / Lot 42, Taxblock 41, 175 – 177 Front Street (Map IDs J236 and J237)
  - 32) Lot 44, Taxblock 41, 173 Front Street (Map ID J239)
  - 33) Lot 20, Taxblock 55, 218 Front Street (Map ID L258)
  - 34) G & L Realty, 206 Front Street (Map ID T264)
  - 35) 134 – 144 Front Street (Identified during the Sanborn review)
  - 36) 78 – 104 Front Street (Identified during the Sanborn review)
  - 37) 291 – 299 Front Street (Identified during the Sanborn review)
  - 38) Walentas Building / Clocktower Condos / FD Roosevelt Island, 15 - 33 Main Street (Map IDs E25, E29, E93, E109 and 138)
  - 39) Sweeney, 24 - 36 Main Street (Map ID E42)
  - 40) 18 – 22 Main Street (Identified during the Sanborn review)
  - 41) Brooklane Associates / Gair 2, 25 Washington Street (Map IDs G118 and G119)
  - 42) Aversa & Martin Inc. / Washington Group, LLC. / Bridgestone Cleaners, 41 – 55 Washington Street (Map IDs K122, M166, M167, M168 and M169)
  - 43) Impressions by Harbor View / Washington Group, LLC., 70 Washington Street (Map IDs K132, K133 and K134)
  - 44) Washington Group, LLC. / Prestone Press LLC., 50 Washington Street (Map IDs K140, K141, K142 and K143)
  - 45) Brooklake Associates, 30 Washington Street (Map IDs G120, M150 and M151)
  - 46) 31 Washington Street (Map ID M156)
  - 47) NYSDOT Adams Street / Iron workers Shop, 59 Adams Street (Map IDs C14, C38 and C44)
  - 48) Long Island Machine & Pattern Works, 69 Adams Street (Map ID H125)
  - 49) 55 Pearl Street (Map ID F10)
  - 50) Pilot Paint Company Inc, 47 Pearl Street (Map IDs F65 and F90)
  - 51) 39 Pearl Street, LLC, 39 Pearl Street (Map IDs F71, F75 and F111)
  - 52) 53 Pearl Street (Map ID F76)
  - 53) 20 – 38 Pearl Street (identified during the Sanborn review)
  - 54) Vacant Warehouse, 39 - 51 Jay Street (Map IDs F31 and I99)
  - 55) 25 – 35 Jay Street (Map ID I101)
  - 56) 42 – 50 Jay Street (Map IDs I89, I102 and I112)
  - 57) 54 Jay Street (Map ID F116)
  - 58) 68 Jay Street (Map ID J137)
  - 59) 65 Jay Street (Map ID J148)
  - 60) 67 Jay Street (Map ID J161)

- 61) Certified Moving and Storage Co. Inc., Boorum & Pease Co/Front Street Station, 85 - 87 Jay Street (Map IDs A265, A266, T308, U269, U270, U271, U272, U273)
- 62) 53 Bridge Street (Map IDs A18, A20, A63 and A92)
- 63) 99 Gold Street (Map IDs N176, N177 and N178)
- 64) 98 Gold Street (Map ID N190)
- 65) 56 Gold Street (identified during the Sanborn review)

#### MODERATE RISK SITES

- 1) 188 Plymouth Street (Map ID I152)
- 2) 304 Water Street (Identified during the Sanborn review)
- 3) 55 – 71 Front Street (Identified during the Sanborn review)
- 4) Kingdon Support Services / Watchtower Bible and Tract Society / Watchtower Vehicle Maintenance Shop, 74 Adams Street (Map IDs H173, H174 and H175)
- 5) 73 Jay Street (Map ID C221)
- 6) 2 Main Street (Identified during the Sanborn review)

#### **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 Aquifer Drilling and Testing, Inc. (ADT) of Mineola, New York. Oversight of drilling activities was performed by Mr. Joseph Nelson, Senior Environmental Scientist of LBA. Laboratory analyses were provided by Hampton-Clarke/Varitech (HC-V) of Fairfield, New Jersey which is a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified analytical laboratory (No. 11408). Field derived Quality Assurance/Quality Control samples (i.e. field blanks, trip blanks, and duplicates) were not collected for this project. The field investigation was conducted from January 7 through 17, 2013 and consisted of the following components:

- The advancement of 24 soil borings (SB01 through SB05, SB07 through SB15, and SB17 though SB26) to a maximum depth of twenty (20) feet below ground surface (ft bgs). Twenty-six borings were initially proposed but due to access issues and multiple refusals, soil borings SB06 and SB16 were abandoned. All borings were initially pre-cleared, using a vactron and air-knife to 6 ft bgs. The borings were then advanced using a Geoprobe® direct push drill rig. Soil samples were collected using 5-foot long, 2-inch diameter Macro Core stainless steel samplers equipped with acetate sleeves. Three (3) temporary well points (TWP) were installed in soil borings SB07, SB11, and SB18. For the installation of the TWP, the Geoprobe® unit was advanced to a maximum depth of 20 ft bgs, approximately ten (10) feet below the encountered water table. Each TWP consisted of a 20-foot length screen section of one-inch diameter schedule 40 PVC. A groundwater sample was collected

from each TWP for screening and laboratory analysis via dedicated Teflon tubing and a peristaltic pump;

- 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) and Munsell Rock Color charts. 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 borings. The composite samples taken from the soil borings were comprised of soil from the entire boring column. The grab samples were collected from the 6-inch interval exhibiting the highest evidence of contamination, the 6-inch interval above the water table, or if groundwater was not encountered, the bottom 6-inch interval of the boring;
- Composite samples were analyzed for: (1) Target Compound List (TCL) base neutral/acid (BN/A) extractable semi-volatile organic compounds (SVOCs) by United States Environmental Protection Agency (EPA) Method 8270; (2) Target Analyte List (TAL) metals by EPA Method 6010B; (3) TCL herbicides and pesticides by EPA Method 8151A and 8081A; and (4) TCL polychlorinated biphenyls (PCBs) by EPA Method 8082. The grab samples were analyzed for TCL volatile organic compounds (VOCs) by EPA Method 8260;
- The collection of six (6) composite waste characterization soil samples (TCLP01 through TCLP06). Composite sample TCLP01 was created by compositing aliquots from samples SB02, SB05, and SB09; TCLP02 was collected from SB01, SB03, SB04, SB07, and SB08; TCLP03 was collected from SB10, SB11, SB12, SB13, and SB14; TCLP04 was collected from SB15, SB17, and SB18; TCLP05 was collected from SB19, SB20, SB21, and SB22; and TCLP06 was collected from SB23, SB24, SB25, and SB26. The waste characterization samples were analyzed for: (1) the EPA Full Toxicity Characteristics Leaching Procedure (TCLP) parameters by EPA Method SW846; and (2) the Resource Conservation and Recovery Act (RCRA) Characteristics (ignitability, reactivity and corrosivity) by EPA Method SW846;
- The collection of three (3) groundwater samples (TWP07, TWP11, and TWP18) from the TWPs and the laboratory analysis of the samples for the parameters published by the New York City Department of Environmental Protection (NYCDEP) as Limitations for Effluent to Sanitary or Combined Sewers (NYCDEP Sewer Discharge Criteria); and
- The preparation of this report, which include tables summarizing the laboratory analytical results and figures depicting boring locations, significant site features and, if applicable, contamination occurrence and distribution.

## 2.0 CORRIDOR INFORMATION

### 2.1 Corridor Location, Description and Use

The Corridor consists of Water Street between Main Street and Hudson Avenue, including the intersections with Bridge Street and Hudson Avenue, Plymouth Street between Main and Jay Streets, Front Street between Main and Pearl Streets, John Street between Adams and Pearl Streets, Main Street and Washington Street between Plymouth and Front Streets, Adams Street and Pearl Street between John and Front Streets, the entire length of Anchorage Street, Jay Street between Plymouth and Water Streets, and Gold Street between Water and Front Streets. The Corridor is located in the DUMBO/Vinegar Hill section of Brooklyn, New York. The entire Corridor is developed with paved roadways, and existing infrastructure. The approximate linear length of the Corridor is 8,281 feet (1.6 miles) and comprises the following eleven (11) street segments:

- Water Street between Main Street and Hudson Avenue – 2,645 feet
- Plymouth Street between Main and Jay Streets – 1,141 feet
- Front Street between Main and Pearl Streets – 852 feet
- John Street between Adams and Pearl Streets – 261 feet
- Main Street between Plymouth and Front Streets – 496 feet
- Washington Street between Plymouth and Front Streets – 496 feet
- Adams Street between John and Front Streets – 722 feet
- Pearl Street between John and Front Streets – 722 feet
- Anchorage Place – 463 feet
- Jay Street between Plymouth and Water Streets – 237 feet
- Gold Street between Water and Front Streets – 246 feet

Manhole covers, asphalt patches and storm drains are visible in roadway and sidewalk areas throughout the Corridor, and indicate the potential presence of multiple buried utilities which may include sewer, water, communications, oil and gas. Exposed or partially asphalt-covered cobblestones were visible in all Corridor roadways, especially within the western portion of the Corridor and the majority of Water Street. Also located within the central and western portions of the Corridor are exposed and partially covered inactive railroad tracks within and parallel to Main Street, Plymouth Street, John Street, Jay Street and Adams Street.

Property usage within the Corridor consists of residential, commercial, utility and industrial/manufacturing uses. The entire area was developed prior to the late 1880's with multi-story industrial and manufacturing buildings. The majority of these buildings have been either repurposed or renovated into modern-day commercial store fronts and/or loft style housing and studios. The western portion of the Corridor primarily consists of apartment and loft-style housing buildings constructed above street-level storefronts including 15 – 33 Main Street (“High” risk) and 41 – 55 Washington Street (“High” risk). Several buildings, including those located at 31 Washington Street (“High” risk) and 25 Washington Street (“High” risk), were under renovation at the time of the Corridor reconnaissance. The central portion of the Corridor

contains a NYSDOT iron workers shop located at 59 Adams Street (“High” risk) and Century Paint and Hardware Lumber (“High” risk). The eastern portion of the Corridor is primarily residential with the exception of the Con Edison Water Street Substation located at 299 Water Street (“High” risk). The western portions of Front Street and Water Street within the Corridor are highly populated areas consisting of large multi-story apartments buildings above street-level commercial storefronts.

Former industrial buildings in the western portion of the Corridor were historically serviced by an interconnected railway system originating at the East River docks. The inactive rail system is exposed and/or partially asphalt-covered within Main Street, Plymouth Street, John Street, Jay Street and Adams Street. Additionally, exposed or partially asphalt-covered cobblestones were visible in all Corridor roadways, especially within the western portion of the Corridor and the majority of Water Street. During the Phase II SCI field investigation, several voids and underground utility vaults, related to either historic operations or active underground utility lines, were uncovered throughout the Corridor while attempting to advance soil borings as part of the soil and groundwater investigation.

## **2.2 Description of Surrounding Properties**

The Corridor is surrounded by a mix of residential and commercial properties, as well as parkland to the south, residential properties to the east, commercial and residential properties to the west and manufacturing/industrial properties to the south. Property north of the Corridor is occupied by Con Edison and consists of transformers and substations.

## **2.3 Corridor and Regional Topographic Setting**

The United States Geologic Survey (USGS) 7.5-minute Topographic Quadrangle for Brooklyn, N.Y. (USGS, 1994) (Figure 1) maps topography within the Corridor, and surrounding area, as sloping to the northwest, toward the East River. Corridor ground surface elevation ranges from approximately 18 feet above mean sea level (msl) along the western Corridor boundary to approximately 25 feet above msl along the eastern boundary. Surface runoff within the Corridor is expected to flow northwest, towards the East River.

## **2.4 Corridor and Regional Geology**

According to the NYC Reconnaissance Soil Survey (2005), the Corridor is underlain by the Pavement & buildings, wet substratum-Laguardia-Ebbets complex. This loamy fill material consists of a mixture of natural soils and construction debris overlying former swamp, tidal marsh or water. Impervious pavements and buildings cover approximately 50 to 80 percent of the land surface area. Based on a review of the soil survey and proximity of the Corridor to the East River and Manhattan Bridge footings, surficial soils and fill material are expected to be encountered no more than 5 feet bgs.

The Ground-Water Resources of Kings and Queens Counties, Long Island, New York (Buxton, 1999) indicates that surficial soils are underlain by Pleistocene aged ground moraine deposits

consisting of unsorted and unstratified clay, sand, gravel and boulders and are expected to be present to a depth of approximately 100 feet bgs. These deposits are in turn underlain by crystalline metamorphic bedrock occurring at approximately 100 feet bgs (Buxton, 1999).

During this Phase II SCI, the Corridor was found to be underlain by at least five (5) to 20 feet of non-native fill material or reworked native soils at all soil boring locations. The fill layer and the reworked native soils consist mostly of moderate yellowish brown to dusky yellowish brown coarse to fine sand with some silt and little medium to fine gravel. Construction debris in the form of brick, concrete, glass, and wood pieces were observed within the fill layer. Native soils along the Corridor are comprised mostly of dusky yellowish brown or olive gray silty sand and were observed beneath the fill layer at depths ranging from 5 to 20 ft bgs. Bedrock was not encountered during this Phase II SCI.

## **2.5 Corridor and Regional Hydrogeology**

According to the environmental LBA's Phase I CAR, the western portion of the Corridor (from Main Street to Jay Street) is located within the 100- and 500-year flood zones while the eastern portion of the Corridor is outside of both the 100- and 500-year flood zones. According to the environmental database report, no Federal wetlands are mapped within the Corridor; however, the United States Fish and Wildlife Service (USFWS), maps Riverine wetlands within the East River, located approximately 20 feet north of the John Street portion of the Corridor (USFWS, 2012).

During this Phase II SCI groundwater was encountered between 10 and 12 ft bgs west of Jay Street and was not encountered in soil borings east of Jay Street. Under natural conditions, groundwater would be expected to flow north-northwest toward the East River. However, groundwater flow directions and elevations may vary due to seasonal fluctuations in precipitation, local usage demands, underground utilities, or dewatering operations.

### 3.0 CORRIDOR EVALUATION

Proposed construction activities within the Corridor include soil excavation and may include dewatering, which will require that soils and groundwater at the site be characterized to identify material handling requirements (i.e. use of protective equipment) and for material reuse, handling and/or waste disposal requirements. LBA provided oversight for the advancement of 24 soil borings, and the collection of soil and groundwater samples during the field investigation at the designated areas in the vicinity of the planned construction. The soil samples from the borings and groundwater samples from the TWP's were transferred into laboratory supplied sample jars, properly labeled and 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

Twenty-four soil borings (SB01 through SB05, SB07 through SB15, and SB17 through SB26) were advanced to a maximum depth of 20 ft bgs, using a Geoprobe® direct push drill rig. Prior to direct push advancement, borings were cleared to a depth of six (6) ft bgs using a hand auger, post hole digger, air knife, vacuum excavator or a combination thereof. Soil was recovered using a 5-foot long, 2-inch diameter Macro Core stainless steel sampler equipped with disposable acetate sleeves. Soil boring locations are depicted 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:

- **SB01** –Advanced in the vicinity of a “High” risk site and located on the sidewalk along the east side of Main Street, 35 feet and 3 inches south of the southeast corner of the intersection of Main Street and Water Street and 2 feet and 1 inch east of the curb along the east side of Main Street.
- **SB02** –Advanced in the vicinity of a “High” risk site and located on the sidewalk along the east side of Main Street, 45 feet and 11 inches north of the northeast corner of the intersection of Main Street and Water Street and 2 feet and 1 inch east of the curb along the east side of Main Street.
- **SB03** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the south side of Front Street, 21 feet and 4 inches west of the southwest corner of the intersection of Main Street and Front Street and 1 foot and 8 inches south of the curb along the south side of Front Street.
- **SB04** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the east side of Washington Street, 55 feet and 8 inches north of the northeast corner of

the intersection of Washington Street and Front Street and 1 foot and 5 inches east of the curb along the east side of Washington Street.

- **SB05** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the east side of Washington Street, 22 feet and 8 inches south of the southeast corner of the intersection of Plymouth Street and Washington Street and 1 foot and 7 inches east of the curb along the east side of Washington Street.
- **SB07/TWP07** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the south side of Front Street, 83 feet and 10 inches west of the southwest corner of the intersection of Front Street and Adams Street and 1 foot and 5 inches south of the curb along the south side of Front Street.
- **SB08** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the west side of Adams Street, 60 feet and 8 inches north of the northwest corner of the intersection of Adams Street and Front Street and 1 foot and 6 inches west of the curb along the west side of Adams Street.
- **SB09** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the west side of Adams Street, 78 feet and 8 inches south of the southwest corner of the intersection of Plymouth Street and Adams Street and 11 feet west of the curb along the west side of Adams Street.
- **SB10** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the south side of Plymouth Street, 46 feet east of the southeast corner of the intersection of Anchorage Place and Plymouth Street and 1 foot south of the curb along the south side of Plymouth Street.
- **SB11/TWP11** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the south side of John Street, 32 feet and 2 inches west of the southwest corner of the intersection of John Street and Pearl Street and 1 foot and 3 inches south of the curb along the south side of John Street.
- **SB12** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the east side of Pearl Street, 13 feet north of the northeast corner of the intersection of Pearl Street and Water Street and 4 feet and 4 inches east of the curb along the east side of Pearl Street.
- **SB13** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the east side of Pearl Street, 86 feet and 7 inches south of the southwest corner of the



intersection of Pearl Street and Plymouth Street and 11 feet east of the curb along the east side of Pearl Street.

- **SB14** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the east side of Pearl Street, 122 feet and 9 inches south of the southwest corner of the intersection of John Street and Pearl Street and 3 feet and 1 inch east of the curb along the east side of Pearl Street.
- **SB15** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the north side of Water Street, 153 feet and 2 inches east of the northeast corner of the intersection of Pearl Street and Water Street and 1 foot and 11 inches north of the curb along the north side of Water Street.
- **SB17** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the west side of Jay Street, 95 feet and 3 inches north of the northwest corner of the intersection of Jay Street and Water Street and 2 feet and 2 inches west of the curb along the west side of Jay Street.
- **SB18/TWP18** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the west side of Jay Street, 25 feet and 10 inches north of the northwest corner of the intersection of Jay Street and Plymouth Street and 2 feet and 1 inches west of the curb along the west side of Jay Street.
- **SB19** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the south side of Water Street, 224 feet west of the northwest corner of the intersection of Water Street and Bridge Street and 1 foot and 9 inches south of the curb along the south side of Water Street.
- **SB20** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the south side of Water Street, 58 feet and 3 inches west of the southwest corner of the intersection of Bridge Street and Water Street and 1 foot and 4 inches south of the curb along the south side of Water Street.
- **SB21** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the north side of Water Street, 126 feet and 2 inches east of the northeast corner of the intersection of Bridge Street and Water Street and 7 feet and 8 inches north of the curb along the north side of Water Street.
- **SB22** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the north side of Water Street, 102 feet and 1 inch west of the northwest corner of the

intersection of Water Street and Gold Street and 1 foot and 6 inches north of the curb along the north side of Water Street.

- **SB23** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the east side of Gold Street, 39 feet and 3 inches north of the northeast corner of the intersection of Gold Street and Water Street and 4 feet and 1 inch east of the curb along the east side of Gold Street.
- **SB24** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the east side of Gold Street, 105 feet and 5 inches from the northeast corner of the intersection of Gold Street and Front Street and 10 feet and 6 inches east of the curb along the east side of Gold Street.
- **SB25** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the north side of Water Street, 48 feet and 7 inches east of the northeast corner of the intersection of Gold Street and Water Street and 4 feet and 3 inches north of the curb along the north side of Water Street.
- **SB26** - Advanced in the vicinity of a “High” risk site and located on the sidewalk along the north side of Water Street, 149 feet east of the southeast corner of the intersection of Gold Street and Water Street and 2 feet and 4 inches south of the curb along the south side of Water Street.

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 cores were collected from each of the borings at 5-foot intervals. In addition, a PID was used to screen the soil for VOC vapors.

In order to identify representative conditions relative to the presence of SVOCs, metals, herbicides, pesticides and PCBs 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. A boring composite sample was taken from each soil boring.

In order to identify representative conditions relative to the presence of VOCs, a grab sample(s) was collected from the 6-inch interval exhibiting the highest evidence of contamination, the 6-inch interval above the water table, or if groundwater was not encountered, the bottom 6-inch interval of the boring.

In order to identify representative conditions for disposal purposes, six (6) composite waste characterization soil samples (TCLP01 through TCLP06) were collected. Composite sample TCLP01 was created by compositing aliquots from samples SB02, SB05, and SB09; TCLP02 was collected from SB01, SB03, SB04, SB07, and SB08; TCLP03 was collected from SB10, SB11, SB12, SB13, and SB14; TCLP04 was collected from SB15, SB17, and SB18; TCLP05



was collected from SB19, SB20, SB21, and SB22; and TCLP06 was collected from SB23, SB24, SB25, and SB26.

Soil classification information, including stratigraphy, is documented on the boring logs included in Appendix B. All boring equipment was cleaned by initially rinsing with tap water, scrubbed with Alconox, then rinsed with deionized water again between each sample interval. In addition, a disposable acetate liner was used inside the sampler for recovery of the soil cores. Following the completion of each boring, the boreholes were back-filled with drill cuttings, and then sealed with concrete, if appropriate.

### **3.2 Groundwater Quality Investigation**

In anticipation of encountering groundwater within the Corridor during the proposed excavation activities, three (3) groundwater samples were collected for screening and submittal for laboratory analysis during the performance of the soil boring activities. Groundwater was encountered at approximately 10 to 12 ft bgs in the area west of Jay Street. Groundwater was not encountered in the borings advanced east of Jay Street. Groundwater samples were collected for screening and laboratory analysis via dedicated Teflon tubing and a peristaltic pump. The Teflon tubing was new, clean, and unused then properly disposed of after use. Upon extraction, the sample was examined for visual evidence (i.e., discoloration, sheen) and any olfactory indications (i.e. odors) of contamination and noted in the field book.

### **3.3 Laboratory Analyses**

Soil samples were submitted to Hampton-Clarke/Varitech (HC-V) of Fairfield, New Jersey which is a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified analytical laboratory (No. 11408). Field derived Quality Assurance/Quality Control 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 TCL VOCs by Method 8260. The boring composite soil samples were analyzed for: (1) TCL BN/A extractable SVOCs by EPA Method 8270; (2) TAL metals by EPA Method 6010B; (3) TCL pesticides and herbicides by EPA Method 8081A and EPA Method 8151A; and (4) PCBs by EPA Method 8082.

The waste characterization soil sample was analyzed for: (1) EPA Full TCLP parameters and (2) RCRA Characteristics (ignitability, reactivity and corrosivity).

The groundwater sample was analyzed for parameters published by NYCDEP as Limitations for Effluent to Sanitary or Combined Sewers.

### **3.4 Data Evaluation**

In order to evaluate subsurface soil quality, laboratory analytical results of grab and composite soil samples were compared with regulatory standards identified in: (1) New York State



Department of Environmental Conservation (NYSDEC) Subpart 375-6: Remedial Program Unrestricted, Residential, and Commercial Use (Track 1 and Track 2) Soil Cleanup Objectives (SCOs) and (2) NYSDEC CP-51 Soil Cleanup Guidance Supplemental Soil Cleanup Objectives (SSCOs) to NYSDEC Subpart 375-6. The laboratory analytical results of the waste classification soil samples were compared with the Toxicity Characteristic Regulatory Levels for Hazardous Waste published in RCRA and NYSDEC Part 371. The analytical results of the groundwater samples were compared to the NYCDEP Sewer Discharge Criteria.

## 4.0 FINDINGS

This section discusses the analytical data and findings for 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 consisted of visual and olfactory indicators of impacts as well as screening with a PID. Visual and olfactory evidence of possible petroleum contamination was observed in soil borings SB05 and SB10. In addition, PID readings of 23.5 parts per million (ppm) were observed in soil boring SB05 and PID readings of 11.7 were observed in soil boring SB10. A slight petroleum odor was also observed in SB05 and SB10. Both SB05 and SB10 were advanced in the vicinity of "High" risk sites with a history of industrial operations and current or former underground storage tanks (USTs). The visual and olfactory evidence of petroleum contamination may be related to historic operations within the vicinity of SB05 and SB10. Refer to Table 1 for a summary of environmental boring data.

### 4.2 Soil and Groundwater Laboratory Analytical Results

#### 4.2.1 Volatile Organic Compounds (VOCs) in Soil

Laboratory results indicate concentrations of acetone in samples SB05 and SB12 in excess of the Unrestricted Use (Track 1) SCOs and low levels of acetone and methylene chloride were found in samples collected throughout the Corridor. Acetone and methylene chloride are common laboratory contaminants and the exceedance of acetone in samples SB05 and SB12 and the low level detections of acetone and methylene chloride found in several locations along the Corridor may be partially attributed to laboratory usage.

In addition, low levels of benzene, tetrachloroethene, and trichloroethene were observed in several soil samples collected throughout the Corridor. The low level detections for these compounds may be partially attributed to historic or ongoing operations within the vicinity of the soil boring in addition to contaminants in fill material beneath the Corridor or native soils which have been reworked and replaced. Refer to Table 2 for a summary of VOC detections.

#### 4.2.2 Semi-Volatile Organic Compounds (SVOCs) in Soil

Several SVOC compounds were detected at concentrations above regulatory standards in soil sample SB23. Most exceedances are in the form of polycyclic aromatic hydrocarbons (PAHs) which are commonly found in asphalt, vehicle exhaust and petroleum byproducts and are common contaminants in urban fill material. Benzo(a)pyrene exceeded Commercial Use (Track 2), Residential Use (Track 2), and Unrestricted Use (Track 1) SCOs in sample SB23. In addition, benzo(a)anthracene, benzo(b)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene exceeded Residential Use (Track 2) and Unrestricted Use (Track 1) SCOs.

Several low level detections of SVOCs were observed in soil samples SB05, SB08, SB12, SB19, and SB21. Lithology shows that the sample collection locations SB05, SB08, SB12, SB19, and SB21 fall within the ubiquitous historical fill material at the Corridor. Therefore, detected concentrations of SVOCs in these soil samples may be attributed to contaminants in fill material beneath the Corridor, native soils having been reworked and replaced during construction or renovation, and may also be partially attributed to impacted stormwater runoff. Refer to Table 3 for a summary of SVOC detections.

#### ***4.2.3 Target Analyte List Metals (TAL Metals) in Soil***

Several metals were detected at concentrations above regulatory standards in soil samples SB05, SB12, SB21, and SB26.

Lead in sample SB05; lead and zinc in sample SB12; arsenic, copper, lead, nickel, and zinc in sample SB21; and nickel in sample SB26 exceeded Unrestricted Use (Track 1) SCOs. Exceedances for lead were detected at concentrations between 210 and 340 ppm. TCLP analysis on composite waste classification samples TCLP01 through TCLP06 indicates that soil beneath the surface of the Corridor is nonhazardous. Elevated metals levels may be attributed to contaminants in urban fill material, native soils having been reworked and replaced during construction or renovation and may also be partially attributed to impacted stormwater runoff. Refer to Table 4 for a summary of metals detections.

#### ***4.2.4 Pesticides and Herbicides in Soil***

The laboratory results indicate that there are no exceedances of pesticides present in any of the soil samples collected as part of this Phase II SCI. Refer to Table 5 for a summary of pesticide detections.

The laboratory results indicate that there are no herbicides present in any of the soil samples collected as part of this Phase II SCI. Refer to Table 6 for a summary of herbicide detections

#### ***4.2.5 PCBs in Soil***

The laboratory results indicate that there are no PCBs present in any of the soil samples collected as part of this Phase II SCI. Refer to Table 7 for a summary of PCB detections.

#### ***4.2.6 Waste Classification of Soil***

The composite waste classification samples TCLP01 through TCLP06 were analyzed for USEPA RCRA hazardous waste characteristics including corrosivity, ignitability, reactivity and toxicity. Results of these analyses indicate that the soil beneath the Corridor does not exhibit evidence of hazardous waste characteristics. Refer to Table 8 for a summary of TCLP parameters and RCRA characteristics.

#### **4.2.7 Analysis of NYCDEP Parameters in Groundwater**

The groundwater samples TWP07, TWP11, and TWP18 were analyzed for the parameters required by the NYCDEP Limitations for Effluent to Sanitary or Combined Sewers (Daily Limit). Total Suspended Solids (TSS) was detected above the NYCDEP Sewer Discharge Limit of 350 mg/L in samples TWP07 and TWP11. The exceedances of TSS are likely attributed to increased turbidity of the sample from conventional grab sampling procedures. In addition, groundwater samples exhibited numerous exceedances for metals which are typical given the increased turbidity of the groundwater during sampling procedures. Metals exceeding the NYCDEP Limit include lead in sample TWP07 and copper, lead, nickel, and zinc in samples TWP11 and TWP18. Based on the results for TSS and metals, groundwater does not meet NYCDEP Sewer Discharge criteria and may require pre-treatment prior to discharge. Refer to Table 9 for a summary of selected NYCDEP parameters in groundwater.

## 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:

- Visual and olfactory evidence of possible petroleum contamination was observed in soil borings SB05 and SB10. In addition, PID readings of 23.5 ppm were observed in soil boring SB05 and PID readings of 11.7 were observed in soil boring SB10. A slight petroleum odor was also observed in SB05 and SB10. Both SB05 and SB10 were advanced in the vicinity of "High" risk sites with a history of industrial operations and current or former underground storage tanks (USTs). The visual and olfactory evidence of petroleum contamination may be related to historic operations within the vicinity of SB05 and SB10;
- The Corridor was found to be underlain by at least five (5) to 20 feet of non-native fill material or reworked native soils at all soil boring locations. The fill layer and the reworked native soils consist mostly of moderate yellowish brown to dusky yellowish brown coarse to fine sand with some silt and little medium to fine gravel. Construction debris in the form of brick, concrete, glass, and wood pieces were observed within the fill layer. Native soils along the Corridor are comprised mostly of dusky yellowish brown or olive gray silty sand and were observed beneath the fill layer at depths ranging from 5 to 20 ft bgs. Bedrock was not encountered during this Phase II SCI;
- Laboratory results indicate concentrations of acetone in samples SB05 and SB12 in excess of the Unrestricted Use (Track 1) SCOs. Acetone is a common laboratory contaminant and the exceedance of acetone in samples SB05 and SB12 may be partially attributed to laboratory usage. In addition, low levels of acetone, benzene, tetrachloroethene, trichloroethene, and methylene chloride were observed in several soil samples collected throughout the Corridor;
- Several SVOC compounds were detected at concentrations above regulatory standards in soil sample SB23. Most exceedances are in the form of PAHs which are commonly found in asphalt, vehicle exhaust and petroleum byproducts and are common contaminants in urban fill material. Benzo(a)pyrene exceeded Commercial Use (Track 2), Residential Use (Track 2), and Unrestricted Use (Track 1) SCOs in sample SB23. In addition, benzo(a)anthracene, benzo(b)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene exceeded Residential Use (Track 2) and Unrestricted Use (Track 1) SCOs;
- Several metals were detected at concentrations above regulatory standards in soil samples SB05, SB12, SB21, and SB26. Lead in sample SB05; lead and zinc in sample SB12; arsenic, copper, lead, nickel, and zinc in sample SB21; and nickel in sample SB26 exceeded Unrestricted Use (Track 1) SCOs. Exceedances for lead were detected at concentrations between 210 and 340 ppm. TCLP analysis on composite waste classification samples TCLP01 through TCLP06 indicates that soil beneath the surface of the Corridor is nonhazardous;



- The composite waste classification samples TCLP01 through TCLP06 were analyzed for USEPA RCRA hazardous waste characteristics including corrosivity, ignitability, reactivity and toxicity. Results of these analyses indicate that the soil beneath the Corridor does not exhibit evidence of hazardous waste characteristics; and
- The groundwater samples TWP07, TWP11, and TWP18 were analyzed for the parameters required by the NYCDEP Limitations for Effluent to Sanitary or Combined Sewers (Daily Limit). Total Suspended Solids (TSS) was detected above the NYCDEP Sewer Discharge Limit of 350 mg/L in samples TWP07 and TWP11. The exceedances of TSS are likely attributed to increased turbidity of the sample from conventional grab sampling procedures. In addition, groundwater samples exhibited numerous exceedances for metals which are typical given the increased turbidity of the groundwater during sampling procedures. Metals exceeding the NYCDEP Sewer Discharge Limit include lead in sample TWP07 and copper, lead, nickel, and zinc in samples TWP11 and TWP18. Based on the results for TSS and metals, groundwater does not meet NYCDEP Sewer Discharge criteria and may require pre-treatment prior to discharge.

Based on the results of the field investigation and laboratory analytical results, LBA recommends the following:

- The Contract documents should identify provisions for managing, handling, transporting, and disposing of SVOC, metals, and petroleum-impacted non-hazardous soil. As a contingency, contract documents should include specifications for transporting hazardous. 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. The Contractor may implement dust control measures to minimize potential airborne contaminants released into the ambient environment as a direct result of construction activities. A Community Air Monitoring Plan (CAMP) should be developed in accordance with NYSDEC DER-10 Regulations. The CAMP requires real-time monitoring for 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 area of the surrounding community located downwind from the potential release of airborne contaminants. Specific requirements should be reviewed for each situation and coordinate with the New York State Department of Health (NYSDOH) to ensure proper applicability;
- Based on the observed depth to groundwater (10 to 12 ft bgs) dewatering may be necessary during construction activities in the Corridor. Total suspended solids were detected in groundwater samples TWP07 and TWP11 and several metals were detected in samples TWP07, TWP11, and TWP18 at concentrations exceeding the NYCDEP Sewer Discharge Limitations and groundwater may require pretreatment prior to discharge to sanitary or combined sewers; however, the contractor will be required to obtain a NYCDEP sewer

discharge permit and perform sampling and laboratory analysis prior to discharge into sanitary and combined sewers;

- In addition, if discharge into storm sewers is required during 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 should submit a site-specific health and safety plan (HASP) that will meet the requirements set forth by the Occupational, Safety and Health Administration (OSHA), the 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 for metals).



## 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:

---

Evan Mankoff, P.G.  
Manager, Subsurface Investigations

Report Reviewed By:

---

Michael J. McCloskey, PG  
QA/QC 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 Site 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 Site.

LBA derived the data in this report primarily from visual inspections, examination of records in the public domain, interviews with individuals with information about the Site, 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 Site, analysis of the data, and reevaluation of the findings, observations, and conclusions expressed in the report.

In preparing this report, LBA has relied upon and presumed accurate certain information (or the absence thereof) about the Site and adjacent properties provided by governmental officials and agencies, the Client, and others identified herein. Except as otherwise stated in the report, LBA 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 Site.

Because of the limitations stated above, the findings, observations, and conclusions expressed by LBA 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 site 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 site 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 ENVIRONMENTAL BORING DATA**
- TABLE 2 – SUMMARY OF TCL VOCs DETECTED IN SOIL**
- TABLE 3 – SUMMARY OF TCL SVOCs DETECTED IN SOIL**
- TABLE 4 – SUMMARY OF TAL METALS DETECTED IN SOIL**
- TABLE 5 – SUMMARY OF PESTICIDES DETECTED IN SOIL**
- TABLE 6 – SUMMARY OF HERBICIDES DETECTED IN SOIL**
- TABLE 7 – SUMMARY OF PCBs DETECTED IN SOIL**
- TABLE 8 – SUMMARY OF WASTE CLASSIFICATION PARAMETERS  
DETECTED IN SOIL**
- TABLE 9 – SUMMARY OF GROUNDWATER QUALITY COMPARED  
TO NYC DEP**

**Table 1. Summary of Environmental Boring Data**  
**Phase II Subsurface Corridor Investigation for Dumbo/Vinegar Hill Area Reconstruction and Plaza**  
**Brooklyn, New York**

Boring No.	Sample ID	High PID (ppm)	Sample Interval (ftbgs)	Total VOCs (mg/kg)	Total SVOCs (mg/kg)	Metals Exceed (Yes/No) <sup>1</sup>	Depth to Water (ftbgs)	Total Depth (ftbgs)	Other Comments
SB01	SB01	<1	8.5 - 9.0	0.045	--	No	10.0	20	
			0 - 20	--	ND				
SB02	SB02	<1	7.5 - 8.0	0.0523	--	No	15.0	20	
			0 - 20	--	ND				
SB03	SB03	<1	7.5 - 8.0	ND	--	No	10.0	20	
			0 - 20	--	ND				
SB04	SB04	<1	15.0 - 15.5	ND	--	No	15.0	20	
			0 - 20	--	ND				
SB05	SB05	23.5	17.5 - 18.0	0.245	--	Yes	10.0	20	Organic debris and petroleum odor
			0 - 20	--	1.451				
SB07	SB07	<1	11.5 - 12.0	ND	--	No	10.0	20	Collected groundwater sample TWP07 from a temporary well point.
			0 - 20	--	ND				
SB08	SB08	<1	11.0 - 11.5	0.0057	--	No	11.5	20	
			0 - 20	--	11.730				
SB09	SB09	<1	7.0 - 7.5	0.075	--	No	10.0	20	
			0 - 20	--	0.06				
SB10	SB10	11.7	10.5 - 11.0	2.87	--	No	11.0	20	Petroleum odor
			0 - 20	--	10.600				
SB11	SB11	<1	6.0 - 6.5	ND	--	No	10.0	20	Collected groundwater sample TWP11 from a temporary well point.
			0 - 20	--	ND				
SB12	SB12	<1	0.0 - 5.0	0.064	--	Yes	NE	5	Refusal at 5 ft bgs.
			0 - 5	--	2.380				
SB13	SB13	<1	10.5 - 11.0	ND	--	No	11.0	20	
			0 - 20	--	ND				
SB14	SB14	<1	8.5 - 9.0	0.782	--	No	10.0	20	
			0 - 20	--	ND				
SB15	SB15	<1	15.5 - 16.0	0.031	--	No	16.0	20	
			0 - 20	--	ND				

**Notes:**

**All concentrations are reported in parts per million or milligrams per kilogram (ppm or mg/kg)**

1. Metal(s) exceeds Unrestricted Use (Track 1), Residential Use or Commercial Use (Track 2) SCOs.

All soil samples were analyzed for Target Compound List (TCL) Volatile Organic Compounds, Semi-Volatile Organic Compounds (SVOCs) Pesticides, PCBs, Target Analyte List (TAL) Metals and Herbicides.

All groundwater samples were analyzed for NYCDEP Limitations for Effluent to Sanitary or Combined Sewers

ND = Not Detected

NE = Not Encountered

ftbgs = feet below ground surface

**Table 1. Summary of Environmental Boring Data**  
**Phase II Subsurface Corridor Investigation for Dumbo/Vinegar Hill Area Reconstruction and Plaza**  
**Brooklyn, New York**

Boring No.	Sample ID	High PID (ppm)	Sample Interval (ftbgs)	Total VOCs (mg/kg)	Total SVOCs (mg/kg)	Metals Exceed (Yes/No) <sup>1</sup>	Depth to Water (ftbgs)	Total Depth (ftbgs)	Other Comments
SB17	SB17	< 1	17.5 - 18.0	ND	--	No	18.0	20	
			0 - 20	--	ND				
SB18	SB18	< 1	7.0 - 7.5	ND	--	No	10.8	20	Collected groundwater sample TWP18 from a temporary well point.
			0 - 20	--	ND				
SB19	SB19	< 1	7.5 - 8.0	ND	--	No	NE	10	
			0 - 10	--	0.460				
SB20	SB20	< 1	17.5 - 18.0	ND	--	No	NE	20	
			0 - 20	--	ND				
SB21	SB21	< 1	19.5 - 20.0	ND	--	Yes	NE	20	
			0 - 20	--	1.850				
SB22	SB22	< 1	17.5 - 18.0	ND	--	No	NE	20	
			0 - 20	--	0.092				
SB23	SB23	< 1	18.5 - 19.0	ND	--	No	NE	20	
			0 - 20	--	16.472				
SB24	SB24	< 1	19.0 - 19.5	ND	--	No	NE	20	
			0 - 20	--	ND				
SB25	SB25	< 1	17.5 - 18.0	ND	--	No	NE	20	
			0 - 20	--	ND				
SB26	SB26	< 1	18.5 - 19.0	ND	--	Yes	NE	20	
			0 - 20	--	ND				

**Notes:**

**All concentrations are reported in parts per million or milligrams per kilogram (ppm or mg/kg)**

1. Metal(s) exceeds Unrestricted Use (Track 1), Residential Use or Commercial Use (Track 2) SCOs.

All soil samples were analyzed for Target Compound List (TCL) Volatile Organic Compounds, Semi-Volatile Organic Compounds (SVOCs)

Pesticides, PCBs, Target Analyte List (TAL) Metals and Herbicides.

All groundwater samples were analyzed for NYCDEP Limitations for Effluent to Sanitary or Combined Sewers

ND = Not Detected

NE = Not Encountered

ftbgs = feet below ground surface

Table 2. Summary of Target Compound List Volatile Organic Compounds Detected in Soil  
Phase II Subsurface Corridor Investigation for Dumbo/Vinegar Hill Area Reconstruction and Plaza  
Brooklyn, New York

TCL VOC	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Commercial Use (Track 2) Soil Cleanup Objectives (SCOs)	Residential Use (Track 2) Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected, and Depth													
				SB01 1/11/2013 8.5-9.0	SB02 1/11/2013 7.5-8.0	SB03 1/14/2013 7.5-8.0	SB04 1/14/2013 15.0-15.5	SB05 1/11/2013 17.5-18.0	SB07 1/14/2013 11.5-12.0	SB08 1/15/2013 11.0-11.5	SB09 1/15/2013 7.0-7.5	SB10 1/10/2013 10.5-11.0	SB11 1/10/2013 6.0-6.5	SB12 1/10/2013 0.0-5.0	SB13 1/10/2013 10.5-11.0		
2-Butanone (MEK)	NS	NS	NS	ND	ND	ND	ND	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	0.05	500	100	0.045	0.043	ND	ND	0.21	ND	ND	ND	ND	ND	ND	ND	ND	0.064
Benzene	0.06	44	2.9	ND	0.0033	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	NS	NS	NS	ND	0.006	ND	ND	0.0052	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	0.25	500	59	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Acetate	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	0.93	500	62	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	0.05	500	51	ND	ND	ND	ND	ND	ND	ND	ND	0.0057	0.0075	ND	ND	ND	ND
Trichloroethene	1.3	150	5.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	0.47	200	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

All concentrations are reported in parts per million or milligrams per kilogram (ppm or mg/kg)

ND = Compound not detected above method detection limit (see attached lab report for mdls)

B = No Standard

NS = Compound was detected in an associated method blank.

SCOs = Soil Cleanup Objectives as per the NYSDC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006)

**BOLD = Concentration exceeds Residential Use (Track 2) Soil Cleanup Objectives**

**Shading = Concentration exceeds Commercial Use (Track 1) Soil Cleanup Objectives**

Underline = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

DDC Project Number: BED794

Work Order Letter No. 8683-LBA-3-8100



Table 2. Summary of Target Compound List Volatile Organic Compounds Detected in Soil  
 Phase II Subsurface Corridor Investigation for Dumbo/Vinegar Hill Area Reconstruction and Plaza  
 Brooklyn, New York

TCL VOC	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Commercial Use (Track 2) Soil Cleanup Objectives (SCOs)	Residential Use (Track 2) Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected, and Depth												
				SB14	SB15	SB17	SB18	SB19	SB20	SB21	SB22	SB23	SB24	SB25	SB26	
2-Butanone (MEK)	NS	NS	NS	1/9/2013 8.5-9.0	1/9/2013 15.5-16.0	1/9/2013 17.5-18.0	1/9/2013 7.0-7.5	1/15/2013 7.5-8.0	1/16/2013 17.5-18.0	1/16/2013 19.5-20.0	1/17/2013 17.5-18.0	1/17/2013 18.5-19.0	1/17/2013 19.0-19.5	1/17/2013 17.5-18.0	1/17/2013 18.5-19.0	
Acetone	0.05	500	100	0.27	0.031	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	0.06	44	2.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	0.25	500	.59	0.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Acetate	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	0.93	500	62	0.0019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	0.05	500	51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1.3	150	5.5	0.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	0.47	200	10	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

**Notes:**  
 All concentrations are reported in parts per million or milligrams per kilogram (ppm or mg/kg)  
 ND = Compound not detected above method detection limit (see attached lab report for mds)  
 NS = No Standard  
 B = Compound was detected in an associated method blank.  
 SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006)  
**BOLD = Concentration exceeds Residential Use (Track 2) Soil Cleanup Objectives**  
 Shading = Concentration exceeds Commercial Use (Track 1) Soil Cleanup Objectives  
 Underline = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

DDC Project Number: BED794

Work Order Letter No. 8663-LBA-3-8100

Table 3. Summary of Target Compound List Semi-Volatile Organic Compounds Detected in Soil  
Phase II Subsurface Corridor Investigation for Dumbo/Vinegar Hill Area Reconstruction and Plaza  
Brooklyn, New York

TCL SVOC	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Commercial Use (Track 2) Soil Cleanup Objectives (SCOs)	Residential Use (Track 2) Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected, and Depth												
				SB01	SB02	SB03	SB04	SB05	SB07	SB08	SB09	SB10	SB11	SB12	SB13	
				1/11/2013 0 - 20	1/11/2013 0 - 20	1/14/2013 0 - 20	1/14/2013 0 - 20	1/11/2013 0 - 20	1/14/2013 0 - 20	1/15/2013 0 - 20	1/15/2013 0 - 20	1/10/2013 0 - 20	1/10/2013 0 - 20	1/10/2013 0 - 5	1/10/2013 0 - 20	
2-Methylnaphthalene	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	0.11	ND	5.8	ND	ND	ND
Acenaphthene	20	500	100	ND	ND	ND	ND	ND	ND	ND	0.42	ND	1.7	ND	ND	ND
Anthracene	100	500	100	ND	ND	ND	ND	ND	ND	ND	0.72	ND	ND	0.039	ND	ND
Benzo(a)anthracene	1	5.6	1	ND	ND	ND	ND	0.14	ND	ND	0.77	ND	0.11	ND	0.18	ND
Benzo(a)pyrene	1	1	1	ND	ND	ND	ND	0.11	ND	ND	0.66	ND	ND	ND	0.2	ND
Benzo(b)fluoranthene	1	5.6	1	ND	ND	ND	ND	0.13	ND	ND	0.75	ND	ND	ND	0.25	ND
Benzo(g,h,i)perylene	100	500	100	ND	ND	ND	ND	0.09	ND	ND	0.49	ND	ND	ND	0.24	ND
Benzo(k)fluoranthene	0.8	56	1	ND	ND	ND	ND	ND	ND	ND	0.25	ND	ND	ND	0.074	ND
bis(2-Ethylhexyl)Phthalate	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.068	ND
Carbazole	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	0.23	ND	ND	ND	ND	ND
Chrysene	1	56	1	ND	ND	ND	ND	0.12	ND	ND	0.68	ND	0.3	ND	0.18	ND
Dibenz(a,h)anthracene	0.33	0.56	0.33	ND	ND	ND	ND	ND	ND	ND	0.12	ND	ND	ND	0.059	ND
Dibenzofuran	NS	350	14	ND	ND	ND	ND	ND	ND	ND	0.27	ND	0.6	ND	ND	ND
Di-n-butylphthalate	NS	NS	NS	ND	ND	NS	NS	ND	ND	ND	0.13 B	0.055 B	ND	ND	ND	ND
Fluoranthene	100	500	100	ND	ND	100	100	0.26	ND	ND	1.8	ND	0.13	ND	0.28	ND
Fluorene	30	500	100	ND	ND	100	100	ND	ND	ND	0.31	ND	1.4	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	0.5	5.6	0.5	ND	ND	5.6	5.6	0.091	ND	ND	0.41	ND	ND	ND	0.19	ND
Naphthalene	12	500	100	ND	ND	500	500	ND	ND	ND	0.26	ND	ND	ND	ND	ND
Phenanthrene	100	500	100	ND	ND	500	500	0.19	ND	ND	2.5	ND	ND	ND	0.16	ND
Pyrene	100	500	100	ND	ND	500	500	0.32	ND	ND	2.1	ND	0.56	ND	0.46	ND

**Notes:**  
All concentrations are reported in parts per million or milligrams per kilogram (ppm or mg/kg)  
ND = Compound not detected above method detection limit (see attached lab report for mdf's)  
NS = No Standard

B = Compound was detected in an associated method blank.

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006)

**BOLD = Concentration exceeds Residential Use (Track 2) Soil Cleanup Objectives**

**Shading = Concentration exceeds Commercial Use (Track 1) Soil Cleanup Objectives**

**Underline = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives**

DDC Project Number: BED794

Work Order Letter No. 8683-LBA-3-8100

**Table 3. Summary of Target Compound List Semi-Volatile Organic Compounds Detected in Soil  
Phase II Subsurface Corridor Investigation for Dumbo/Vinegar Hill Area Reconstruction and Plaza  
Brooklyn, New York**

TCL SVOC	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Commercial Use (Track 2) Soil Cleanup Objectives (SCOs)	Residential Use (Track 2) Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected, and Depth														
				SB14 1/9/2013 0 - 20	SB15 1/9/2013 0 - 20	SB17 1/9/2013 0 - 20	SB18 1/9/2013 0 - 20	SB19 1/15/2013 0 - 10	SB20 1/16/2013 0 - 20	SB21 1/16/2013 0 - 20	SB22 1/16/2013 0 - 20	SB23 1/17/2013 0 - 20	SB24 1/17/2013 0 - 20	SB25 1/17/2013 0 - 20	SB26 1/17/2013 0 - 20			
2-Methylnaphthalene	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	500	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	100	500	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benz(a)anthracene	1	5.6	1	ND	ND	ND	ND	0.048	ND	0.16	ND	1.3	ND	ND	ND	ND	ND	ND
Benz(a)pyrene	1	1	1	ND	ND	ND	ND	0.047	ND	0.12	ND	1.4	ND	ND	ND	ND	ND	ND
Benz(b)fluoranthene	1	5.6	1	ND	ND	ND	ND	0.053	ND	0.15	ND	1.8	ND	ND	ND	ND	ND	ND
Benz(k)fluoranthene	100	500	100	ND	ND	ND	ND	ND	ND	0.078	ND	1.2	ND	ND	ND	ND	ND	ND
Benz(ghi)perylene	0.8	56	1	ND	ND	ND	ND	ND	ND	0.055	ND	0.51	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)Phthalate	NS	NS	NS	ND	ND	ND	ND	ND	ND	0.038	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	1	56	1	ND	ND	ND	ND	0.041	ND	0.19	ND	1.1	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	0.33	0.56	0.33	ND	ND	ND	ND	ND	ND	ND	ND	0.4	ND	ND	ND	ND	ND	ND
Dibenzofuran	NS	350	14	ND	ND	ND	ND	ND	ND	ND	ND	0.085	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	NS	NS	NS	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	100	500	100	ND	ND	500	100	0.089	ND	0.3	0.042	2	ND	ND	ND	ND	ND	ND
Fluorene	30	500	100	ND	ND	500	100	ND	ND	ND	ND	0.097	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	0.5	5.6	0.5	ND	ND	5.6	0.5	ND	ND	0.063	ND	0.97	ND	ND	ND	ND	ND	ND
Naphthalene	12	500	100	ND	ND	500	100	ND	ND	ND	ND	0.04	ND	ND	ND	ND	ND	ND
Phenanthrene	100	500	100	ND	ND	500	100	0.062	ND	0.35	ND	1.7	ND	ND	ND	ND	ND	ND
Pyrene	100	500	100	ND	ND	500	100	0.12	ND	0.3	0.05	3.2	ND	ND	ND	ND	ND	ND

**Notes:**  
 All concentrations are reported in parts per million or milligrams per kilogram (ppm or mg/kg)  
 ND = Compound not detected above method detection limit (see attached lab report for mdls)  
 NS = No Standard  
 B = Compound was detected in an associated method blank.  
 SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006)  
**BOLD = Concentration exceeds Residential Use (Track 2) Soil Cleanup Objectives**  
Shading = Concentration exceeds Commercial Use (Track 1) Soil Cleanup Objectives  
Underline = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

Table 4. Summary of Target Analyte List Metals Detected in Soil  
Phase II Subsurface Corridor Investigation for Dumbo/Vinegar Hill Area Reconstruction and Plaza  
Brooklyn, New York

Target Analyte List Metal	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Commercial Use (Track 2) Soil Cleanup Objectives (SCOs)	Residential Use (Track 2) Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected, and Depth												
				SB01	SB02	SB03	SB04	SB05	SB07	SB08	SB09	SB10	SB11	SB12	SB13	
				1/1/2013 0 - 20	1/1/2013 0 - 20	1/4/2013 0 - 20	1/4/2013 0 - 20	1/1/2013 0 - 20	1/14/2013 0 - 20	1/15/2013 0 - 20	1/15/2013 0 - 20	1/10/2013 0 - 20	1/10/2013 0 - 20	1/10/2013 0 - 5	1/10/2013 0 - 20	
Aluminum	NS	NS	NS	7300	15000	7500	3500	8300	5100	4100	7400	7300	5500	7700	6000	
Arsenic	13	16	16	3.5	6.6	ND	ND	4.5	ND	4.4	3	3.8	7.2	7.1	ND	
Barium	350	400	350	22	32	56	21	56	28	15	44	22	39	98	39	
Cadmium	2.5	9.3	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Calcium Metal	NS	NS	NS	2100	7700	1700	ND	17000	ND	ND	ND	1400	1500	30000	1200	
Chromium	NS	NS	NS	12	27	15	7.8	16	10	12	15	14	12	15	13	
Cobalt	NS	NS	NS	5.5	11	8.6	3.3	7	5.1	5	8.6	6.7	6.3	6	6.2	
Copper	50	270	270	11	15	17	8	39	10	7.4	18	10	17	44	13	
Iron	NS	NS	NS	16000	31000	16000	7200	18000	11000	12000	16000	16000	14000	17000	12000	
Lead	63	1000	400	11	17	ND	29	210	17	6	6.4	6.1	6.4	390	6.1	
Magnesium	NS	NS	NS	3100	7600	3800	1500	5500	2300	1600	3400	3300	2900	8800	3000	
Manganese	1600	10000	2000	180	470	190	62	290	260	190	360	130	130	390	230	
Mercury	NS	2.8	0.81	ND	ND	ND	ND	0.35	ND	ND	ND	ND	ND	0.31	0.15	
Nickel	30	310	140	13	25	26	12	20	16	14	17	14	14	22	14	
Potassium	NS	NS	NS	1100	3200	1800	620	1600	880	ND	2100	1400	1400	1100	1600	
Sodium	NS	NS	NS	320 U	1400	420	ND	900	ND	ND	520	320	ND	440	300	
Vanadium	NS	NS	NS	17	35	20	ND	23	15	13	21	18	19	21	17	
Zinc	109	10000	2200	34	72	37	16	64	26	22	48	38	40	120	31	

**Notes:**  
 All concentrations are reported in parts per million or milligrams per kilogram (ppm or mg/kg).  
 ND = Compound not detected above method detection limit (see attached lab report for mdls)  
 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)  
**BOLD = Concentration exceeds Residential Use (Track 2) Soil Cleanup Objectives**  
Striking = Concentration exceeds Commercial Use (Track 1) Soil Cleanup Objectives  
Underline = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

Table 4. Summary of Target Analyte List Metals Detected in Soil  
Phase II Subsurface Corridor Investigation for Dumbo/Vinegar Hill Area Reconstruction and Plaza  
Brooklyn, New York

Target Analyte List Metal	Sample ID, Date Collected, and Depth																			
	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)		Commercial Use (Track 2) Soil Cleanup Objectives (SCOs)		Residential Use (Track 2) Soil Cleanup Objectives (SCOs)		SB14	SB15	SB17	SB18	SB19	SB20	SB21	SB22	SB23	SB24	SB25	SB26		
	19/2013	0 - 20	19/2013	0 - 20	19/2013	0 - 20	19/2013	0 - 20	19/2013	0 - 20	1/15/2013	0 - 10	1/16/2013	0 - 20	1/17/2013	0 - 20	1/17/2013	0 - 20	1/17/2013	0 - 20
Aluminum	NS	NS	NS	NS	NS	NS	4700	4600	6400	5000	8300	3500	3300	2500	2500	2400	3000	3300	3300	3300
Arsenic	13	16	16	16	16	16	ND	ND	ND	ND	2.6	ND	19	ND	4.9	ND	ND	ND	ND	ND
Barium	350	400	400	350	350	350	37	44	62	28	48	36	230	66	40	25	35	34	34	34
Cadmium	2.5	9.3	9.3	2.5	2.5	2.5	ND	ND	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND
Calcium Metal	NS	NS	NS	NS	NS	NS	1800	2500	5000	ND	1500	7600	2900	12000	4300	1500	5300	5100	5100	5100
Chromium	NS	NS	NS	NS	NS	NS	10	11	15	12	17	9.1	17	7.3	7.1	6.3	6.6	11	11	11
Cobalt	NS	NS	NS	NS	NS	NS	6.1	5.8	7.5	5	8.9	5.2	7.4	5	3.1	3.3	4.4	5.1	5.1	5.1
Copper	50	270	270	270	270	270	14	16	22	11	20	16	210	5.8	16	16	14	11	11	11
Iron	NS	NS	NS	NS	NS	NS	12000	11000	15000	11000	17000	9500	10000	9000	7200	7300	9100	9400	9400	9400
Lead	63	1000	1000	400	400	400	17	ND	16	6.6	6.2	9	340	ND	44	ND	8.2	ND	ND	ND
Magnesium	NS	NS	NS	NS	NS	NS	2700	3700	3800	2500	4000	4000	6900	2000	1800	1900	2400	5900	5900	5900
Manganese	1600	10000	10000	2000	2000	2000	190	220	260	200	290	270	700	200	200	240	270	200	200	200
Mercury	NS	2.8	2.8	0.81	0.81	0.81	ND	ND	ND	ND	ND	ND	0.37	ND	0.11	ND	ND	ND	ND	ND
Nickel	30	310	310	140	140	140	13	15	19	13	20	15	49	6.6	9.7	13	15	44	44	44
Potassium	NS	NS	NS	NS	NS	NS	1200	1400	2100	1000	1900	1100	890	ND	560	740	660	880	880	880
Sodium	NS	NS	NS	NS	NS	NS	ND	410	310	350	ND	ND	300	ND	ND	ND	ND	ND	ND	ND
Vanadium	NS	NS	NS	NS	NS	NS	17	19	23	18	26	16	19	11	17	14	28	15	15	15
Zinc	109	10000	10000	2200	2200	2200	29	31	64	26	52	25	660	15	56	17	22	23	23	23

**Notes:**  
 All concentrations are reported in parts per million or milligrams per kilogram (ppm or mg/kg).  
 ND = Compound not detected above method detection limit (see attached lab report for mdls)  
 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)  
**BOLD = Concentration exceeds Residential Use (Track 2) Soil Cleanup Objectives**  
 Shading = Concentration exceeds Commercial Use (Track 1) Soil Cleanup Objectives  
 Underline = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

DDC Project Number: BED794

Work Order Letter No. 8683-LBA-3-8100

**Table 5. Summary of Target Compound List Pesticides Detected in Soil**  
Phase II Subsurface Corridor Investigation for Dumbo/Vinegar Hill Area Reconstruction and Plaza  
Brooklyn, New York

Pesticide	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Commercial Use (Track 2) Soil Cleanup Objectives (SCOs)	Residential Use (Track 2) Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected, and Depth												
				SB01	SB02	SB03	SB04	SB05	SB07	SB08	SB09	SB10	SB11	SB12	SB13	
No Pesticides were detected	NS	NS	NS	1/17/2013 0 - 20	1/11/2013 0 - 20	1/14/2013 0 - 20	1/17/2013 0 - 20	1/17/2013 0 - 20	1/14/2013 0 - 20	1/15/2013 0 - 20	1/15/2013 0 - 20	1/10/2013 0 - 20	1/10/2013 0 - 20	1/10/2013 0 - 20	1/10/2013 0 - 20	1/10/2013 0 - 20

**Notes:**

All concentrations are reported in parts per million or milligrams per kilogram (ppm or mg/kg)

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)

**BOLD = Concentration exceeds Residential Use (Track 2) Soil Cleanup Objectives**

Shading = Concentration exceeds Commercial Use (Track 1) Soil Cleanup Objectives

Underline = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

DDC Project Number: BED794

Work Order Letter No. 8683-LBA-3-8100

Table 5. Summary of Target Compound List Pesticides Detected in Soil  
 Phase II Subsurface Corridor Investigation for Dumbo/Vinegar Hill Area Reconstruction and Plaza  
 Brooklyn, New York

Pesticide	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Commercial Use (Track 2) Soil Cleanup Objectives (SCOs)	Residential Use (Track 2) Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected, and Depth													
				SB14	SB15	SB17	SB18	SB19	SB20	SB21	SB22	SB23	SB24	SB25	SB26		
No Pesticides were detected	NS	NS	NS	1/9/2013	1/9/2013	1/9/2013	1/9/2013	1/15/2013	1/16/2013	1/16/2013	1/16/2013	1/17/2013	1/17/2013	1/17/2013	1/17/2013	1/17/2013	1/17/2013
				0 - 20	0 - 20	0 - 20	0 - 20	0 - 10	0 - 20	0 - 20	0 - 20	0 - 20	0 - 20	0 - 20	0 - 20	0 - 20	0 - 20
				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

**Notes:**  
 All concentrations are reported in parts per million or milligrams per kilogram (ppm or mg/kg)  
 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)  
**BOLD = Concentration exceeds Residential Use (Track 2) Soil Cleanup Objectives**  
**Shading = Concentration exceeds Commercial Use (Track 1) Soil Cleanup Objectives**  
Underline = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

DDC Project Number: BED794

Work Order Letter No. 8683-LBA-3-8100

**Table 6. Summary of Herbicides Detected in Soil**  
**Phase II Subsurface Corridor Investigation for Dumbo/Vinegar Hill Area Reconstruction and Plaza**  
**Brooklyn, New York**

Herbicide	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Commercial Use (Track 2) Soil Cleanup Objectives (SCOs)	Residential Use (Track 2) Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected, and Depth													
				SB01 1/11/2013 0 - 20	SB02 1/11/2013 0 - 20	SB03 1/14/2013 0 - 20	SB04 1/14/2013 0 - 20	SB05 1/11/2013 0 - 20	SB07 1/14/2013 0 - 20	SB08 1/15/2013 0 - 20	SB09 1/15/2013 0 - 20	SB10 1/10/2013 0 - 20	SB11 1/10/2013 0 - 20	SB12 1/10/2013 0 - 5	SB13 1/10/2013 0 - 20		
No Herbicides were detected	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

**Notes:**

All concentrations are reported in parts per million or milligrams per kilogram (ppm or mg/kg)

ND = Compound not detected above method detection limit (see attached lab report for mdls)

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)

**BOLD = Concentration exceeds Residential Use (Track 2) Soil Cleanup Objectives**

Shading = Concentration exceeds Commercial Use (Track 1) Soil Cleanup Objectives

Underline = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

DDC Project Number: BED794

Work Order Letter No. 8683-LBA-3-8100



**Table 6. Summary of Herbicides Detected in Soil**  
**Phase II Subsurface Corridor Investigation for Dumbo/Vinegar Hill Area Reconstruction and Plaza**  
**Brooklyn, New York**

Herbicide	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Commercial Use (Track 2) Soil Cleanup Objectives (SCOs)	Residential Use (Track 2) Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected and Depth													
				SB14	SB15	SB17	SB18	SB19	SB20	SB21	SB22	SB23	SB24	SB25	SB26		
No Herbicides were detected	NS	NS	NS	1/9/2013 0 - 20	1/9/2013 0 - 20	1/9/2013 0 - 20	1/9/2013 0 - 20	1/15/2013 0 - 10	1/16/2013 0 - 20	1/16/2013 0 - 20	1/17/2013 0 - 20	1/17/2013 0 - 20	1/17/2013 0 - 20	1/17/2013 0 - 20	1/17/2013 0 - 20	1/17/2013 0 - 20	1/17/2013 0 - 20

**Notes:**

- All concentrations are reported in parts per million or milligrams per kilogram (ppm or mg/kg)
- ND = Compound not detected above method detection limit (see attached lab report for mdls)
- NS = No Standard
- SCOs = Soil Cleanup Objectives as per the NYSDC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006)
- BOLD = Concentration exceeds Residential Use (Track 2) Soil Cleanup Objectives**
- Shading = Concentration exceeds Commercial Use (Track 1) Soil Cleanup Objectives
- Underline = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

**Table 7. Summary of Polychlorinated Biphenyls Detected in Soil**  
**Phase II Subsurface Corridor Investigation for Dumbo/Vinegar Hill Area Reconstruction and Plaza**  
**Brooklyn, New York**

PCB	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Commercial Use (Track 2) Soil Cleanup Objectives (SCOs)	Residential Use (Track 2) Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected, and Depth													
				SB01	SB02	SB03	SB04	SB05	SB07	SB08	SB09	SB10	SB11	SB12	SB13		
No PCBs were detected	NS	NS	NS	1/11/2013 0 - 20	1/11/2013 0 - 20	1/14/2013 0 - 20	1/14/2013 0 - 20	1/11/2013 0 - 20	1/11/2013 0 - 20	1/4/2013 0 - 20	1/15/2013 0 - 20	1/15/2013 0 - 20	1/10/2013 0 - 20	1/10/2013 0 - 20	1/10/2013 0 - 5	1/10/2013 0 - 20	ND

**Notes:**

All concentrations are reported in parts per million or milligrams per kilogram (ppm or mg/kg)

ND = Compound not detected above method detection limit (see attached lab report for md/s)

NS = No Standard

SCOs = Soil Cleanup Objectives as per the NYDEC Regulations & NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006)

**BOLD = Concentration exceeds Residential Use (Track 2) Soil Cleanup Objectives**

**Shading = Concentration exceeds Commercial Use (Track 1) Soil Cleanup Objectives**

**Underline = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives**

DDC Project Number: BED794

Work Order Letter No. 8683-LBA-3-8100

Table 7. Summary of Polychlorinated Biphenyls Detected in Soil  
 Phase II Subsurface Corridor Investigation for Dumbo/Vinegar Hill Area Reconstruction and Plaza  
 Brooklyn, New York

PCB	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Commercial Use (Track 2) Soil Cleanup Objectives (SCOs)	Residential Use (Track 2) Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected, and Depth													
				SB14	SB15	SB17	SB18	SB19	SB20	SB21	SB22	SB23	SB24	SB25	SB26		
No PCBs were detected	NS	NS	NS	1/19/2013 0 - 20	1/19/2013 0 - 20	1/19/2013 0 - 20	1/19/2013 0 - 20	1/15/2013 0 - 10	1/16/2013 0 - 20	1/16/2013 0 - 20	1/16/2013 0 - 20	1/17/2013 0 - 20	1/17/2013 0 - 20	1/17/2013 0 - 20	1/17/2013 0 - 20	1/17/2013 0 - 20	1/17/2013 0 - 20

**Notes:**  
 All concentrations are reported in parts per million or milligrams per kilogram (ppm or mg/kg)  
 ND = Compound not detected above method detection limit (see attached lab report for md/ls)  
 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)  
**BOLD = Concentration exceeds Residential Use (Track 2) Soil Cleanup Objectives**  
Shading = Concentration exceeds Commercial Use (Track 1) Soil Cleanup Objectives  
Underline = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

Table 8. Summary of Waste Classification Parameters Detected in Soil  
Phase II Subsurface Corridor Investigation for Dumbo/Vinegar Hill Area Reconstruction and Plaza  
Brooklyn, New York

Parameter	RCRA Hazardous Waste Levels	Sample ID and Date Collected					
		TCLP01 1/15/2013	TCLP02 1/15/2013	TCLP03 1/10/2013	TCLP04 1/9/2013	TCLP05 1/16/2013	TCLP06 1/17/2013
Ignitability	>140	NEG °F	NEG °F	NEG °F	NEG °F	NEG °F	NEG °F
pH	>2 and < 12.5	8.8	8.6	8.2	8.9	10	10
Reactive Cyanide	250 mg/kg	ND mg/kg	ND mg/kg	ND mg/kg	ND mg/kg	ND mg/kg	ND mg/kg
Reactive Sulfide	500 mg/kg	ND mg/kg	ND mg/kg	ND mg/kg	ND mg/kg	ND mg/kg	ND mg/kg
1,1-Dichloroethene	0.7 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
1,2-Dichloroethane	0.5 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
1,4-Dichlorobenzene	7.5 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
2-Butanone	200 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Benzene	0.5 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Carbon tetrachloride	0.5 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Chlorobenzene	100 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Chloroform	6 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Tetrachloroethene	0.7 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Trichloroethene	0.5 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Vinyl Chloride	0.2 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
2,4,5-Trichlorophenol	400 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
2,4,6-Trichlorophenol	2 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
2,4-Dinitrotoluene	0.13 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
2-Methylphenol	200 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
3&4-Methylphenol	200 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Hexachlorobenzene	0.13 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Hexachlorobutadiene	0.5 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Hexachlorocyclopentadiene	3 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Nitrobenzene	2 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Pentachlorophenol	100 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Pyridine	5 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Chloroethane	0.03 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Endrin	0.02 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Gamma-BHC	0.4 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Heptachlor	0.008 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Heptachlor epoxide	0.008 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Methoxychlor	10 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Toxaphene	0.5 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
2,4-D	10 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Silvex	1 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Arsenic	5 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Barium	100 mg/L	0.28 mg/L	0.32 mg/L	ND mg/L	0.42 mg/L	ND mg/L	0.66 mg/L
Cadmium	1 mg/L	ND mg/L	ND mg/L	ND mg/L	0.0017 mg/L	ND mg/L	ND mg/L
Chromium	5 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Lead	5 mg/L	ND mg/L	0.2 mg/L	ND mg/L	ND mg/L	ND mg/L	0.49 mg/L
Mercury	0.2 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Selenium	1 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L
Silver	5 mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L	ND mg/L

Notes:  
All concentrations are reported in parts per million, milligrams per kilogram, or milligrams per liter (ppm, mg/L, or mg/kg)  
NS = No Standard  
ND = Compound not detected above method detection limit (see attached lab report for mdf's)  
N/A = Not Analyzed  
Bold = Positive detection  
Shaded = Concentration exceeds RCRA Hazardous Waste Level

**Table 9. Groundwater Quality Compared to New York City Department of Environmental Protection  
Limitations for Effluent to Sanitary or Combined Sewers  
Phase II Subsurface Corridor Investigation for Dumbo/Vinegar Hill Area Reconstruction and Plaza  
Brooklyn, New York**

Parameter <sup>1</sup>	NYC DEP Limitations to Sanitary or Combined Sewers		Sample ID, Date Collected, and DTW		
			TWP07	TWP11	TWP18
			1/14/2013	1/10/2013	1/9/2013
			10	10	10.8
Non-Polar Material <sup>2</sup>	50	mg/L	ND mg/L	ND mg/L	ND mg/L
Flash Point - Liquid/Solid	> 140	°F	> 141 °F	> 141 °F	> 141 °F
pH	>2 and <10		7.1	7.2	7.1
Cadmium (Instantaneous or Composite)	2 or 0.69	mg/L	ND mg/L	ND mg/L	ND mg/L
Chromium Hexavalent (VI)	5	mg/L	ND mg/L	ND mg/L	ND mg/L
Copper	5	mg/L	ND mg/L	<b>78</b> mg/L	<b>33</b> mg/L
Lead	2	mg/L	<b>6.1</b> mg/L	<b>130</b> mg/L	<b>17</b> mg/L
Mercury	0.05	mg/L	ND mg/L	ND mg/L	ND mg/L
Nickel	3	mg/L	ND mg/L	<b>54</b> mg/L	<b>28</b> mg/L
Zinc	5	mg/L	ND mg/L	<b>150</b> mg/L	<b>49</b> mg/L
Benzene	134	ug/L	ND ug/L	<b>0.69</b> ug/L	ND ug/L
Carbontetrachloride	NS	ug/L	ND ug/L	ND ug/L	ND ug/L
Chloroform	NS	ug/L	<b>2.6</b> ug/L	ND ug/L	ND ug/L
1,4 Dichlorobenzene	NS	ug/L	ND ug/L	ND ug/L	ND ug/L
Ethylbenzene	380	ug/L	ND ug/L	ND ug/L	ND ug/L
MTBE (Methyl-Tert-Butyl-Ether)	50	ug/L	ND ug/L	ND ug/L	ND ug/L
Naphthalene	47	ug/L	ND ug/L	ND ug/L	ND ug/L
Phenol	NS	ug/L	ND ug/L	ND ug/L	ND ug/L
Tetrachloroethene	20	ug/L	<b>1.5</b> ug/L	ND ug/L	<b>3.2</b> ug/L
Toluene	74	ug/L	ND ug/L	ND ug/L	ND ug/L
1,2,4 Trichlorobenzene	NS	ug/L	ND ug/L	ND ug/L	ND ug/L
1,1,1 Trichloroethane	NS	ug/L	<b>1.2</b> ug/L	ND ug/L	<b>280</b> ug/L
Xylenes (Total)	74	ug/L	ND ug/L	ND ug/L	ND ug/L
PCBs (Total) <sup>3</sup>	1	ug/L	ND ug/L	ND ug/L	ND ug/L
Total Suspended Solids	350	mg/L	<b>530</b> mg/L	<b>590</b> mg/L	<b>280</b> mg/L
CBOD <sup>5</sup>	NS	mg/L	ND mg/L	ND mg/L	ND mg/L
Chloride <sup>5</sup>	NS	mg/L	<b>370</b> mg/L	<b>230</b> mg/L	<b>1600</b> mg/L
Total Nitrogen <sup>5</sup>	NS	mg/L	<b>14</b> mg/L	ND mg/L	<b>3.3</b> mg/L
Total Solids <sup>5</sup>	NS	mg/L	<b>1100</b> mg/L	<b>1400</b> mg/L	<b>4100</b> mg/L

**Notes:**

All concentrations are reported in parts per million, milligrams per liter (ppm or mg/L), parts per billion or micrograms per liter (ppb or ug/L)

°F = Degrees Fahrenheit

N/A = Compound or sample characteristic not analyzed

NS = No Standard

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

**Bold** = Positive detection

**BOLD and Shaded** = Concentration exceeds NYCDEP Limitations for Effluent to Sanitary or Combined Sewers (daily limit)

<sup>1</sup> All handling and preservation of collected samples and laboratory analyses of samples was performed in accordance with 40 CFR Part 136.

<sup>2</sup> Analysis for non-polar materials was performed by EPA method 1664.

<sup>3</sup> Analysis for polychlorinated biphenyls (PCBs) was performed according to EPA method 608 with method detection limit =<65 parts per trillion. Analysis for PCBs is required if discharge =>10,000 gallons per day (gpd) and duration of discharge > 10 days.

<sup>4</sup> For discharge => 10,000 gpd, the total suspended solids (TSS) limit is 350 mg/l. For discharge < 10,000 gpd, the limit is determined on a case by case basis

<sup>5</sup> Analysis for Carbonaceous Biochemical Oxygen Demand (CBOD), Chloride, Total Solids, and Total Nitrogen are required if proposed discharge => 10,000 gpd



**FIGURE 1 – TOPOGRAPHIC CORRIDOR LOCATION MAP**



**Legend**  
 [Dashed line box] Approximate Corridor Area



Louis Berger & Assoc., P.C.

DDC PROJECT NO. BED794 WOL NO.: 8683-LBA-3-8100

**TOPOGRAPHIC CORRIDOR LOCATION MAP**  
 Phase II Subsurface Corridor Investigation  
 DUMBO/VINEGAR HILL AREA  
 RECONSTRUCTION AND PLAZA  
 BROOKLYN, NEW YORK

Source: USGS Quadrangle Brooklyn, New York

SCALE: 1" = 1000' DATE: 1/30/2013 FIGURE: 1

**FIGURE 2 – SAMPLE LOCATION PLAN**





Lotis Berger & Assoc., P.C.  
 WOL 088348A-5498  
 SOIL BORING AND  
 TEMPORARY WELL LOCATION PLAN  
 Phase II Subsurface Corridor Investigation  
 DUMBO/VINEGAR HILL AREA  
 RECONSTRUCTION AND PLAZA  
 PROJECT, DUMBO, NY, NY  
 SCALE: 1" = 200' DATE: 2/4/2013 FIGURE 2

**Legend**

- Soil Boring Location
- Soil Boring and Temporary Well Location
- Approximate Corridor Area



**APPENDIX A**  
**BORING LOCATION PLAN**



PLYMOUTH ST

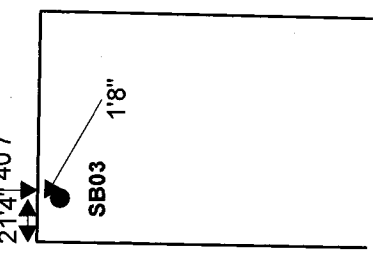
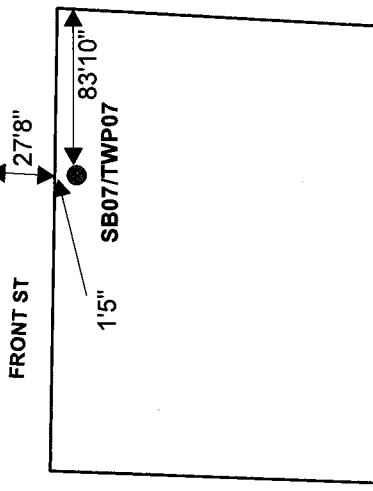
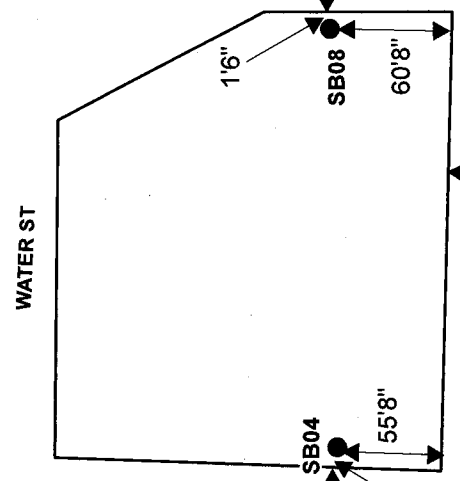
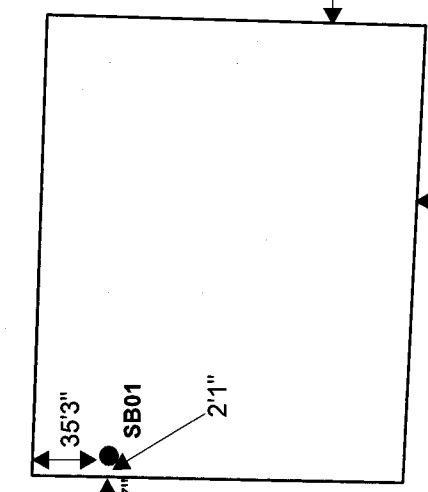
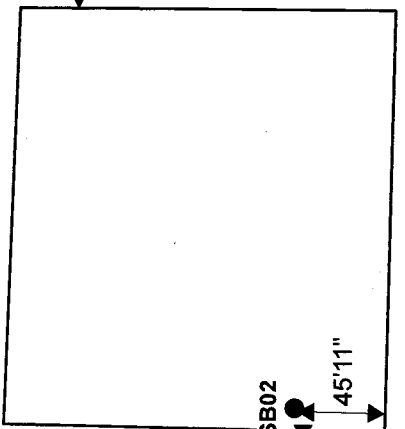
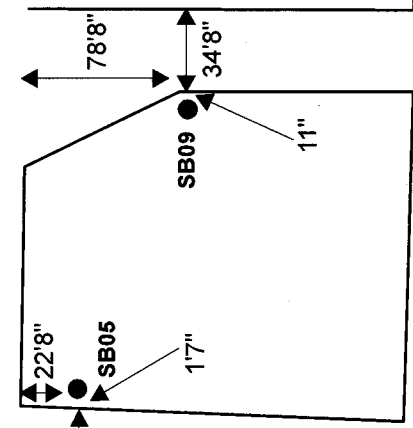
MAIN ST

WATER ST

WASHINGTON ST

ADAMS ST

FRONT ST



**Legend**

● Soil Boring Location

● Soil Boring and Temporary Well Location

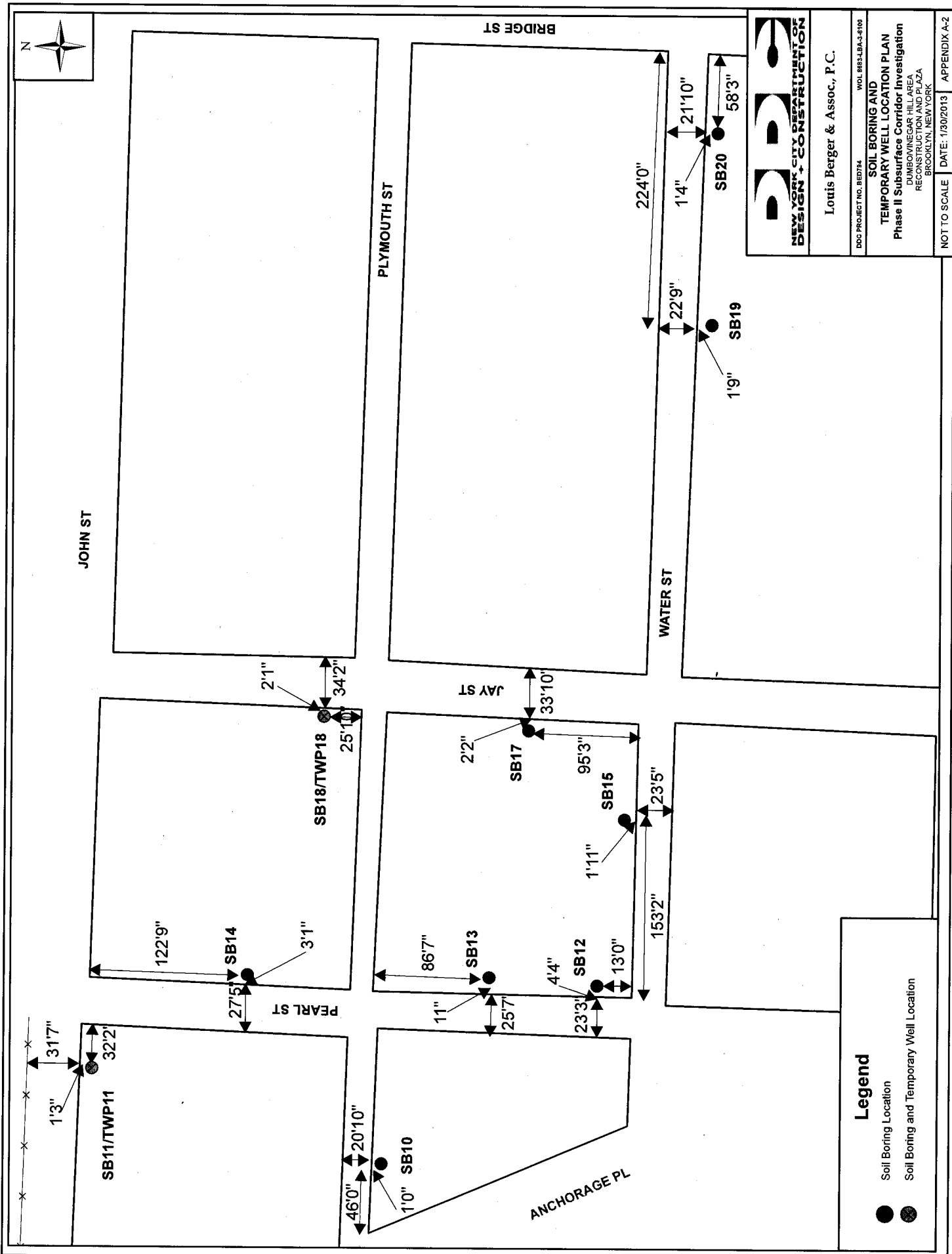


Louis Berger & Assoc., P.C.

DDC PROJECT NO. BBD784 WOL 8884-LBA-3-F100

**SOIL BORING AND  
TEMPORARY WELL LOCATION PLAN**  
Phase II Subsurface Corridor Investigation  
DUMBO/VINEGAR HILL AREA  
RECONSTRUCTION AND PLAZA  
BROOKLYN, NEW YORK

NOT TO SCALE DATE: 1/30/2013 APPENDIX A-1



**DBE**  
 NEW YORK CITY DEPARTMENT OF  
 DESIGN + CONSTRUCTION

Louis Berger & Assoc., P.C.

DDC PROJECT NO. BBD714 WOL 865-LBA-J-5106

**SOIL BORING AND  
 TEMPORARY WELL LOCATION PLAN**  
 Phase II Subsurface Corridor Investigation  
 DUMBO/VINEGAR HILL AREA  
 RECONSTRUCTION AND PLAZA  
 BROOKLYN, NEW YORK

NOT TO SCALE DATE: 1/30/2013 APPENDIX A-2

**Legend**

- Soil Boring Location
- Soil Boring and Temporary Well Location



HUDSON AVE

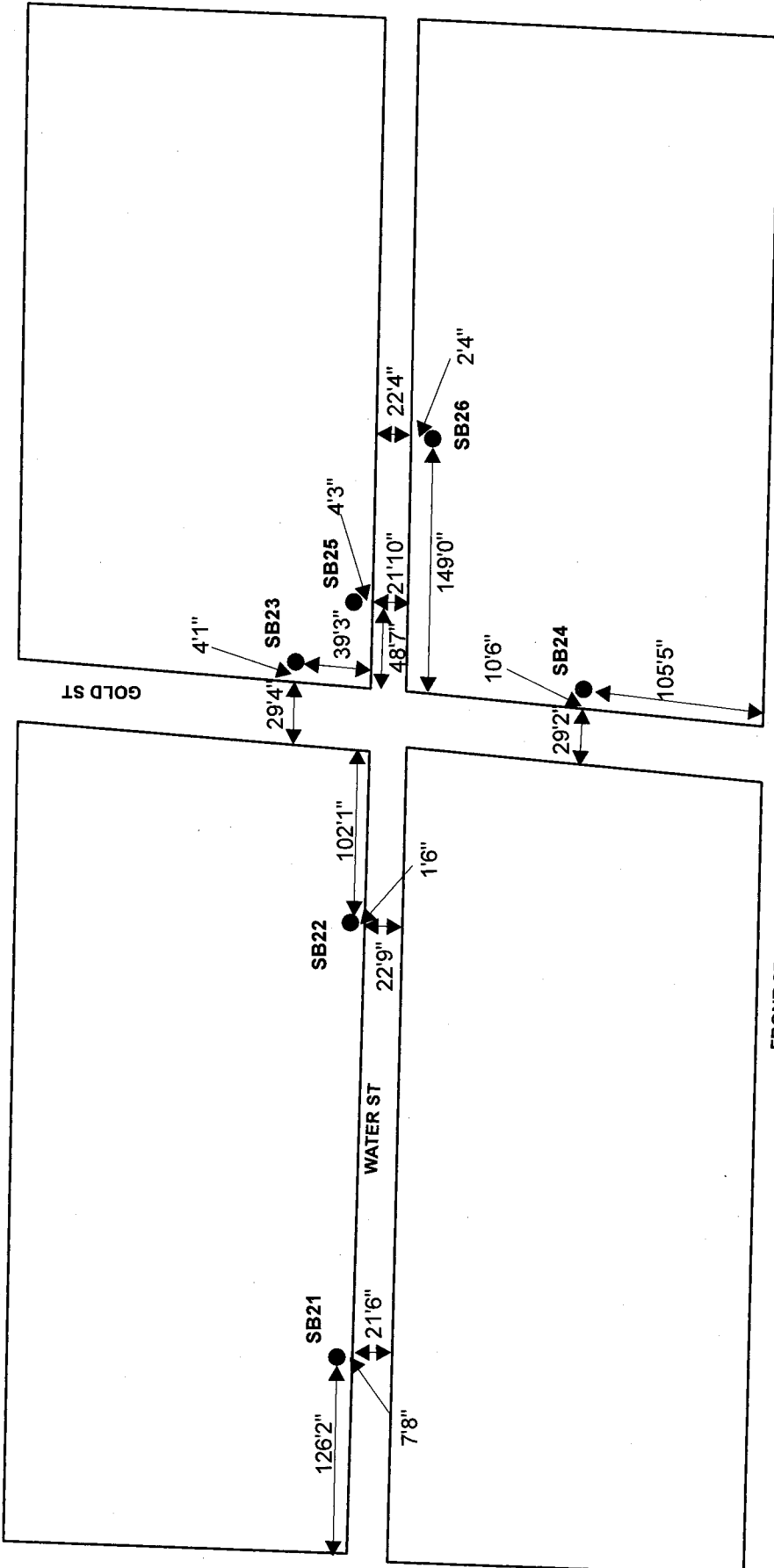
PLYMOUTH ST

GOLD ST

BRIDGE ST

WATER ST

FRONT ST



Louis Berger & Assoc., P.C.  
D&C PROJECT NO. BED784 WOL 8683-BA-3-8100

**SOIL BORING AND  
TEMPORARY WELL LOCATION PLAN**  
Phase II Subsurface Corridor Investigation  
DUMBO/VINEGAR HILL AREA  
RECONSTRUCTION AND PLAZA  
BROOKLYN, NEW YORK

NOT TO SCALE DATE: 1/30/2013 APPENDIX A-3

**Legend**

- Soil Boring Location
- ⊗ Soil Boring and Temporary Well Location



## **APPENDIX B**

### **GEOLOGIC BORING LOGS**

Louis Berger & Assoc., P.C.  
48 Wall Street, 16th Floor  
New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB01  
**WELL ID:** NA  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction

**PROJECT NO:** SPC870S4

**PROJECT:** DUMBO/Vinegar Hill Phase II SCI

**FMS ID#:** BED794

**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.

**WOL #:** 8683-LBA-3-8100

**DRILLING METHOD:** Geoprobe Direct Push

**DATE STARTED:** 1/11/2013

## BOREHOLE DATA

## WELL DATA

**DATE FINISHED:** 1/11/2013

**Diameter (in):** 2

**Well Diameter:** N/A

**DRILLER:** A. Larkin

**Total Depth (ft):** 20.00

**Total Depth (ft):** N/A

**LBA INSPECTOR:** J. Nelson

**Depth to Refusal (ft):** 20.00

**Screen Length (ft):** N/A

**NORTHING:** N/A

**Depth to Water (ft):** 10

**Depth to Water (ft):** N/A

**EASTING:** N/A

**Depth to Rock (ft):** N/A

**Slot Size:** N/A

**SURFACE ELEVATION:** N/A













**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Very light grey (N8) CONCRETE and COBBLES; dry.	Concrete(Fill)
	2		FILL				<1	Moderate yellowish brown (10YR5/4) coarse to fine SAND, little Silt, trace fine Gravel; moist.	Sand (Fill - brick)
	6		SP				<1	Moderate yellowish brown (10YR5/4) to dark yellowish brown (10YR4/2) medium to fine SAND, some Silt; moist.	Silty Sand
	8								

Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

**PROJECT NO.:** SPC870S4  
 Page 2 of 2

**BORING NO.:** SB01  
**WELL NO.:** NA

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10		SP				<1	Moderate yellowish brown (10YR5/4) to olive gray (5Y4/1) medium to fine SAND, some Silt; saturated.	Water Level at 10 ft bgs
	12		CL				<1	Olive gray (5Y4/1) Silty CALY; wet.	Silty Clay
	14								
	16		ML				<1	Olive gray (5Y4/1) SILT, and medium to fine Sand; saturated.	Sandy Silt  Collected grab sample SB01 from 8.5-9.0 ft bgs and composite sample from 0-20 ft bgs.
	18		CL				<1	Olive gray (5Y4/1) CLAY; wet.	Clay  End of Boring at 20 ft bgs
	20								



Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB02  
**WELL ID:** NA  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction

**PROJECT NO:** SPC870S4

**PROJECT:** DUMBO/Vinegar Hill Phase II SCI

**FMS ID#:** BED794

**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.

**WOL #:** 8683-LBA-3-8100

**DRILLING METHOD:** Geoprobe Direct Push

**DATE STARTED:** 1/11/2013

## BOREHOLE DATA

## WELL DATA

**DATE FINISHED:** 1/11/2013

**Diameter (in):** 2

**Well Diameter:** N/A

**DRILLER:** A. Larkin

**Total Depth (ft):** 20.00

**Total Depth (ft):** N/A

**LBA INSPECTOR:** J. Nelson

**Depth to Refusal (ft):** 20.00

**Screen Length (ft):** N/A

**NORTHING:** N/A

**Depth to Water (ft):** 15

**Depth to Water (ft):** N/A




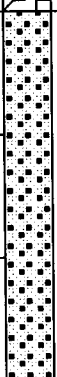


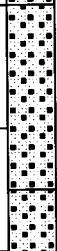


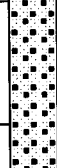





**EASTING:** N/A

**Depth to Rock (ft):** N/A

**Slot Size:** N/A

**SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Very light grey (N8) CONCRETE; dry.	Concrete(Fill)
	2		SP				<1	Dark yellowish brown (10YR4/2) coarse to fine SAND, little Silt, trace fine Gravel; moist.	Sand
	4		SP				<1	Dark yellowish brown (10YR4/2) coarse to fine SAND, little Silt, trace fine Gravel; moist.	
	6		SP					Olive gray (5Y4/1) coarse to fine SAND, little Silt; wet.	
	8								

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10		NA				<1	No Recovery	
	12								
	14								
	16		SP				<1	Olive gray (5Y4/1) coarse to fine SAND; saturated.	Water Level at 15 ft bgs Σ
	18		CL				<1	Olive gray (5Y4/1) CLAY; wet.	Clay  Collected grab sample SB02 from 7.5-8.0 ft bgs and composite sample from 0-20 ft bgs.  End of Boring at 20 ft bgs
	20								

Louis Berger & Assoc., P.C.  
48 Wall Street, 16th Floor  
New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB03  
**WELL ID:** NA  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction **PROJECT NO:** SPC870S4

**PROJECT:** DUMBO/Vinegar Hill Phase II SCI **FMS ID#:** BED794

**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc. **WOL #:** 8683-LBA-3-8100

**DRILLING METHOD:** Geoprobe Direct Push **DATE STARTED:** 1/14/2013

**BOREHOLE DATA** **WELL DATA** **DATE FINISHED:** 1/14/2013

**Diameter (in):** 2 **Well Diameter:** N/A **DRILLER:** A. Larkin

**Total Depth (ft):** 20.00 **Total Depth (ft):** N/A **LBA INSPECTOR:** J. Nelson

**Depth to Refusal (ft):** 20.00 **Screen Length (ft):** N/A **NORTHING:** N/A

**Depth to Water (ft):** 10 **Depth to Water (ft):** N/A **EASTING:** N/A

**Depth to Rock (ft):** N/A **Slot Size:** N/A **SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Light gray (N7) Concrete; dry.	Concrete(Fill)
	2		FILL				<1	Dusky yellowish brown (10YR2/2) coarse to fine SAND, little Silt, trace fine Gravel (fill material - brick, wood); dry.	Sand (Fill - brick)
	6		SP				<1	Dark yellowish brown (10YR4/2) medium to fine SAND, trace Silt, little medium to fine Gravel; dry.	Sand
	8		SP				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND; moist.	

Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

PROJECT NO.: SPC870S4

BORING NO.: SB03

Page 2 of 2

WELL NO.: NA

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10		SP				<1	Moderate yellowish brown (10YR5/4) medium to fine Sand; saturated.	Water Level at 10 ft bgs
	12		ML				<1	Moderate yellowish brown (10YR5/4) SILT; saturated.	Silt
	14								
	16		SM				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, and Silt; saturated.	Silty Sand
	18								Collected grab sample SB03 from 6.5-8.5 ft bgs and composite sample from 0-20 ft bgs.
	20								End of Boring at 20 ft bgs

Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB04  
**WELL ID:** NA  
**LOCATION:** Brooklyn, NY
















**CLIENT:** New York City Department of Design and Construction  
**PROJECT:** DUMBO/Vinegar Hill Phase II SCI  
**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.  
**DRILLING METHOD:** Geoprobe Direct Push

**PROJECT NO:** SPC870S4  
**FMS ID#:** BED794  
**WOL #:** 8683-LBA-3-8100  
**DATE STARTED:** 1/14/2013  
**DATE FINISHED:** 1/14/2013

BOREHOLE DATA		WELL DATA	
Diameter (in):	2	Well Diameter:	N/A
Total Depth (ft):	20.00	Total Depth (ft):	N/A
Depth to Refusal (ft):	20.00	Screen Length (ft):	N/A
Depth to Water (ft):	15	Depth to Water (ft):	N/A
Depth to Rock (ft):	N/A	Slot Size:	N/A

**DRILLER:** A. Larkin  
**LBA INSPECTOR:** J. Nelson  
**NORTHING:** N/A  
**EASTING:** N/A  
**SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Medium light grey (N6) CONCRETE and COBBLES; dry.	Concrete(Fill)
	2		FILL				<1	Dark yellowish brown (10YR4/2) coarse to fine SAND, some Silt, trace fine Gravel; dry.	Sily Sand (Fill - brick)
	4		NA				NA	No Recovery	
	6								
	8								

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10		NA				NA	No Recovery	
	12								
	14								
	16		SM				<1	Moderate yellowish brown (10YR5/4) to dark yellowish brown (10YR4/2) coarse to fine SAND, some Silt; saturated.	<p><b>Water Level at 15 ft bgs</b></p> <p><b>Silty Sand</b></p> <p>Collected grab sample SB05 from 15.5-16.0 ft bgs and composite sample from 0-20 ft bgs.</p> <p>End of Boring at 20 ft bgs</p>
	18								
	20								

Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB05  
**WELL ID:** NA  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction

**PROJECT NO:** SPC870S4

**PROJECT:** DUMBO/Vinegar Hill Phase II SCI

**FMS ID#:** BED794

**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.

**WOL #:** 8683-LBA-3-8100

**DRILLING METHOD:** Geoprobe Direct Push

**DATE STARTED:** 1/11/2013

## BOREHOLE DATA

## WELL DATA

**DATE FINISHED:** 1/11/2013

**Diameter (in):** 2

**Well Diameter:** N/A

**DRILLER:** A. Larkin

**Total Depth (ft):** 20.00

**Total Depth (ft):** N/A

**LBA INSPECTOR:** J. Nelson

**Depth to Refusal (ft):** 20.00

**Screen Length (ft):** N/A

**NORTHING:** N/A

**Depth to Water (ft):** 10

**Depth to Water (ft):** N/A

**EASTING:** N/A

**Depth to Rock (ft):** N/A

**Slot Size:** N/A

**SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Very light grey (N8) to medium light gray (N6) CONCRETE and COBBLES; dry.	Concrete(Fill)
	2		FILL				<1	Dusky yellowish brown (10YR2/2) to olive gray (5Y4/1) coarse to fine SAND, trace fine Gravel; moist.	Sand (Fill - brick)
	4								
	6		FILL				<1	Dusky yellowish brown (10YR2/2) to olive gray (5Y4/1) coarse to fine SAND, little Silt, trace fine Gravel; moist.	
	8								

Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

**PROJECT NO.:** SPC870S4  
 Page 2 of 2

**BORING NO.:** SB05  
**WELL NO.:** NA

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10								Water Level at 10 ft bgs
			SP				<1	Dark yellowish brown (10YR4/2) coarse to fine SAND, trace fine Gravel; saturated.	Sand
	12		SM				<1	Olive gray (5Y4/1) to dark gray (N3) medium to fine SAND, and Silt; saturated.	Sily Sand
	14								
	16		ML				23.5	Medium dark gray (N4) to grayish black (N2) SILT, and medium to fine Sand; saturated.	Sandy Silt
	18								Slight petroleum odor
									Collected grab sample SB05 from 17.5-18.0 ft bgs and composite sample from 0-20 ft bgs.
	20								End of Boring at 20 ft bgs



Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB07  
**WELL ID:** TWP07  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction

**PROJECT NO:** SPC870S4

**PROJECT:** DUMBO/Vinegar Hill Phase II SCI

**FMS ID#:** BED794

**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.

**WOL #:** 8683-LBA-3-8100

**DRILLING METHOD:** Geoprobe Direct Push

**DATE STARTED:** 1/14/2013

## BOREHOLE DATA

## WELL DATA

**DATE FINISHED:** 1/14/2013

**Diameter (in):** 2

**Well Diameter:** N/A

**DRILLER:** A. Larkin

**Total Depth (ft):** 20.00

**Total Depth (ft):** N/A

**LBA INSPECTOR:** J. Nelson

**Depth to Refusal (ft):** 20.00

**Screen Length (ft):** N/A

**NORTHING:** N/A

**Depth to Water (ft):** 10

**Depth to Water (ft):** N/A











**EASTING:** N/A

**Depth to Rock (ft):** N/A

**Slot Size:** N/A

**SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Very light gray (N8) Concrete; dry.	Concrete(Fill)
	2		FILL				<1	Dusky yellowish brown (10YR2/2) coarse to fine SAND, little Silt, trace fine Gravel (fill material - brick); moist.	Sand (Fill - brick)
	4		FILL				<1	Dusky yellowish brown (10YR2/2) coarse to fine SAND, little Silt, trace fine Gravel (fill material - brick); moist.	
	6		FILL				<1	Dusky yellowish brown (10YR2/2) coarse to fine SAND, little Silt, trace fine Gravel (fill material - brick); moist.	
	8		ML				<1	Moderate yellowish brown (10YR5/4) SILT, and medium to fine Sand, trace fine Gravel; moist.	Sandy Silt

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10	SM					<1	Moderate brown (5YR4/4) to moderate yellowish brown (10YR5/4) medium to fine SAND, and Silt, trace fine Gravel; wet.	Water Level at 10 ft bgs  Silty Sand
	12								
	14								
	16	SM					<1	Moderate brown (5YR4/4) medium to fine SAND, and Silt; saturated.	Collected grab sample SB07 from 11.5- 12.0 ft bgs and composite sample from 0-20 ft bgs.  End of Boring at 20 ft bgs
	18								
	20								

Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB08  
**WELL ID:** NA  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction

**PROJECT NO:** SPC870S4

**PROJECT:** DUMBO/Vinegar Hill Phase II SCI

**FMS ID#:** BED794

**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.

**WOL #:** 8683-LBA-3-8100

**DRILLING METHOD:** Geoprobe Direct Push

**DATE STARTED:** 1/15/2013

## BOREHOLE DATA

## WELL DATA

**DATE FINISHED:** 1/15/2013

**Diameter (in):** 2

**Well Diameter:** N/A

**DRILLER:** A. Larkin

**Total Depth (ft):** 20.00

**Total Depth (ft):** N/A

**LBA INSPECTOR:** J. Nelson

**Depth to Refusal (ft):** 20.00

**Screen Length (ft):** N/A

**NORTHING:** N/A

**Depth to Water (ft):** 11.5

**Depth to Water (ft):** N/A
















**EASTING:** N/A

**Depth to Rock (ft):** N/A

**Slot Size:** N/A

**SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Light gray (N7) Concrete; dry.	Concrete(Fill)
	2		FILL				<1	Dark yellowish brown (10YR4/2) coarse to fine SAND, little Silt, trace fine Gravel; dry.	Sand (Fill - brick)
	4		FILL				<1	Dark yellowish brown (10YR4/2) medium to fine SAND, and Silt (fill material - concrete); moist.	Silty Sand (Fill)
	6		FILL				<1	Dusky yellowish brown (10YR2/2) coarse to fine SAND, little Silt, trace fine Gravel; moist.	Sand (Fill)
	8		FILL				<1		

Well	Depth	Lith.	USCS	Interval	Rec.	BLOWS	PID	Description	Remarks
	10		FILL				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, and Silt (fill material - brick); moist.	Silty Sand (Fill)  Water Level at 11.5 ft bgs
	12		SM				<1	Dark yellowish brown (10YR4/2) medium to fine SAND, and Silt; saturated.	Silty Sand  Collected Waste Class Sample TCLP02
	14								
	16		SM				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, and Silt; saturated.	Collected grab sample SB08 from 11.0-11.5 ft bgs and composite sample from 0-20 ft bgs.
	18								End of Boring at 20 ft bgs
	20								

Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB09  
**WELL ID:** NA  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction  
**PROJECT:** DUMBO/Vinegar Hill Phase II SCI  
**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.  
**DRILLING METHOD:** Geoprobe Direct Push

**PROJECT NO:** SPC870S4  
**FMS ID#:** BED794  
**WOL #:** 8683-LBA-3-8100  
**DATE STARTED:** 1/15/2013  
**DATE FINISHED:** 1/15/2013

BOREHOLE DATA		WELL DATA	
Diameter (in):	2	Well Diameter:	N/A
Total Depth (ft):	20.00	Total Depth (ft):	N/A
Depth to Refusal (ft):	20.00	Screen Length (ft):	N/A
Depth to Water (ft):	10	Depth to Water (ft):	N/A
Depth to Rock (ft):	N/A	Slot Size:	N/A

**DRILLER:** A. Larkin  
**LBA INSPECTOR:** J. Nelson  
**NORTHING:** N/A  
**EASTING:** N/A  
**SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Very light gray (N8) Concrete; dry.	Concrete(Fill)
	2		FILL				<1	Moderate yellowish brown (10YR5/4) to dark yellowish brown (10YR4/2) coarse to fine SAND, some Silt, trace fine Gravel (fill material - brick); dry.	Sand (Fill - brick)
	6		FILL				<1	Dark gray (N3) coarse to fine SAND, trace Silt, little fine Gravel (fill material - brick); moist.	Sand (Fill)
	8		SM				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, and Silt; wet.	Silty Sand

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10	SM					<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, and Silt; saturated.	$\nabla$ <b>Water Level at 10 ft bgs</b>
	12								<b>Collected Waste Class Sample TCLP01</b>
	14								
	16	ML					<1	Dark greenish gray (5G4/1) SILT, and medium to fine Sand; saturated.	<b>Sandy Silt</b>
	18								<b>Collected grab sample SB09 from 7.0-7.5 ft bgs and composite sample from 0-20 ft bgs.</b>
	20								<b>End of Boring at 20 ft bgs</b>

Louis Berger & Assoc., P.C.  
48 Wall Street, 16th Floor  
New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB10  
**WELL ID:** NA  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction

**PROJECT NO:** SPC870S4

**PROJECT:** DUMBO/Vinegar Hill Phase II SCI

**FMS ID#:** BED794

**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.

**WOL #:** 8683-LBA-3-8100

**DRILLING METHOD:** Geoprobe Direct Push

**DATE STARTED:** 1/10/2013

## BOREHOLE DATA

## WELL DATA

**DATE FINISHED:** 1/10/2013

**Diameter (in):** 2

**Well Diameter:** N/A

**DRILLER:** A. Larkin

**Total Depth (ft):** 20.00

**Total Depth (ft):** N/A

**LBA INSPECTOR:** J. Nelson

**Depth to Refusal (ft):** 20.00

**Screen Length (ft):** N/A

**NORTHING:** N/A

**Depth to Water (ft):** 11

**Depth to Water (ft):** N/A

**EASTING:** N/A

**Depth to Rock (ft):** N/A

**Slot Size:** N/A

**SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Very light grey (N8) CONCRETE; dry.	Concrete(Fill)
	2		FILL				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, little Silt, trace fine Gravel; moist.	Sand (Fill - brick)
	6		SP				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND; moist.	Sand
	8								

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10		SP				11.7	Dusky yellowish brown (10YR2/2) to olive gray (5Y4/1) coarse to fine SAND, little Silt; moist.	Slight petroleum odor
	12		SP				<1	Dark yellowish brown (10YR4/2) coarse to fine SAND, little Silt; saturated.	Water Level at 11 ft bgs
	14								
	16		SP				<1	Olive gray (5Y4/1) medium to fine SAND, little Silt; saturated.	
	18		ML				<1	Olive gray (5Y4/1) SILT, little medium to fine Sand; saturated.	Silt  Collected grab sample SB10 from 10.5-11.0 ft bgs and composite sample from 0-20 ft bgs.
	20		SP				<1	Dark yellowish brown (10YR4/2) coarse to fine SAND, little Silt; saturated.	Sand  End of Boring at 20 ft bgs



Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB11  
**WELL ID:** TWP11  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction

**PROJECT NO:** SPC870S4

**PROJECT:** DUMBO/Vinegar Hill Phase II SCI

**FMS ID#:** BED794

**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.

**WOL #:** 8683-LBA-3-8100

**DRILLING METHOD:** Geoprobe Direct Push

**DATE STARTED:** 1/10/2013

## BOREHOLE DATA

## WELL DATA

**DATE FINISHED:** 1/10/2013

**Diameter (in):** 2

**Well Diameter:** N/A

**DRILLER:** A. Larkin

**Total Depth (ft):** 20.00

**Total Depth (ft):** N/A

**LBA INSPECTOR:** J. Nelson

**Depth to Refusal (ft):** 20.00

**Screen Length (ft):** N/A

**NORTHING:** N/A

**Depth to Water (ft):** 10

**Depth to Water (ft):** N/A

**EASTING:** N/A

**Depth to Rock (ft):** N/A

**Slot Size:** N/A

**SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Very light grey (N8) CONCRETE and COBBLES; dry.	Concrete(Fill)
	2		FILL				<1	Moderate yellowish brown (10YR5/4) coarse to fine SAND, some Silt, trace fine Gravel; moist.	Silty Sand (Fill - brick)
	4								
	6		FILL				<1	Moderate yellowish brown (10YR5/4) coarse to fine SAND, some Silt, trace fine Gravel; moist.	
	8								

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10	SM					<1	Moderate yellowish brown (10YR5/4) to dark yellowish brown (10YR4/2) coarse to fine SAND, some Silt, trace fine Gravel; saurated.	Water Level at 10 ft bgs  Silty Sand  Collected groudwater sample TWP11
	12								
	14								
	16	SM					<1	Dark yellowish brown (10YR4/2) coarse to fine SAND, and Silt; saturated.	Collected grab sample SB11 from 6.0-6.5 ft bgs and composite sample from 0-20 ft bgs.
	18								
	20								End of Boring at 20 ft bgs

Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

# Drilling Log

Page 1 of 1

**BORING ID:** SB12  
**WELL ID:** NA  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction  
**PROJECT:** DUMBO/Vinegar Hill Phase II SCI  
**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.  
**DRILLING METHOD:** Geoprobe Direct Push

**PROJECT NO:** SPC870S4  
**FMS ID#:** BED794  
**WOL #:** 8683-LBA-3-8100  
**DATE STARTED:** 1/10/2013  
**DATE FINISHED:** 1/10/2013

BOREHOLE DATA		WELL DATA	
<b>Diameter (in):</b> 2		<b>Well Diameter:</b> N/A	
<b>Total Depth (ft):</b> 5.00		<b>Total Depth (ft):</b> N/A	
<b>Depth to Refusal (ft):</b> 5.00		<b>Screen Length (ft):</b> N/A	
<b>Depth to Water (ft):</b> NA		<b>Depth to Water (ft):</b> N/A	
<b>Depth to Rock (ft):</b> N/A		<b>Slot Size:</b> N/A	











**DRILLER:** A. Larkin  
**LBA INSPECTOR:** J. Nelson  
**NORTHING:** N/A  
**EASTING:** N/A  
**SURFACE ELEVATION:** N/A


**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Very light grey (N8) CONCRETE; dry.	Concrete(Fill)
	2		FILL				<1	Dark yellowish brown (10YR4/2) coarse to fine SAND, little Silt; moist.	Sand (Fill - brick)  Collected grab sample SB12 from 0-5 ft bgs and composite sample from 0-5 ft bgs.  Collected sample TCLP03  Refusal at 5 ft bgs

<b>Louis Berger &amp; Assoc., P.C.</b> 48 Wall Street, 16th Floor New York, New York 10005	<h1>Drilling Log</h1> Page 1 of 2		<b>BORING ID:</b> SB13
			<b>WELL ID:</b> NA
			<b>LOCATION:</b> Brooklyn, NY
<b>CLIENT:</b> New York City Department of Design and Construction		<b>PROJECT NO:</b> SPC870S4	
<b>PROJECT:</b> DUMBO/Vinegar Hill Phase II SCI		<b>FMS ID#:</b> BED794	
<b>DRILLING CONTRACTOR:</b> Aquifer Drilling & Testing, Inc.		<b>WOL #:</b> 8683-LBA-3-8100	
<b>DRILLING METHOD:</b> Geoprobe Direct Push		<b>DATE STARTED:</b> 1/10/2013	
<b>BOREHOLE DATA</b>		<b>WELL DATA</b>	
<b>Diameter (in):</b> 2	<b>Well Diameter:</b> N/A	<b>DRILLER:</b> A. Larkin	
<b>Total Depth (ft):</b> 20.00	<b>Total Depth (ft):</b> N/A	<b>LBA INSPECTOR:</b> J. Nelson	
<b>Depth to Refusal (ft):</b> 20.00	<b>Screen Length (ft):</b> N/A	<b>NORTHING:</b> N/A	
<b>Depth to Water (ft):</b> 11	<b>Depth to Water (ft):</b> N/A	<b>EASTING:</b> N/A	
<b>Depth to Rock (ft):</b> N/A	<b>Slot Size:</b> N/A	<b>SURFACE ELEVATION:</b> N/A	

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Very light grey (N8) CONCRETE; dry.	Concrete(Fill)
	2		FILL				<1	Dark yellowish brown (10YR4/2) coarse to fine SAND, little Silt, trace fine Gravel; moist.	Sand (Fill - brick)
	4		FILL				<1	Dark yellowish brown (10YR4/2) coarse to fine SAND, little Silt, trace fine Gravel; moist.	
	6		FILL				<1	Dark yellowish brown (10YR4/2) coarse to fine SAND, little Silt, trace fine Gravel; moist.	
	8		FILL				<1	Dark yellowish brown (10YR4/2) coarse to fine SAND, little Silt, trace fine Gravel; moist.	

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10		FILL				<1	Dark yellowish brown (10YR4/2) coarse to fine SAND, little Silt; saturated.	 Water Level at 11 ft bgs
	12								
	14								
	16		FILL				<1	Dark yellowish brown (10YR4/2) medium to fine SAND; saturated.	Collected grab sample SB13 from 10.5-11.0 ft bgs and composite sample from 0-20 ft bgs.
	18		FILL				<1	Moderated brown (5YR4/4) coarse to fine SAND, little Silt, trace fine Gravel; saturated.	End of Boring at 20 ft bgs
	20								

<b>CLIENT:</b> New York City Department of Design and Construction	<b>PROJECT NO:</b> SPC870S4
<b>PROJECT:</b> DUMBO/Vinegar Hill Phase II SCI	<b>FMS ID#:</b> BED794
<b>DRILLING CONTRACTOR:</b> Aquifer Drilling & Testing, Inc.	<b>WOL #:</b> 8683-LBA-3-8100
<b>DRILLING METHOD:</b> Geoprobe Direct Push	<b>DATE STARTED:</b> 1/9/2013

BOREHOLE DATA	WELL DATA	DATE FINISHED:
<b>Diameter (in):</b> 2	<b>Well Diameter:</b> N/A	<b>DRILLER:</b> A. Larkin
<b>Total Depth (ft):</b> 20.00	<b>Total Depth (ft):</b> N/A	<b>LBA INSPECTOR:</b> J. Nelson
<b>Depth to Refusal (ft):</b> 20.00	<b>Screen Length (ft):</b> N/A	<b>NORTHING:</b> N/A
<b>Depth to Water (ft):</b> 10	<b>Depth to Water (ft):</b> N/A	<b>EASTING:</b> N/A
<b>Depth to Rock (ft):</b> N/A	<b>Slot Size:</b> N/A	<b>SURFACE ELEVATION:</b> N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Very light grey (N8) to grayish black (N2) CONCRETE; dry.	<b>Concrete(Fill)</b>
	2		FILL				<1	Dark yellowish brown (10YR4/2) medium to fine SAND; moist.	<b>Sand (Fill - brick)</b>
	4								
	6		SP				<1	Pale yellowish brown (10YR6/2) medium to fine SAND, trace fine Gravel; most.	<b>Sand</b>
	8								

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10		SP				<1	Dark yellowish brown (10YR4/2) to olive gray (5Y4/1) medium to fine SAND; saturated.	Water Level at 10 ft bgs
	12								
	14								
	16		SP				<1	Olive gray (5Y4/1) o dark yellowish brown (10YR4/2) medium to fine SAND; saturated.	Collected grab sample SB14 from 8.5-9.0 ft bgs and composite sample from 0-20 ft bgs.
	18								
	20								End of Boring at 20 ft bgs

<b>Louis Berger &amp; Assoc., P.C.</b> 48 Wall Street, 16th Floor New York, New York 10005	<h1 style="margin: 0;">Drilling Log</h1> <p style="margin: 0;">Page 1 of 2</p>		<b>BORING ID:</b> SB15
			<b>WELL ID:</b> NA
			<b>LOCATION:</b> Brooklyn, NY
<b>CLIENT:</b> New York City Department of Design and Construction			<b>PROJECT NO:</b> SPC870S4
<b>PROJECT:</b> DUMBO/Vinegar Hill Phase II SCI			<b>FMS ID#:</b> BED794
<b>DRILLING CONTRACTOR:</b> Aquifer Drilling & Testing, Inc.			<b>WOL #:</b> 8683-LBA-3-8100
<b>DRILLING METHOD:</b> Geoprobe Direct Push			<b>DATE STARTED:</b> 1/9/2013
<b>BOREHOLE DATA</b>		<b>WELL DATA</b>	
<b>Diameter (in):</b> 2	<b>Well Diameter:</b> N/A	<b>DATE FINISHED:</b> 1/9/2013	
<b>Total Depth (ft):</b> 20.00	<b>Total Depth (ft):</b> N/A	<b>DRILLER:</b> A. Larkin	
<b>Depth to Refusal (ft):</b> 20.00	<b>Screen Length (ft):</b> N/A	<b>LBA INSPECTOR:</b> J. Nelson	
<b>Depth to Water (ft):</b> 16	<b>Depth to Water (ft):</b> N/A	<b>NORTHING:</b> N/A	
<b>Depth to Rock (ft):</b> N/A	<b>Slot Size:</b> N/A	<b>EASTING:</b> N/A	
			<b>SURFACE ELEVATION:</b> N/A
<b>NOTES:</b> Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.			

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0	FILL					<1	Very light grey (N8) CONCRETE	Concrete(Fill)
		FILL					<1	Dusky yellowish brown (10YR2/2) coarse to fine SAND, some Silt, trace fine Gravel; dry.	Silty Sand (Fill - brick)
	2								
	4								
		FILL					<1	Dusky yellowish brown (10YR2/2) to moderate yellowish brown (10YR5/4) coarse to fine SAND, some Silt, trace fine Gravel; most.	
	6								
	8								



Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10								
	10		SM				<1	Dusky yellowish brown (10YR2/2) to moderate yellowish brown (10YR5/4) coarse to fine SAND, some Silt, trace fine Gravel; moist.	Silty Sand
	12								
	14								
	16		SM				<1	Pale yellowish brown (10YR6/2) coarse to fine SAND, some Silt, trace fine Gravel; moist.	Water Level at 16 ft bgs
	16		SM				<1	Dusky yellowish brown (10YR2/2) coarse to fine SAND, some Silt, trace fine Gravel; saturated.	Collected grab sample SB15 from 15.5-16.0 ft bgs and composite sample from 0-20 ft bgs.
	18								
	20								End of Boring at 20 ft bgs

<b>Louis Berger &amp; Assoc., P.C.</b> 48 Wall Street, 16th Floor New York, New York 10005	<h1>Drilling Log</h1> Page 1 of 2	<b>BORING ID:</b> SB17
		<b>WELL ID:</b> NA
		<b>LOCATION:</b> Brooklyn, NY

<b>CLIENT:</b> New York City Department of Design and Construction	<b>PROJECT NO:</b> SPC870S4
--	-----------------------------

<b>PROJECT:</b> DUMBO/Vinegar Hill Phase II SCI	<b>FMS ID#:</b> BED794
---	------------------------

<b>DRILLING CONTRACTOR:</b> Aquifer Drilling & Testing, Inc.	<b>WOL #:</b> 8683-LBA-3-8100
--	-------------------------------

<b>DRILLING METHOD:</b> Geoprobe Direct Push	<b>DATE STARTED:</b> 1/9/2013
--	-------------------------------

<b>BOREHOLE DATA</b>	<b>WELL DATA</b>	<b>DATE FINISHED:</b> 1/9/2013
----------------------	------------------	--------------------------------

<b>Diameter (in):</b> 2	<b>Well Diameter:</b> N/A	<b>DRILLER:</b> A. Larkin
-------------------------	---------------------------	---------------------------

<b>Total Depth (ft):</b> 20.00	<b>Total Depth (ft):</b> N/A	<b>LBA INSPECTOR:</b> J. Nelson
--------------------------------	------------------------------	---------------------------------

<b>Depth to Refusal (ft):</b> 20.00	<b>Screen Length (ft):</b> N/A	<b>NORTHING:</b> N/A
-------------------------------------	--------------------------------	----------------------

<b>Depth to Water (ft):</b> 18	<b>Depth to Water (ft):</b> N/A	<b>EASTING:</b> N/A
--------------------------------	---------------------------------	---------------------

<b>Depth to Rock (ft):</b> N/A	<b>Slot Size:</b> N/A	<b>SURFACE ELEVATION:</b> N/A
--------------------------------	-----------------------	-------------------------------

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Very light grey (N8) to medium light grey (N6) CONCRETE; dry.	Concrete(Fill)
	2		FILL					Dark yellowish brown (10YR4/2) coarse to fine SAND, some Silt, trace fine Gravel; moist.	Silty Sand (Fill - brick)
	4								
	6		SP				<1	Moderate brown (5YR4/4) medium to fine SAND, and Silt; moist.	Silty Sand
	8								

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10		SP				<1	Moderate brown (5YR4/4) medium to fine SAND, and Silt, trace fine Gravel; moist.	
	12								Collected composite sample TCLP01
	14								
	16		SP				<1	Dark yellowish brown (10YR4/2) medium to fine SAND, and Silt, trace fine Gravel; saturated.	Collected grab sample SB17 from 17.5-18.0 ft bgs and composite sample from 0-20 ft bgs.
	18								Water Level at 18 ft bgs
	20								End of Boring at 20 ft bgs

Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB18  
**WELL ID:** TWP18  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction

**PROJECT NO:** SPC870S4

**PROJECT:** DUMBO/Vinegar Hill Phase II SCI

**FMS ID#:** BED794

**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.

**WOL #:** 8683-LBA-3-8100

**DRILLING METHOD:** Geoprobe Direct Push

**DATE STARTED:** 1/9/2013

## BOREHOLE DATA

## WELL DATA

**DATE FINISHED:** 1/9/2013

**Diameter (in):** 2

**Well Diameter:** N/A

**DRILLER:** A. Larkin

**Total Depth (ft):** 20.00

**Total Depth (ft):** N/A

**LBA INSPECTOR:** J. Nelson

**Depth to Refusal (ft):** 20.00

**Screen Length (ft):** N/A

**NORTHING:** N/A

**Depth to Water (ft):** 10.8

**Depth to Water (ft):** N/A
















**EASTING:** N/A



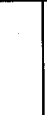









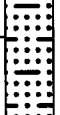


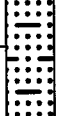


**Depth to Rock (ft):** N/A

**Slot Size:** N/A

**SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Medium gray (N5) to medium light gray (N6) CONCRETE and COBBLE STONES, dry.	Concrete(Fill)
	2		FILL				<1	Moderate yellowish brown (10YR5/4) coarse to fine SAND, and Silt, trace fine Gravel; most.	Sand (Fill - brick)
	4		FILL				<1	Moderate yellowish brown (10YR5/4) coarse to fine SAND, and Silt, trace fine Gravel; most.	
	6		SP				<1	Moderate yellowish brown (10YR5/4) medium to fine SAND; most.	Sand
	8								

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10		SM				<1	Moderate yellowish brown (10YR5/4) coarse to fine SAND, and Silt; saturated.	<p>Silty Sand</p> <p>∇ Water Level at 10.8 ft bgs</p> <p>Collected groundwaer sample TWP18</p>
	12								
	14								
	16		SM				<1	Moderate yellowish brown (10YR5/4) to pale yellowish brown (10YR6/2) coarse to fine SAND, and Silt, trace fine Gravel; saturated.	<p>Collected grab sample SB18 from 7.0-7.5 ft bgs and composite sample from 0-20 ft bgs.</p>
	18								
	20								<p>End of Boring at 20 ft bgs</p>

<b>CLIENT:</b> New York City Department of Design and Construction	<b>PROJECT NO:</b> SPC870S4
<b>PROJECT:</b> DUMBO/Vinegar Hill Phase II SCI	<b>FMS ID#:</b> BED794
<b>DRILLING CONTRACTOR:</b> Aquifer Drilling & Testing, Inc.	<b>WOL #:</b> 8683-LBA-3-8100
<b>DRILLING METHOD:</b> Geoprobe Direct Push	<b>DATE STARTED:</b> 1/15/2013

BOREHOLE DATA	WELL DATA	DATE FINISHED:
<b>Diameter (in):</b> 2	<b>Well Diameter:</b> N/A	<b>DRILLER:</b> A. Larkin
<b>Total Depth (ft):</b> 20.00	<b>Total Depth (ft):</b> N/A	<b>LBA INSPECTOR:</b> J. Nelson
<b>Depth to Refusal (ft):</b> 20.00	<b>Screen Length (ft):</b> N/A	<b>NORTHING:</b> N/A
<b>Depth to Water (ft):</b> NA	<b>Depth to Water (ft):</b> N/A	<b>EASTING:</b> N/A
<b>Depth to Rock (ft):</b> N/A	<b>Slot Size:</b> N/A	<b>SURFACE ELEVATION:</b> N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0	FILL					<1	Very light gray (N8) Concrete; dry.	Concrete(Fill)
	2	FILL					<1	Moderate yellowish brown (10YR5/4) medium to fine SAND, some Silt, trace fine Gravel (fill material - brick); moist.	Silty Sand (Fill - brick)
	6	ML					<1	Moderate yellowish brown (10YR5/4) SILT, and medium to fine Sand; moist.	Sandy Silt
	8								Collected grab sample SB19 from 7.5-8.0 ft bgs and composite sample from 0-20 ft bgs.
	10								Refusal at 10 ft bgs

Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB20  
**WELL ID:** NA  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction

**PROJECT NO:** SPC870S4

**PROJECT:** DUMBO/Vinegar Hill Phase II SCI

**FMS ID#:** BED794

**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.

**WOL #:** 8683-LBA-3-8100

**DRILLING METHOD:** Geoprobe Direct Push

**DATE STARTED:** 1/16/2013

## BOREHOLE DATA

## WELL DATA

**DATE FINISHED:** 1/16/2013

**Diameter (in):** 2

**Well Diameter:** N/A

**DRILLER:** A. Larkin

**Total Depth (ft):** 20.00

**Total Depth (ft):** N/A

**LBA INSPECTOR:** J. Nelson

**Depth to Refusal (ft):** 20.00

**Screen Length (ft):** N/A

**NORTHING:** N/A

**Depth to Water (ft):** NA

**Depth to Water (ft):** N/A
















**EASTING:** N/A

**Depth to Rock (ft):** N/A

**Slot Size:** N/A

**SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Very light gray (N8) Concrete; dry.	Concrete(Fill)
	2		FILL				<1	Moderate yellowish brown (10YR5/4) to dusky yellowish brown (10YR2/2) coarse to fine SAND, little medium to fine Gravel (fill material - brick, concrete); dry.	Sand (Fill - brick)
	4		FILL				<1	Moderate brown (5YR4/4) to dark yellowish brown (10YR4/2) coarse to fine SAND, little medium to fine Gravel (fill material - brick, concrete); dry.	
	6		FILL				<1		
	8		FILL				<1		

Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

PROJECT NO.: SPC870S4

BORING NO.: SB20

Page 2 of 2

WELL NO.: NA

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10		FILL				<1	Moderate yellowish brown (10YR5/4) to dark yellowish brown (10YR4/2) coarse to fine SAND, some Silt; dry.	Silty Sand (Fill)
	12								
	14								
	16		FILL				<1	Dark yellowish brown (10YR4/2) coarse to fine SAND, some medium to fine Gravel (fill material - brick, concrete); dry.	Gravelly Sand (Fill)
	18								Collected grab sample SB20 from 17.5-18.0 ft bgs and composite sample from 0-20 ft bgs.
	20								End of Boring at 20 ft bgs



Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB21  
**WELL ID:** NA  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction

**PROJECT NO:** SPC870S4

**PROJECT:** DUMBO/Vinegar Hill Phase II SCI

**FMS ID#:** BED794

**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.

**WOL #:** 8683-LBA-3-8100

**DRILLING METHOD:** Geoprobe Direct Push

**DATE STARTED:** 1/16/2013

## BOREHOLE DATA

## WELL DATA

**DATE FINISHED:** 1/16/2013

**Diameter (in):** 2

**Well Diameter:** N/A

**DRILLER:** A. Larkin

**Total Depth (ft):** 20.00

**Total Depth (ft):** N/A

**LBA INSPECTOR:** J. Nelson

**Depth to Refusal (ft):** 20.00

**Screen Length (ft):** N/A

**NORTHING:** N/A

**Depth to Water (ft):** NA

**Depth to Water (ft):** N/A
















**EASTING:** N/A

**Depth to Rock (ft):** N/A

**Slot Size:** N/A

**SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Light gray (N7) Concrete; dry.	Concrete(Fill)
	2		FILL				<1	Dusky brown (5YR2/2) coarse to fine SAND, trace Silt, little medium to fine Gravel (fill material - brick); dry.	Sand (Fill - brick)
	4		FILL				<1	Moderate brown (5YR4/4) coarse to fine SAND, trace Silt, little medium to fine Gravel (fill material - brick); dry.	
	6		FILL				<1		
	8		FILL				<1		

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10	FILL		FILL			<1	Grayish brown (5YR3/2) to moderate brown (5YR4/4) coarse to fine SAND, little Silt, trace medium to fine Gravel (fill material - concrete, brick); dry.	
	12								
	14								
	16	FILL		FILL			<1	Grayish brown (5YR3/2) to dusky brown (5YR2/2) coarse to fine SAND, some medium to fine Gravel; dry.	<b>Gravelly Sand (Fill)</b>  Collected grab sample SB21 from 19.5-20.0 ft bgs and composite sample from 0-20 ft bgs.  <b>End of Boring at 20 ft bgs</b>
	18								
	20								

Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB22  
**WELL ID:** NA  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction

**PROJECT NO:** SPC870S4

**PROJECT:** DUMBO/Vinegar Hill Phase II SCI

**FMS ID#:** BED794

**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.

**WOL #:** 8683-LBA-3-8100

**DRILLING METHOD:** Geoprobe Direct Push

**DATE STARTED:** 1/16/2013

## BOREHOLE DATA

## WELL DATA

**DATE FINISHED:** 1/16/2013

**Diameter (in):** 2

**Well Diameter:** N/A

**DRILLER:** A. Larkin

**Total Depth (ft):** 20.00

**Total Depth (ft):** N/A

**LBA INSPECTOR:** J. Nelson

**Depth to Refusal (ft):** 20.00

**Screen Length (ft):** N/A

**NORTHING:** N/A

**Depth to Water (ft):** NA

**Depth to Water (ft):** N/A

**EASTING:** N/A

**Depth to Rock (ft):** N/A

**Slot Size:** N/A

**SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Medium light gray (N6) Concrete; dry.	Concrete(Fill)
	2		FILL				<1	Dusky yellowish brown (10YR2/2) coarse to fine SAND, little medium to fine Gravel (fill material - brick); dry.	Sand (Fill - brick)
	4		FILL				<1	Moderate brown (5YR3/4) to dark greenish gray (5GY4/1) coarse to fine SAND, little medium to fine Gravel (fill material - brick, concrete); dry.	
	6		FILL				<1		
	8		FILL				<1		

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10		FILL				<1	Moderate brown (5YR3/4) coarse to fine SAND, little medium to fine Gravel (fill material - brick, concrete); dry.	
	12								
	14								
	16		FILL				<1	Moderate brown (5YR3/4) coarse to fine SAND, little medium to fine Gravel (fill material - brick, concrete); dry.	
	18								Collected grab sample SB22 from 17.5-18.0 ft bgs and composite sample from 0-20 ft bgs.
	20								End of Boring at 20 ft bgs

Louis Berger & Assoc., P.C.  
48 Wall Street, 16th Floor  
New York, New York 10005

# Drilling Log

Page 1 of 2




**BORING ID:** SB23  
**WELL ID:** NA  
**LOCATION:** Brooklyn, NY  
**PROJECT NO:** SPC870S4  
**FMS ID#:** BED794  
**WOL #:** 8683-LBA-3-8100  
**DATE STARTED:** 1/17/2013  
**DATE FINISHED:** 1/17/2013

**CLIENT:** New York City Department of Design and Construction  
**PROJECT:** DUMBO/Vinegar Hill Phase II SCI  
**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.  
**DRILLING METHOD:** Geoprobe Direct Push

BOREHOLE DATA		WELL DATA	
Diameter (in):	2	Well Diameter:	N/A
Total Depth (ft):	20.00	Total Depth (ft):	N/A
Depth to Refusal (ft):	20.00	Screen Length (ft):	N/A
Depth to Water (ft):	NA	Depth to Water (ft):	N/A
Depth to Rock (ft):	N/A	Slot Size:	N/A

**DRILLER:** A. Larkin  
**LBA INSPECTOR:** J. Nelson  
**NORTHING:** N/A  
**EASTING:** N/A  
**SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Black (N1) Concrete; dry.	Concrete(Fill)
	2		FILL				<1	Moderate brown (5YR3/4) coarse to fine SAND, trace Silt, some medium to fine Gravel, (fill material - brick, concrete); moist.	Gravelly Sand (Fill - brick)
	4		NA				NA	No Recovery.	
	6								
	8								

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10	FILL					<1	Moderate brown (5YR3/4) coarse to fine SAND, and medium to fine Gravel (fill material - concrete); dry.	
	12								
	14								
	16	SP					<1	Moderate brown (5YR3/4) coarse to fine SAND, some medium to fine Gravel; dry.	<b>Gravelly Sand</b>  Collected grab sample SB23 from 18.5-19.0 ft bgs and composite sample from 0-20 ft bgs.  <b>End of Boring at 20 ft bgs</b>
	18								
	20								

Louis Berger & Assoc., P.C.  
48 Wall Street, 16th Floor  
New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB24  
**WELL ID:** NA  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction

**PROJECT NO:** SPC870S4

**PROJECT:** DUMBO/Vinegar Hill Phase II SCI

**FMS ID#:** BED794

**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.

**WOL #:** 8683-LBA-3-8100

**DRILLING METHOD:** Geoprobe Direct Push

**DATE STARTED:** 1/17/2013

## BOREHOLE DATA

## WELL DATA

**DATE FINISHED:** 1/17/2013

**Diameter (in):** 2

**Well Diameter:** N/A

**DRILLER:** A. Larkin

**Total Depth (ft):** 20.00

**Total Depth (ft):** N/A

**LBA INSPECTOR:** J. Nelson

**Depth to Refusal (ft):** 20.00

**Screen Length (ft):** N/A

**NORTHING:** N/A

**Depth to Water (ft):** NA

**Depth to Water (ft):** N/A

**EASTING:** N/A

**Depth to Rock (ft):** N/A

**Slot Size:** N/A

**SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Dusky yellowish brown (10YR2/2) to moderate brown (5YR4/4) coarse to fine SAND, trace Silt, some medium to fine Gravel (fill material - brick); moist.	Gravelly Sand (Fill)
	2								
	4								
	6		SM				<1	Moderate brown (5YR4/4) coarse to fine SAND, some Silt, little medium to fine Gravel; moist.	Silty Sand
	8								

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10	SM					<1	Moderate brown (5YR4/4) coarse to fine SAND, some Silt, little medium to fine Gravel; dry.	
	12								
	14								
	16	SP					<1	Moderate brown (5YR4/4) coarse to fine SAND, some medium to fine Gravel; dry.	<b>Gravelly Sand</b>  <b>Collected grab sample SB24 from 19.0-19.5 ft bgs and composite sample from 0-20 ft bgs.</b>  <b>End of Boring at 20 ft bgs</b>
	18								
	20								



Louis Berger & Assoc., P.C.  
 48 Wall Street, 16th Floor  
 New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB25  
**WELL ID:** NA  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction

**PROJECT NO:** SPC870S4

**PROJECT:** DUMBO/Vinegar Hill Phase II SCI

**FMS ID#:** BED794

**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.

**WOL #:** 8683-LBA-3-8100

**DRILLING METHOD:** Geoprobe Direct Push

**DATE STARTED:** 1/17/2013

## BOREHOLE DATA

## WELL DATA

**DATE FINISHED:** 1/17/2013

**Diameter (in):** 2

**Well Diameter:** N/A

**DRILLER:** A. Larkin

**Total Depth (ft):** 20.00

**Total Depth (ft):** N/A

**LBA INSPECTOR:** J. Nelson

**Depth to Refusal (ft):** 20.00

**Screen Length (ft):** N/A

**NORTHING:** N/A

**Depth to Water (ft):** NA

**Depth to Water (ft):** N/A

**EASTING:** N/A

**Depth to Rock (ft):** N/A

**Slot Size:** N/A

**SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Very light gray (N8) Concrete; dry.	Concrete(Fill)
	2		FILL				<1	Moderate brown (5YR3/4) coarse to fine SAND, trace Silt, some medium to fine Gravel (fill material - brick); moist.	Gravelly Sand (Fill)
	6		SP				<1	Moderate brown (5YR3/4) coarse to fine SAND, some medium to fine Gravel; dry.	Gravelly Sand

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10		SP				<1	Moderate brown (5YR3/4) coarse to fine SAND, some medium to fine Gravel; dry.	
	12								
	14								
	16		SP				<1	Moderate brown (5YR3/4) coarse to fine SAND, trace Silt, little fine Gravel; moist.	<b>Sand</b>  <b>Collected grab sample SB25 from 17.5-18.0 ft bgs and composite sample from 0-20 ft bgs.</b>  <b>End of Boring at 20 ft bgs</b>
	18								
	20								

Louis Berger & Assoc., P.C.  
48 Wall Street, 16th Floor  
New York, New York 10005

# Drilling Log

Page 1 of 2

**BORING ID:** SB26  
**WELL ID:** NA  
**LOCATION:** Brooklyn, NY

**CLIENT:** New York City Department of Design and Construction

**PROJECT NO:** SPC870S4

**PROJECT:** DUMBO/Vinegar Hill Phase II SCI

**FMS ID#:** BED794

**DRILLING CONTRACTOR:** Aquifer Drilling & Testing, Inc.

**WOL #:** 8683-LBA-3-8100

**DRILLING METHOD:** Geoprobe Direct Push

**DATE STARTED:** 1/17/2013

## BOREHOLE DATA

## WELL DATA

**DATE FINISHED:** 1/17/2013

**Diameter (in):** 2

**Well Diameter:** N/A

**DRILLER:** A. Larkin

**Total Depth (ft):** 20.00

**Total Depth (ft):** N/A

**LBA INSPECTOR:** J. Nelson

**Depth to Refusal (ft):** 20.00

**Screen Length (ft):** N/A

**NORTHING:** N/A

**Depth to Water (ft):** NA

**Depth to Water (ft):** N/A

**EASTING:** N/A

**Depth to Rock (ft):** N/A

**Slot Size:** N/A

**SURFACE ELEVATION:** N/A

**NOTES:** Soil boring was pre-cleared to 6 ft bgs. Soil description based on Munsell Rock Color Chart.

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0		FILL				<1	Light gray (N7) Concrete; dry.	Concrete(Fill)
	2		FILL				<1	Moderate brown (5YR3/4) coarse to fine SAND, trace Silt, some medium to fine Gravel (fill material - brick); moist.	Gravelly Sand (Fill)
	6		SP				<1	Moderate brown (5YR3/4) coarse to fine SAND, some medium to fine Gravel; moist.	Gravelly Sand

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10		SP				<1	Moderate brown (5YR3/4) coarse to fine SAND, some coarse to fine Gravel; dry.	<b>Collected waste class sample TCLP06</b>
	12								
	14								
	16		SP				<1	Dark yellowish brown (10YR4/2) coarse to fine SAND, some medium to fine Gravel; dry.	<b>Collected grab sample SB26 from 18.5-19.0 ft bgs and composite sample from 0-20 ft bgs.</b>
	18								
	20								<b>End of Boring at 20 ft bgs</b>

**(NO TEXT ON THIS PAGE)**

**SPECIFICATIONS FOR  
ABATEMENT OF ASBESTOS-CONTAINING  
MATERIALS ASSOCIATED WITH**

**VAULT PROGRAM  
RECONSTRUCTION OF  
DUMBO/VINEGAR HILL AREA  
MAIN/JAY/WATER/GOLD/Front STREETS  
BROOKLYN, NEW YORK 11201**

**Prepared For:**



**Department of  
Design and  
Construction**

**Program Management Division  
Office of Environmental and Geotechnical Services  
30-30 Thomson Avenue, 3<sup>rd</sup> Floor  
Long Island City, New York 11101**

**Prepared By:**



**LiRo Engineers, Inc.**  
A LiRo Group Company

**Three Aerial Way  
Syosset, New York 11791**

**Draft Date: 12/27/2017**

**DDC Capital Project Number: HWKKP005  
Work Order Letter Number: 13766-LIRO-3-R-PENDING  
Task No. 13766  
LiRo Project Number: 17-115-0265  
Contract Registration Number: 20181405131  
Contract Registration Date: October 1, 2017**

**July 2017 Version**

**PAGE LEFT INTENTIONALLY BLANK**



**TABLE OF CONTENTS**

**SECTION 028013 – GENERAL CONTRACTOR WORK ALLOWANCE  
FOR INCIDENTAL ASBESTOS ABATEMENT.....ACM-1**

**SECTION 028213 – ASBESTOS ABATEMENT.....ACM-17**



**PAGE LEFT INTENTIONALLY BLANK**



**SECTION 028013 – GENERAL CONTRACTOR WORK**

**ALLOWANCE FOR INCIDENTAL ASBESTOS ABATEMENT**

**1.01 SCOPE FOR ASBESTOS ABATEMENT WORK**

- A. NO TEXT
- B. The Asbestos abatement contractor shall remove asbestos containing materials as needed to perform the other work of this Contract when discovered during the course of work. When required, the Asbestos abatement contractor shall replace the ACM with non-asbestos containing materials. An allowance of **\$500,000.00** for the **General Contractor** is herein established for this incidental work when so ordered and authorized by the Commissioner.
- C. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE RULES AND REGULATIONS OF THE ASBESTOS CONTROL PROGRAM AS PROMULGATED BY TITLE 15 CHAPTER I OF RCNY AND NEW YORK STATE DEPARTMENT OF LABOR INDUSTRIAL CODE RULE 56 CITED AS 12 NYCRR, PART 56 WHICHEVER IS MORE STRINGENT AS PER LATEST AMENDMENTS TO THESE LAWS AND AS MODIFIED HEREIN BY THESE SPECIFICATIONS.
- D. ALL DISPOSAL OF ASBESTOS CONTAMINATED MATERIAL SHALL BE PER LOCAL LAW 70/85.
- E. THE ASBESTOS ABATEMENT CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT CERTAIN METHODS OF ASBESTOS ABATEMENT ARE PROTECTED BY PATENTS. TO DATE, PATENTS HAVE BEEN ISSUED WITH RESPECT TO "NEGATIVE PRESSURE ENCLOSURE" OR "NEGATIVE-AIR" OR "REDUCED PRESSURE" AND "GLOVE BAG".
- F. THE ASBESTOS ABATEMENT CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND SHALL HOLD THE DEPARTMENT OF DESIGN AND CONSTRUCTION AND THE CITY HARMLESS FROM ANY AND ALL DAMAGES, LOSSES AND EXPENSES RESULTING FROM ANY INFRINGEMENT BY THE ASBESTOS ABATEMENT CONTRACTOR OF ANY PATENT, INCLUDING BUT NOT LIMITED TO THE PATENTS DESCRIBED ABOVE, USED BY THE ASBESTOS ABATEMENT CONTRACTOR DURING PERFORMANCE OF THIS AGREEMENT.
- G. "Asbestos" shall mean any hydrated mineral silicate separable into commercially usable fibers, including but not limited to chrysotile (serpentine), amosite (cumingtonite-grunerite), crocidolite (riebeckite), tremolite, anthrophyllite and actinolite.



- H. Prior to starting, the Asbestos abatement contractor must notify the Commissioner of the Department of Design and Construction if he/she anticipates any difficulty in performing the Work as required by these Specifications. The Asbestos abatement contractor is responsible to prepare and submit all filings, notifications, etc. required by all City, State and Federal regulatory agencies having jurisdiction.

The Asbestos abatement contractor is responsible for submitting the Asbestos Project Notification Form (ACP-7 Form) to the Department of Environmental Protection, Asbestos Control Program, as per Title 15, Chapter I of RCNY and to the NYSDOL as per Industrial Code Rule 56.

The Asbestos abatement contractor is responsible for preparing, and submitting Asbestos Variance Application (ACP-9). If a Variance is required, the Asbestos abatement contractor is responsible to retain a NYSDOL Asbestos Project Designer, as defined in Title 15, Chapter 1 of the RCNY to prepare and submit the required variance.

The General contractor is responsible for preparing and submitting an Asbestos Abatement Permit and/or Work Place Safety Plans (WPSP) that may be required for the completion of the Contract or incidental work. If such plans are required, the Asbestos abatement contractor is responsible to retain a NYSDOL Licensed Design Professional as defined in Title 15, Chapter 1 of the RCNY to prepare and submit the required plans.

The Asbestos abatement contractor is responsible for the submission of all required documents to the NYCDEP to acquire the appropriate Asbestos Project Conditional Closeout (ACP-20) and/or Asbestos Project Completion Forms (ACP-21) on a timely basis for the completion of the incidental work encountered under this contract.

The Asbestos abatement contractor will be required to attend an on-site job meeting with the Construction Project Manager prior to the start of work to examine conditions and plan the sequence of operations, etc.

The Asbestos abatement contractor shall have a NYSDOL/NYCDEP Asbestos Supervisor onsite to oversee the work and conduct a final visual inspection as required by both Title 15, Chapter 1 of the RCNY and NYSDOL Industrial Code Rule 56.

- I. All work shall be done during regular working hours unless the Asbestos abatement contractor requests authorization to work in other than regular working hours and such authorization is granted by the Commissioner. (Regular work hours are those hours during which any given facility, in which work is to be done, is customarily open and functioning, normally between the hours of 8:00 A.M. and 4:00 P.M. Monday - Friday.) If such work schedule is authorized by the Commissioner, the work shall be done at no additional cost to the City.



- J. The Commissioner may order that work be done in other than regular working hours as herein by defined and this order may require the Asbestos abatement contractor to pay premium or overtime wages to complete the work. If the Commissioner orders work in other than regular working hours, the Asbestos abatement contractor shall multiply the unit price for that portion of the work requiring premium wages by 1.50 when computing payment in accordance with Paragraph 1.09. All requests for premium payment must be supported by certified payroll sheets and field sheets approved by the Construction Project Manager.

#### **1.02 QUALIFICATIONS OF ASBESTOS ABATEMENT CONTRACTOR**

- A. Requirements: The asbestos abatement contractor must demonstrate compliance with the special experience requirements set forth in subparagraphs (1) through (5) below. The asbestos abatement contractor must, submit documentation demonstrating compliance with all listed requirements. Such documentation shall include without limitation, all required licenses, certificates, and documentation.
1. The asbestos abatement contractor must, whether an individual, corporation, partnership, joint venture or other legal entity, must demonstrate for the three year period prior to the work, that it has been licensed by the New York State Department of Labor, as an "Asbestos abatement contractor".
  2. The asbestos abatement contractor must, for the three year period prior to the work, have been in the business of providing asbestos abatement services as a routine part of its daily operations.
  3. The asbestos abatement contractor proposing to do asbestos abatement work must be thoroughly experienced in such work and must provide evidence of having successfully performed and completed in a timely fashion at least five (5) asbestos abatement projects of similar size and complexity. The aggregate cost of these projects must be at least \$250,000.00 in each of the three years.
  4. For each project submitted to meet the experience requirements set forth above, the asbestos abatement contractor must submit the following information for the project; name and location of the project; name title and telephone number of the owner or the owner's representative who is familiar with the asbestos abatement contractor's work, brief description of the work completed as a prime or sub-asbestos abatement contractor; amount of contract or subcontract and the date of completion.
  5. The asbestos abatement contractor must demonstrate that it has the financial resources, supervisory personnel and equipment necessary to carry out the work and to comply with the required performance schedule, taking into consideration other business commitments. The asbestos abatement



contractor must submit such documentation as may be required by the Department of Design and Construction to demonstrate that it has the requisite capacity to perform the required services of this contract.

- B. Insurance Requirements: The asbestos abatement contractor must provide asbestos liability insurance in the following amount: 1 million dollars per occurrence, 2 million dollars aggregate (combined single limit). The City of New York shall be named as an additional insured on such insurance policy.
- C. Throughout the specifications, reference is made to codes and standards which establish qualities and types of workmanship and materials, and which establish methods for testing and reporting on the pertinent characteristics thereof.

### **1.03 ASBESTOS ABATEMENT CONTRACTOR RESPONSIBILITIES**

The Asbestos abatement contractor will visit the subject location within one (1) working day of notification to ascertain actual work required. If the project is identified as being "urgent", then work shall commence no later than 48 hours from the time of notification. In this event, the asbestos abatement contractor shall immediately notify when applicable EPA NESHAPS Coordinator, NYSDOL Asbestos Control Bureau and NYCDEP Asbestos Control Program of start of the work and file the necessary Asbestos Notifications and any applicable Variance Applications with the regulatory agencies cited above.

In the event that the project is not classified as "urgent" the Asbestos abatement contractor shall notify the EPA NESHAPS Coordinator, NYSDOL and NYCDEP by submitting the requisite asbestos project notification forms, postmarked 10 days before activity begins if 260 linear feet or more and/or 160 square feet or more of asbestos containing material will be disturbed.

The following information must be included in the notification:

- A. Name and address of building City or operator;
- B. Project description:
  - 1. Size - square feet, number of linear feet, etc;
  - 2. Age - date of construction and renovations (if known);
  - 3. Use - i.e., office, school, industrial, etc.
  - 4. Scope - repair, demolition, cleaning, etc.
- C. Amount of asbestos involved in work and an explanation of techniques used to determine the amount;
- D. Building location/address, including Block and Lot numbers;



- E. Work schedule including the starting and completion dates;
- F. Abatement methods to be employed;
- G. Procedures for removal of asbestos-containing material;
- H. Name, title and authority of governmental representative sponsoring project.

**1.04 WORK INCLUDED IN UNIT PRICE**

The Asbestos abatement contractor will be paid a basic unit price of **\$25.00** per square feet for the removal and disposal of asbestos containing material and replacement of the same with non-asbestos containing materials.

Unit price shall include all costs necessary to do the work of this Contract, including but not limited to: labor, materials, equipment, utilities, disposal, insurance, overhead and profit.

**1.05 AIR MONITORING – ASBESTOS ABATEMENT CONTRACTOR**

- A. "Air Sampling" shall mean the process of measuring the fiber content of a known volume of air collected during a specific period of time. The procedure utilized for asbestos follows the NIOSH Standard Analytical Method 7400 or the provisional transmission electron microscopy methods developed by the USEPA and/or National Institute of Standard and Technology which are utilized for lower detectability and specific fiber identification.
- B. Air monitoring of Asbestos abatement contractor's personnel will be performed in conformance with OSHA requirements, (All costs associated with this work are deemed included in the unit price.).
- C. Qualifications of Testing Laboratory:

The industrial hygiene laboratory shall be a current proficient participant in the American Industrial Hygiene Association (AIHA) PAT Program. The laboratory identification number shall be submitted and approved by the City. The laboratory shall be accredited by the AIHA and New York State Department of Health Environmental Laboratory Approval Program (ELAP).

Note: Work area air testing and analysis before, during and upon completion of work (clearance testing) will be performed by a Third Party Air Monitor under separate Contract with the City.

**1.06 THIRD PARTY MONITORING AND LABORATORY**

- A. The NYCDDC, at its own expense, will employ the services of an independent Third Party Air Monitoring Firm and Laboratory. The Third Party Air Monitor will perform air sampling activities and project monitoring at the Work Site.



- B. The Laboratory will perform analysis of air samples utilizing Phase Contrast Microscopy (PCM) and/or Transmission Electron Microscopy (TEM).
- C. The Third Party Air Monitoring Firm and the designated Project Monitor shall have access to all areas of the asbestos removal project at all times and shall continuously inspect and monitor the performance of the Asbestos abatement contractor to verify that said performance complies with this Specification. The Third-Party Air Monitor shall be on site throughout the entire abatement operation.
- D. The NYCDDC will be responsible for costs incurred with the Third Party Air Monitoring Firm and laboratory work. Any subsequent additional testing required due to limits exceeded during initial testing shall be paid for by the Asbestos abatement contractor.

**1.07 PAYMENT REQUEST DOCUMENTATION**

- B. The following information shall be included for each payment request:
  - 1. Description of work performed.
  - 2. Linear footage and pipe sizes involved.
  - 3. Square footage for boiler & breaching insulation removed.
  - 4. Square footage of non pipe and boiler areas removed, patched, enclosed, sealed, or painted.
  - 5. Square footage of encapsulation, sealing, patching, and painting involved.
  - 6. Total cost associated with compliance with the assigned task.
  - 7. Architectural, Electrical, HVAC, Plumbing, etc. work incidental to the Asbestos Abatement Work.
  - 8. A certified copy (in form 4312-39) to the Comptroller or Financial Officer of the New York City to the effect that the financial statement is true.
  - 9. A signed copy (in form 6506q-6) of certificate of compliance with non-discriminatory provisions of the Contract.
  - 10. Attach a copy of valid workmen compensation insurance.
  - 11. Valid asbestos insurance per occurrence.
  - 12. General liability insurance when required.



- C. Each payment request shall include a grand total for all work completed that billing period, the landfill waste manifests and a copy of waste transporter permit. The Department of Design and Construction will inspect the work performed, review the cost and approve or disapprove requests for payment.
- D. **EXPOSURE LOG:** With this final payment, the Asbestos abatement contractor shall submit a listing of the names and social security numbers of all employees actively engaged in the abatement work of this Contract. This list shall include a summary showing each part of the abatement work in which the employee was engaged and the dates thereof.

**1.08 QUANTITY CALCULATIONS**

In order to determine the square footage involved for the various pipe sizes of pipe insulation that might be encountered, the following table is to be used.

<u>PIPE INSULATION SIZE O.D.</u>	<u>PIPE SIZE O.D.</u>	<u>SQUARE FOOTAGE PER LINEAR FOOT</u>
2-1/2"	1/2"	0.65
2-3/4"	3/4"	0.72
3"	1"	0.79
3-1/4"	1-1/4"	0.85
3-1/2"	1-1/2"	0.92
4"	2"	1.05
4-1/2"	2-1/2"	1.18
5"	3"	1.31
6"	3-1/4"	1.57
7"	3-1/2"	1.83
8"	4"	2.09
9"	5"	2.36
10"	6"	2.62
12"	8"	3.14
14"	10"	3.67
16"	12"	4.19
18"	14"	4.71

**1.09 METHOD OF PAYMENT**

Payment shall be made in accordance with Items A through R below. Payment shall be calculated based on the actual quantity of the item performed by the asbestos abatement contractor, times the unit price specified below. Credits may apply to certain times, as specified below.

- A. **REMOVAL, DISPOSAL AND REPLACEMENT OF ASBESTOS CONTAINING PIPE INSULATION:** Actual linear footage, multiplied by the square footage factor





listed for the respective pipe size in Section 1.08, multiplied by the unit price in Section 1.04.

EXAMPLE: 100 lin.ft. of 1/2" pipe and 100 lin.ft. of 6" pipe, including elbows, tees. Flanges, etc.

100 X 0.65 = 65 sq.ft.      65 x unit price = Payment

100 X 2.62 = 262 sq.ft.      262 x unit price = Payment

- B. REMOVAL, DISPOSAL AND REPLACEMENT OF BOILER INSULATION:** (all types including Silicate Block and including the removal/replacement of metal jacketing) Payment shall be made at 1.5 times the unit price per square foot.

EXAMPLE: Item B. removal and replacement of 1000 S.F. of boiler insulation (incl. Silicate block)

1000 S.F. X (1.5) X the Unit Price = Payment

- C. REMOVAL, DISPOSAL AND REPLACEMENT OF TANK INSULATION:** (all types including removal/replacement of metal jacketing) Payment shall be made at 1.5 times the unit price per square foot.
- D. REMOVAL, DISPOSAL AND REPLACEMENT OF BOILER UPTAKE, & BREACHING INSULATION:** (all types including stiffening angles and wire lath) Payment shall be made at 2.0 times the unit price per square foot.
- E. REMOVAL, DISPOSAL AND REPLACEMENT OF DUCT INSULATION:** Payment shall be made at 1.0 times the unit price per square foot.
- F. REMOVAL, DISPOSAL AND REPLACEMENT OF SOFT ASBESTOS CONTAINING MATERIAL:** (Including sprayed-on fire proofing and sound proofing) Payment shall be made at 1.0 times the unit price per square foot of surface area. Area of irregular surfaces must be calculated and confirmed with DDC representative.
- G. ACOUSTIC PLASTER REPAIR AND/OR ENCAPSULATION:** Payment shall be made at 0.5 times the unit price per square foot.
- H. PATCHING OR REPAIR** of items listed in A through F will be paid at 0.33 times the unit price per square foot.
- I. REMOVAL, DISPOSAL AND REPLACEMENT OF WATERPROOFING ASBESTOS CONTAINING MATERIAL:** (including friable and non-friable waterproofing material from interior and exterior walls, floors, foundations, penetrations, louvers, vents and openings other than windows, doors and skylights) Payment shall be made at 0.5 times the unit price per square foot.



- J. **REMOVAL, DISPOSAL AND REPLACEMENT OF ASBESTOS CONTAINING ELECTRICAL WIRING INSULATION:** (including friable and non-friable wiring insulation) Payment shall be made at 0.33 times the unit price per square foot.
- K. **PAINTING:** Payment shall be made at 0.05 times the unit price per square foot.
- L. **REMOVAL AND DISPOSAL OF ASBESTOS-CONTAINING PLASTER:** from ceilings and walls, including any wire lath and disposal as asbestos containing waste. Payment shall be made at 0.80 times the unit price per square foot.
- M. **REMOVAL AND DISPOSAL OF ASBESTOS-CONTAINING FLOOR TILES, CEILING TILES, TRANSITE PANELS:** (including any adhesive, glue, mastic and/or underlayment) and disposal as asbestos containing waste. Payment shall be made at 0.40 times the unit price per square foot. If multiple layers are discovered, each additional layer shall be paid at 0.20 times the unit price per square foot.
- N. **ADDITIONAL CLEAN UP/HOUSEKEEPING OF WORK AREA:** (excluding pre-cleaning of work area required by regulations) HEPA vacuuming and wet cleaning of asbestos contaminated surface. Payment shall be made at 0.20 times the unit price per square foot. When GLOVE BAG is employed to remove ACM, cost of HEPA vacuuming and wet cleaning of floor area up to 3 feet on each side of glove-bag shall be included in unit price and no extra payment will be made.
- O. **REMOVAL, DISPOSAL OF ASBESTOS-CONTAINING ROOFING MATERIAL:** including mastic, flashing and sealant compound and provide temporary asbestos-free roof covering consisting of one layer of rolled roofing paper sealed with asphaltic roofing compound. Payment shall be made at 0.8 times the unit price per square foot. Credit at a rate of 0.33 times the unit price will be taken for each square foot of temporary roof covering which the Asbestos abatement contractor is directed not to install.
- P. **PICK-UP AND DISPOSAL OF GROSS DEBRIS:** (excluding any waste generated from abatement under Item A-R) at a rate of \$150 per cubic yard for asbestos contaminated waste and \$75 per cubic yard for non-asbestos contaminated waste. This cost includes all labor and material cost associated with work.
- Q. **REMOVAL OF ASBESTOS-CONTAINING BRICK, BLOCK, MORTAR, CEMENT OR CONCRETE:** along with all surfacing materials including wire lath and/or other supporting structures and disposal as ACM waste. Payment shall be made at a rate of \$25.00 per cubic foot of material removed.
- R. **REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING WINDOW/DOOR CAULKING:** including friable and non-friable caulking, weather-stripping, glazing, sealants or other waterproofing materials applied to windows, doors, skylights, etc. Payment shall be made at the rate of \$400.00 per opening regardless of size or configuration. This cost includes labor, consumable materials, set-up/breakdown, removal and disposal, as required.



**Note 1: CREDIT:** For items listed in A through F, a credit at a rate of 0.33 times the unit price, times the respective multiplier (for each item) will be taken for each square foot of insulation which the asbestos abatement contractor is not directed to reapply.

**Note 2: MINIMUM PAYMENT:** The minimum payment per call at any individual job sites or various job sites during the same day will be eight hundred dollars (\$800.00).

**Note 3:** All payments shall be made as described in paragraph 1.09 herein.

**Note 4: WORKING HIGHER THAN 12 FEET ABOVE FLOOR LEVEL OR WORK REQUIRING COMPLEX SCAFFOLDING OR CONSTRUCTION WORK PLATFORMS:** Provisions are made in this Contract to compensate the Asbestos abatement contractor for work performed in locations that are difficult to access due to work at elevations that are significantly higher than the normal work level. The unit price for these items will be paid at 1.20 times the unit price described in Paragraphs 1.09, A through R for those portions of the work that are more than twelve (12) feet above the grade for that would be judged as the normal working level.

#### **1.10 GUARANTEE**

- A. Work performed in compliance with each task shall be guaranteed for a period of one year from the date the completed work is accepted by the Department of Design and Construction.
- B. The Commissioner of The Department of Design and Construction will notify the Asbestos abatement contractor in writing regarding defects in work under the guarantee.

#### **1.11 OCCUPANCY OF SITE NOT EXCLUSIVE**

Attention is specifically drawn to the fact that contractors, performing the work of other Contracts, may be brought upon any of the work sites of this Contract. Therefore, the Asbestos abatement contractor shall not have exclusive rights to any site of his work and shall fully cooperate and coordinate his work with the work of other contractors who may be brought upon any site of the work of this Contract. This paragraph applies to those areas outside the regulated Work Area as defined by Title 15, Chapter 1 of RCNY.

#### **1.12 SUBMITTALS**

- A. Pre-Construction Submittals:
  - 1. Attend a pre-construction meeting scheduled by the City of New York Department of Design and Construction. This meeting shall also be attended by a designated representative of the City of New York third party air monitoring firm, facility manager and the Construction Project Manager. At this meeting, the Asbestos abatement contractor shall present three copies of the following items:



- a. Asbestos abatement contractor's scope of work, work plan and schedule.
- b. Asbestos project notifications, approved variances and plans to Government Agencies.
- c. Copies of Permits, clearance and licenses if required.
- d. Schedules: the Asbestos abatement contractor shall provide to the Construction Project Manager a copy of the following schedules for approval. Once approved, schedules shall be maintained and updated as received. Asbestos abatement contractor shall post a copy of all schedules at the site:
  - (1) A construction schedule stating critical dates of the project including, but not limited to, mobilization, Work Area preparation, demolition, gross removal, fine cleaning, encapsulation, inspections, clearance monitoring, and phase of refinishing and final inspections. The schedule shall be updated biweekly, at a minimum.
  - (2) A schedule of staffing stating number of workers per shift per activity, name and number of supervisor(s) per shift, shifts per day, and total days to be worked.
  - (3) Submit all changes in schedule or staffing to the Construction Project Manager prior to implementation.
- e. Written description of emergency procedures to be followed in case of injury or fire. This section must include evacuation procedures, source of medical assistance (name and telephone number to nearest hospital) and procedures to be used for access by medical personnel (examples: first aid squad and physician). NOTE: Necessary Emergency Procedures Shall Take Priority Over All Other Requirements of These Specifications.
- f. Safety Data Sheets (SDS) for encapsulants, sealants, firestopping foam, cleaners/disinfectants, spray adhesive and any and all potentially hazardous materials that may be employed on the project. No work involving the aforementioned will be allowed to proceed until SDS are reviewed.
- g. Worker Training and Medical Surveillance: The Asbestos abatement contractor shall submit a list of the persons who will be employed by him /her to perform the removal work. Present evidence that workers



have received proper training required by the regulations and the medical examinations required by OSHA 29 CFR 1926.1101.

- h. Logs: Specimen copies of daily progress log, visitor's log, and disposal log.
  - (1) The Asbestos abatement contractor shall provide a permanently bound log book of minimum 8-1/2" x 11" size at the entrance to the Worker and Waste Decontamination enclosure system as hereinafter specified. Log book shall contain on title page the project name, name, address and phone number of the Asbestos abatement contractor; name, address and phone number of Asbestos abatement contractor and City's third party air monitoring firm; emergency numbers including, but not limited to local Fire/Rescue Department. Log book shall contain a list of personnel approved for entry into the Work Area.
  - (2) All entries into the log shall be made in non-washable, permanent ink and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted. Any significant events occurring during the abatement project shall be entered into the log. Upon completion of the job, the Asbestos abatement contractor shall submit the logbook containing a day-to-day record of personnel log entries countersigned by the Construction Project Manager every day.
- i. Worker's Acknowledgments: Submit statements signed by each employee that the employee has received training in the proper handling of ACM, understands the health implications and risks involved; and understands the use and limitations of the respiratory equipment to be used.

**B. During Construction Submittals:**

- 1. Security and safety logs showing names of person entering workspace, date and time of entry and exit, record of any accident, emergency evacuation, and any other safety and/or health incident.
- 2. Progress logs showing the number of workers, supervisors, hours of work and tasks completed shall be submitted daily to the Construction Project Manager.
- 3. Floor plans indicating Asbestos abatement contractor's current work progress shall be submitted for review by the Construction Project Manager.



4. All Asbestos abatement contractors' air monitoring and inspection results.

C. Project Closeout Submittals:

Upon completion of the project and as a condition of acceptance, the Asbestos abatement contractor shall present two copies of the following items, bound and indexed:

1. Lien Waivers from Asbestos abatement contractor, Sub-Asbestos abatement contractors and Suppliers,
2. Daily OSHA air monitoring results,
3. All Waste Manifests (Asbestos and Construction Debris), seals and disposal logs,
4. Field Sign-In/Sign-Out Logs for every shift,
5. Copies of all Building Department Forms and Permits,
6. A Letter of Compliance stating that all the work on this project was performed in accordance with the Specifications and all applicable Federal, State and Local regulations,
7. All Warranties as stated in the Specifications,
  - a. Fully executed disposal certificates and transportation manifest.
8. Project Record: The Asbestos abatement contractor shall maintain a project record for all small and large asbestos projects. During the project, the project record shall be kept on site at all times. Upon completion of the project, the project record shall be maintained by the building owner. The project record shall be submitted to DDC as part of the close out documents. The project record shall consist of:
  - a. Copies of licenses of all asbestos abatement contractors involved in the project;
  - b. Copies of NYCDEP and NYSDOL supervisor and handler certificates for all workers engaged in the project;
  - c. Copies of all project notifications and reports filed with NYCDEP, NYSDOL and USEPA for the project, with any amendments or variances;



- d. Copies of all asbestos abatement permits, including associated approved plans and work place safety plan;
- e. A copy of the air sampling log and all air sampling results;
- f. A copy of the abatement asbestos abatement contractor's daily log book;
- g. Copies of all asbestos waste manifests;
- h. A copy of all Project Monitor's Reports (ACP-15).
- i. A copy of each ATR-1 Form completed for the asbestos project (if required).
- j. A copy of each Asbestos Project Conditional Closeout Report (ACP-20) if required.
- k. A copy of the Asbestos Project Completion Form (ACP-21).

### **1.13 PROTECTION OF FURNITURE AND EQUIPMENT**

Cover all furniture and equipment that cannot be removed from Work Areas. Movable furniture and equipment will be removed from Work Areas by the Asbestos abatement contractor prior to start of work. At the conclusion of the work (after final air testing), the Asbestos abatement contractor will remove all plastic covering on walls, floors, furniture, equipment and reinstall furniture and equipment. He shall remove and store all sheaths, curtains and drapes, and reinstall same following final clean up.

### **1.14 UTILITIES**

#### **A. General:**

All temporary facilities shall be subject to the approval of the Commissioner. Prior to starting work at any site, locations and/or sketches (if required) of temporary facilities must be submitted to the Construction Project Manager for the required approval.

#### **B. Water:**

The Department of Design and Construction will furnish all water needed for construction, at no cost to the Asbestos abatement contractor in buildings under their jurisdiction. However, it is the responsibility of the Asbestos abatement contractor to ensure that hot water is provided for showering in the decontamination unit. The Asbestos abatement contractor shall furnish, install and maintain any needed equipment to meet these requirements at his own expense.



C. Electricity:

The Department of Design and Construction will furnish all electricity needed for construction, at no cost to the Asbestos abatement contractor in a building, under their jurisdiction. The Asbestos abatement contractor is responsible for routing the electric power to the abatement Work Area.

All temporary lighting and temporary electrical service for Work Area shall be in weatherproof enclosures and be ground fault protected.

- D. In leased spaces, arrangements for water supplies and electricity must be made with the landlord. However, all such arrangements must be made through and are subject to approval of the Department of Design and Construction. Utilities will be provided at no cost to the Asbestos abatement contractor. However, it is the Asbestos abatement contractor's (or the General contractor's) responsibility to furnish and install a suitable distribution system to the Work Area. This system will be provided at no cost to the City.

**1.15 FEES**

The Asbestos abatement contractor shall be responsible for any and all fees or charges imposed by Local, State or Federal Law, Rule and Regulation applicable to the work specified herein, including fees or charges which may be imposed subsequent to the date of the Bid opening.

**END OF SECTION**



**PAGE LEFT INTENTIONALLY BLANK**



**SECTION 028213  
JULY 2017 VERSION**

**ASBESTOS ABATEMENT**

**PART 1 – GENERAL**

**1.01 DESCRIPTION**

- A. The Contract Documents are as defined in the “Agreement”. The General Conditions shall apply to all Work of this Section.
- B. Work specified herein shall be the removal and disposal of Asbestos-Containing Materials (ACM) and asbestos-contaminated materials from designated areas of the Reconstruction of Dumbo/Vinegar Hill Area located in Brooklyn, New York 11201.
- C. The following documents were reviewed and utilized to generate this abatement design specification which serves to locate and quantify the amount of ACM and/or asbestos contaminated material, to be abated in support of this project.
  - 1. A set of Drawings titled “Dumbo D.M.A./Vinegar Hill Area” dated 05/27/16 prepared by New York City Department of Design and Construction Division of Infrastructure Bureau of Design.
  - 2. “Reconstruction of Dumbo/Vinegar Hill Area, Borough of Brooklyn, City of New York, Final Vault Program Level 2” performed by AECOM dated 02/18/15.
- D. The phasing and scheduling of work for this project shall be coordinated with and approved by the Construction Project Manager and Facility Manager. The Construction Project Manager and Facility Manager will make the final determination on all issues under this Contract covered by this Specification.

**1.02 SCOPE OF WORK**

- A. The asbestos abatement contractor is to provide all labor, materials, equipment, services, testing, appurtenances, permits and agreements necessary to perform the work required for the abatement of ACM as required by these contract documents. All work shall be performed in accordance with this Specification, EPA regulations, OSHA regulations, New York City Local Law 70, Title 15, Chapter 1 RCNY, New York State Industrial Code 56, NIOSH recommendations, and any other applicable federal, state or local government regulations. Whenever there is a conflict or overlap of the above references, the most stringent provisions are applicable.
- B. The intent of this Specification section is to ensure that the asbestos abatement contractor is responsible for the following:



1. Abatement of all ACM.
  2. Cleaning and decontamination of the entire affected area.
  3. Demolition that may be required to access ACM in each area, Asbestos abatement contractor shall dispose of all debris associated with demolition activities as ACM waste.
  4. Removal and disposal of all ACM; all ACM contaminated debris and soil, etc.
  5. Provide all scaffolding, platform installation, equipment, tools, transportation and any other equipment required and/or necessary to complete all work described in the Contract Documents.
  6. The Asbestos abatement contractor shall be responsible for and shall include any and all fees or charges imposed by Local, State or Federal Law, Rule or Regulation applicable to the work specified herein, including fees or charges which may be imposed subsequent to the work.
  7. Prior to destructive demolition activities, the DDC may elect to collect bulk samples of assumed asbestos-containing materials and analyze the bulk samples for asbestos content.
- C. The Asbestos abatement contractor shall perform the following work as described below and indicated on the drawings. The drawings are only a diagrammatic representation of the Work Areas and do not constitute the actual quantities of material. Asbestos abatement contractor is responsible for the confirmation of the actual total quantities of the Work.
1. **Drawing H-002.00: Vault Location Plan – Water/Jay Streets**
    - a. Remove and dispose of assumed asbestos-contaminated debris and 4” of assumed asbestos contaminated soil within **Work Area 1 Vault 17A**. Assumed asbestos-contaminated debris and 4” of assumed asbestos contaminated soil shall be removed utilizing NYCDEP Full Containment Procedure.
    - b. Remove and dispose of assumed asbestos-contaminated debris and 4” of assumed asbestos contaminated soil within **Work Area 2 Vault 17**. Assumed asbestos-contaminated debris and 4” of assumed asbestos contaminated soil shall be removed utilizing NYCDEP Full Containment Procedure.
    - c. Remove and dispose of assumed asbestos-contaminated debris and 4” of assumed asbestos contaminated soil within **Work Area 3 Vault 18**. Assumed asbestos-contaminated debris and 4” of assumed asbestos contaminated soil shall be removed utilizing NYCDEP Full Containment Procedure.



Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
Work Area 1 - Vault 17A	NYCDEP Full Containment Procedure	560 Sq. Ft. of assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil	-
Work Area 2 - Vault 17		80 Sq. Ft. of assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil	-
Work Area 3 - Vault 18		80 Sq. Ft. of assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil	-

**2. Drawing H-003.00: Vault Location Plan – Water/Bridge Streets**

- a. Remove and dispose of assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil within **Work Area 4 Vault 23**. Assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil shall be removed utilizing NYCDEP Full Containment Procedure.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
Work Area 4 - Vault 23	NYCDEP Full Containment Procedure	230 Sq. Ft. of assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil	-

**3. Drawing H-004.00: Vault Location Plan – Main Street**

- a. Remove and dispose of assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil within **Work Area 5 Vault 28**. Assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil shall be removed utilizing NYCDEP Full Containment Procedure.
- b. Remove and dispose of assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil within **Work Area 6 Vault 20**. Assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil shall be removed utilizing NYCDEP Full Containment Procedure.



Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
Work Area 5 - Vault 28	NYCDEP Full Containment Procedure	20 Sq. Ft. of assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil	-
Work Area 6 - Vault 20		20 Sq. Ft. of assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil	-

**4. Drawing H-005.00: Vault Location Plan – Main Street**

- a. Remove and dispose of assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil within **Work Area 7 Vault 27**. Assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil shall be removed utilizing NYCDEP Full Containment Procedure.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
Work Area 7 - Vault 27	NYCDEP Full Containment Procedure	60 Sq. Ft. of assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil	-

**5. Drawing H-006.00: Vault Location Plan – Front Street**

- a. Remove and dispose of assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil within **Work Area 8 Vault 29**. Assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil shall be removed utilizing NYCDEP Full Containment Procedure.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
Work Area 8 - Vault 29	NYCDEP Full Containment Procedure	20 Sq. Ft. of assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil	-

**6. Drawing H-007.00: Vault Location Plan – Main/Water Streets**

- a. Remove and dispose of assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil within **Work Area 9 Vault 26**. Assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil shall be removed utilizing NYCDEP Full Containment Procedure.



Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
Work Area 9 - Vault 26	NYCDEP Full Containment Procedure	1,600 Sq. Ft. of assumed asbestos-contaminated debris and 4" of assumed asbestos contaminated soil	-

- D. The facilities are under the jurisdiction of numerous owners. The asbestos abatement contractor shall perform the work of this contract in a manner that will be least disruptive to the normal use of the building.
- E. Asbestos abatement contractor's attention is directed to the fact that patents cover certain methods of asbestos abatement indicated in the specifications. To date, patents have been issued with regard to negative pressure enclosures or negative or reduced pressure and glove-bag.
- F. Asbestos abatement contractor shall be solely responsible for and shall hold the City of New York Department of Design and Construction and the City harmless from, any and all damages, losses and expenses resulting from any infringement by Asbestos abatement contractor of any patent, including but not limited to the patents described above, used by Asbestos abatement contractor during performance of this agreement.
- G. Prior to starting, the asbestos abatement contractor must notify the Commissioner of the City of New York Department of Design and Construction if he anticipates any difficulty in performing the work as directed and required by these Specifications. Asbestos abatement contractor shall be required to attend an on-site job meeting with the Construction Project Manager prior to start of work to examine conditions of the site for removal and plan the sequence for removal operations.
- H. The asbestos abatement contractor shall retain a certified Project Designer for the preparation of an Asbestos Variance Application (ACP-9), if required.
- I. The asbestos abatement contractor shall be responsible for preparing and submitting all filings, notifications, amendments and variances, etc. required by all City, State and Federal regulatory agencies having jurisdiction, at no additional cost to the NYC DDC.
- J. The general contractor shall retain a Registered Design Professional (person licensed and registered to practice the professions of architecture or engineering under the Education Law of the State of New York) to prepare a Work Place Safety Plan (WPSP), if required.
- K. The general contractor shall retain a Registered Design Professional (person licensed and registered to practice the professions of architecture or engineering under the Education Law of the State of New York) to perform final inspections



required pursuant to Title 28 of the Administrative Code, including but not limited to special inspections required under Chapter 17 of the Building Code. Such special inspections and A-TR1 forms shall be completed by the Registered Design professional.

- L. For coordination with other Asbestos abatement contractors, see the General Conditions governing all Contracts.
- M. Related Asbestos Removal Work Under Other Contracts:
  - 1. Each asbestos abatement contractor shall be responsible for the removal of incidental asbestos not identified in this section and found prior to or during the Work.
  - 2. Incidental asbestos is defined as ACM that is discovered during the course of their work that must be abated to enable them to perform the work of their Contract.
- N. Work Hours:
  - 1. The asbestos abatement contractor shall establish his work schedule in a way that avoids interference or conflict with the normal functioning of the facility. Work in the evenings shall be done at no additional cost to the City.
  - 2. All work shall be done during regular working hours unless the Asbestos abatement contractor requests authorization to work other than regular working hours and such authorization is granted by the Commissioner (Regular working hours are those during which any given facility in which work is to be done is customarily open and functioning). If such work schedule is authorized by the Commissioner the work shall be done at no additional cost to the City.
  - 3. The order of phases and start dates associated with each will be determined by the Construction Project Manager.
  - 4. Asbestos abatement contractor shall be required to schedule waste transfer during evening hours, when activity within the facility is at a minimum. Evening hours are defined as 6:00 p.m. to 6:00 a.m. Waste transfer must be approved by the Construction Project Manager and Facility Manager.
- O. The following conditions shall apply to all temporary shutdowns of existing services:
  - 1. All temporary lighting and temporary electrical services for use in the Work Area shall be in weather proof enclosures and be ground fault protected and:



2. Shall be performed at no additional charge to the City.
3. Shall be performed at times not interfering with the other activities in the building.
4. Shall be performed only with written consent from the Commissioner and the Facility Manager.
5. Shall be made through written request to the Commissioner at least 10 days in advance with complete written description of the work to be performed.

**P. Stages of Asbestos Removal Work:**

1. The asbestos abatement contractor will be required to perform the work and it is the intent of this Specification to remove all asbestos containing and asbestos contaminated materials from the Work Area. The asbestos abatement contractor is responsible for verifying all quantities of materials listed.

**Q.** Certain equipment in the Work Area may need to remain operational during removal. Therefore, the removal of ACM from this equipment shall be performed as the last removal activities within the Work Area. The Asbestos abatement contractor shall coordinate the scheduling for the removal of ACM on functioning equipment with the Construction Project Manager.

### **1.03 QUALIFICATIONS OF ASBESTOS ABATEMENT CONTRACTOR**

**A.** Requirements: The asbestos abatement contractor must demonstrate compliance with the special experience requirements set forth in subparagraphs (1) through (5) below. The asbestos abatement contractor must submit documentation demonstrating compliance with all listed requirements. Such documentation shall include without limitation, all required licenses, certificates, and documentation.

1. The asbestos abatement contractor must, whether an individual, corporation, partnership, joint venture or other legal entity, demonstrate for the three year period prior to the work, that it has been licensed by the New York State Department of Labor, as an "Asbestos Abatement Contractor".
2. The asbestos abatement contractor must, for the three year period prior to the work, have been in the business of providing asbestos abatement services as a routine part of its daily operations.
3. The asbestos abatement contractor proposing to do asbestos abatement work must be thoroughly experienced in such work and must provide evidence of having successfully performed and completed in a timely fashion at least five (5) asbestos abatement projects of similar size and complexity. The





aggregate cost of these projects must be at least \$1,000,000 in each of the three years.

4. For each project submitted to meet the experience requirements set forth above, the asbestos abatement contractor must submit the following information for the project; name and location of the project; name title and telephone number of the owner or the owner's representative who is familiar with the asbestos abatement contractor's work; brief description of the work completed as a prime or sub-asbestos abatement contractor; amount of contract or subcontract and the date of completion.
  5. The asbestos abatement contractor must demonstrate that it has the financial resources, supervisory personnel and equipment necessary to carry out the work and to comply with the required performance schedule, taking into consideration other business commitments. The asbestos abatement contractor must submit such documentation as may be required by the Department of Design and Construction to demonstrate that it has the requisite capacity to perform the required services of this contract.
- B. Throughout the specifications, reference is made to codes and standards which establish qualities and types of workmanship and materials, and which establish methods for testing and reporting on the pertinent characteristics thereof. Provide materials or workmanship that meet or exceed the specifically named codes or standards where required by these specifications.
- C. Site Investigation: Asbestos abatement contractor shall inspect all the specifications and related drawings, and will investigate and confirm the site conditions affecting the work, including, but not limited to:
1. Physical considerations and conditions of both the material and structure. These considerations include any obstacles or obstructions encountered in accessing or removing the material.
  2. Handling, storage, transportation and disposal of the material.
  3. Availability of qualified and skilled labor.
  4. Availability of utilities.
  5. Exact quantities of all materials to be disturbed and/or removed.

#### **1.04 WORK BY OTHERS**

The City reserves the right during the term of this Contract to have work performed on asbestos abatement projects by other asbestos abatement contractors as the situation warrants.

## 1.05 DEFINITIONS

- A. General Explanation: Certain terms used in this Specification Section are defined below. Definitions and explanations of this Specification Section are not necessarily complete or exclusive, but are general for the Work to the extent they are not stated more explicitly in another element of the Contract Documents.
- B. Definitions in General Use:
1. Approve: Where used in conjunction with Engineer's response to submittals, requests, applications, inquiries, reports and claims by Asbestos abatement contractor, the meaning of term "approved" will be held to limitations of Engineer's responsibilities and duties as specified in Contract Documents. In no case will "approval" by Engineer be interpreted as a release of Asbestos abatement contractor from responsibilities to fulfill requirements of Contract Documents.
  2. Directed, Requested, etc.: Where not otherwise explained, terms such as "directed," "requested," "authorized," "selected," "approved," "required," "accepted," and "permitted" mean "directed by Engineer," "requested by Engineer," and similar phrases. However, no such implied meaning will be interpreted to extend Engineer's responsibility into Asbestos abatement contractor's responsibility for construction supervision.
  3. Furnish: Except as otherwise defined in greater detail, term "furnish" is used to mean supply and deliver to project site, ready for unloading, unpacking, assembly, installation, etc., as applicable in each instance.
  4. Indicated: The term "indicated" is a cross-reference to graphic representations, notes or schedules on Drawings, to other paragraphs or schedules in the Specifications, and to similar means of recording requirements in Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used in lieu of "indicated," it is for purpose of helping reader locate cross-reference, and no limitation of location is intended except as specifically noted.
  5. Install: Except as otherwise defined in greater detail, term "install" is used to describe operations at Project site including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations, as applicable in each instance.
  6. Installer: The term "installer" is defined as the entity (person or firm) engaged by the asbestos abatement contractor, or its sub-asbestos abatement contractor for performance of a particular unit of work at Project site, including installation, erection, application and similar required operations. It is a



general requirement that such entities (installers) be expert in operations they are engaged to perform.

7. Provide: Except as otherwise defined in greater detail, term “provide” means furnish and install, complete and ready for intended use, as applicable in each instance.
8. Third-Party Air Monitor: The term “Third-Party Air Monitor ” is defined as an entity engaged by City and Construction Project Manager to perform specific inspections or tests of the work, either at Project site or elsewhere; and to report and (if required) interpret results of those inspections or tests.

**C. Definitions Relative to Asbestos Abatement:**

1. Abatement: Any and all procedures physically taken to control fiber release from asbestos-containing materials. This includes removal, encapsulation, enclosure, cleanup and repair.
2. Adequately Wet: The complete penetration of a material with amended water to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then the material has not been adequately wetted. However, the absence of visible emissions is not evidence of being adequately wet. ACM must be fully penetrated with the wetting agent in order to be considered adequately wet. If the ACM being abated is resistant to amended water penetration, wetting agent shall be applied to the material prior to and during removal as necessary to minimize fiber release.
3. Aggressive Sampling: Method of sampling in which the individual collecting the air sample creates activity by the use of mechanical equipment during the sampling period to stir up settled dust and simulate activity in that area of the building.
4. AHERA: Asbestos Hazard Emergency Response Act of 1986
5. AIHA: American Industrial Hygiene Association.
6. Airlock: System for permitting entrance and exit while restricting air movement between a contaminated area and an uncontaminated area. It consists of two curtained doorways separated by a distance of at least three feet such that one passes through one doorway into the airlock, allowing the doorway sheeting to overlap and close off the opening before proceeding through the second doorway, thereby preventing flow-through contamination.
7. Air Sampling: Process of measuring the fiber content of a known volume of air collected during a specific period. The procedure utilized for asbestos follows the NIOSH Standard Analytical Method 7400, or the provisional



transmission electron microscopy methods developed by the US EPA which is utilized for lower detection levels and specific fiber identification.

8. **Ambient Air Monitoring:** “Ambient air monitoring” shall mean measurement or determination of airborne asbestos fiber concentrations outside but in the general vicinity of the worksite.
9. **Amended Water:** Water to which a surfactant has been added.
10. **ANSI:** American National Standards Institute
11. **Area Air Sampling:** Any form of air sampling or monitoring where the sampling device is placed at some stationary location.
12. **Asbestos:** Any hydrated mineral silicate separable into commercially usable fibers, including but not limited to chrysotile (serpentine), amosite (cumingtonite-grunerite), crocidolite (riebeckite), tremolite, anthophyllite and actinolite.
13. **Asbestos-Containing Material (ACM):** Asbestos or any material containing more than one-percent asbestos.
14. **Asbestos-Containing Waste Material:** ACM, asbestos-contaminated objects or debris associated with asbestos abatement requiring disposal.
15. **Asbestos-Contaminated Objects:** Any objects which have been contaminated by asbestos or asbestos-containing material.
16. **Asbestos Assessment Report:** “Asbestos Assessment Report” shall mean the “Form ACP-5” form, as approved by NYCDEP, by which a NYCDEP-certified asbestos investigator certifies that a building or structure (or portion thereof) is free of ACM or the amount of ACM to be abated constitutes a minor project.
17. **Asbestos Handler:** Individual who disturbs, removes, repairs, or encloses asbestos material. This individual shall have completed approved training course(s) and be in possession of certification issued by NYCDEP and NYSDOL.
18. **Asbestos Handler Supervisor:** Individual who supervises the handlers during an asbestos project and ensures that proper asbestos abatement procedures as well as individual safety procedures are being adhered to. This individual shall have completed approved training course(s) and be in possession of certification issued by NYCDEP and NYSDOL.



19. **Asbestos Investigator:** An individual certified by NYCDEP as having successfully demonstrated his or her ability to identify the presence of and evaluate the condition of asbestos in a building or structure.
20. **Asbestos Project:** Any form of work performed in a building or structure which will disturb (e.g., remove, enclose, encapsulate) asbestos-containing material.
21. **ASTM:** American Society for Testing and Materials.
22. **Asbestos Project Notification:** The "Form ACP-7" asbestos project notification form as approved by DEP.
23. **Authorized Visitor:** Authorized visitor shall mean the building owner and his/her representative, and any representative of a regulatory or other agency having jurisdiction over the project.
24. **Building Owner:** Person in whom legal title to the premises is vested unless the premises are held in land trust, in which instance Building Owner means the person in whom beneficial title is vested.
25. **Building Materials:** Any and all manmade materials, including but not limited to interior and exterior finishes, equipment, bricks, mortar, concrete, plaster, roofing, flooring, caulking, sealants, tiles, insulation, and outdoor paving such as sidewalks, paving tiles and asphalt.
26. **Certified Industrial Hygienist (CIH):** Individual with a minimum of five years experience as an industrial hygienist and who has successfully completed both levels of the examination administered by the American Board of Industrial Hygiene and who is currently certified by that board.
27. **Certified Safety Professional (CSP):** Individual having a bachelor's degree from an accredited college or university and a minimum of four years experience as a safety professional and who has successfully completed both levels of the examination administered by the Board of Certified Safety Professionals and who is currently certified by that board.
28. **Chain of Custody:** "Chain of Custody" shall mean the form or set of forms that document the collection and transfer of a sample.
29. **City:** City of New York
30. **Clean Room:** An uncontaminated area or room that is part of worker decontamination enclosure system with provisions for storage of workers' street clothes and protective equipment.



31. Clearance Air Monitoring: Employment of aggressive sampling techniques with a volume of air collected to determine the airborne concentration of residual fibers and shall be performed as the final abatement activity.
32. Commissioner: shall mean the head of the Agency that has entered into this contract or his/her duly authorized representative.
33. Competent Person: Shall mean the designated person as defined by OSHA in 29 CFR1926.1101.
34. Curtained Doorway: Device that consists of at least three overlapping sheets of fire retardant plastic over an existing or temporarily framed doorway. One sheet shall be secured at the top and left side, the second sheet at the top and right side, and the third sheet at the top and left side. All sheets shall have weights attached to the bottom to ensure that the sheets hang straight and maintain a seal over the doorway when not in use.
35. Decontamination Enclosure System: Series of connected rooms, separated from the Work Area and from each other by air locks, for the decontamination of workers, materials, waste containers, and equipment.
36. Demolition: The dismantling or razing of a building, including all operations incidental thereto (except for asbestos abatement activities), for which a demolition permit from the New York City Department of Buildings is required.
37. NYCDEP or DEP: The New York City Department of Environmental Protection.
38. Disturb: Any action taken which may alter, change, or stir, such as but not limited to the removal, encapsulation, enclosure or repair of asbestos-containing material.
39. DOB: The New York City Department of Buildings.
40. Egress: A continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a public way. A means of egress consists of three separate and distinct parts: the exit access, the exit and the exit discharge.
41. ELAP: Environmental Laboratory Approval Program administered by the New York State Department of Health.
42. Encapsulant (sealant) or Encapsulating Agent: Liquid material which can be applied to ACM and which temporarily controls the possible release of asbestos fibers from the material either by creating a membrane over the



surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant). A thin coat of lockdown encapsulant shall be applied to all surfaces in the work area which were not the subject of removal or abatement, including the cleaned layer of the surface barriers, but excepting sprinklers, standpipes, and other active elements of the fire suppression system.

43. Encapsulation: The coating or spraying of asbestos-containing material encapsulant. A thin coat of lockdown encapsulant shall be applied to all surfaces in the work area which were not the subject of removal or abatement, including the cleaned layer of the surface barriers, but excepting sprinklers, standpipes, and other active elements of the fire suppression system.
44. Enclosure: Construction of airtight walls and/or ceilings between ACM and the facility environment, or around surfaces coated with ACM, or any other appropriate procedure as determined by the NYCDEP which prevents the release of asbestos fibers.
45. EPA or USEPA: United States Environmental Protection Agency.
46. Equipment Room: Contaminated area or room that is part of the worker decontamination enclosure system with provisions for the storage of contaminated clothing and equipment.
47. Exit: That portion of a means of egress system which is separated from other interior spaces of a building or structure by fire-resistance-rated construction to provide a protected path of egress travel between the exit access and the exit discharge.
48. FDNY: The Fire Department of the City of New York.
49. Fiber: An acicular single crystal or a similarity elongated polycrystalline aggregate which displays some resemblance to organic fibers by having such properties as flexibility, high aspect ratio, silky luster, axial lineation, and others, and which has attained its shape primarily through growth rather than cleavage.
50. Fixed Object: A unit of equipment, furniture, or other item in the work area which cannot be removed from the work area. Fixed objects shall include equipment, furniture, or other items that are attached, in whole or in part, to a floor, ceiling, wall, or other building structure or system or to another fixed object and cannot be reasonably removed from the work area. Fixed objects shall also include pipes and other equipment inside the work area which are not the subject of the asbestos project. Active fire suppression system components shall not be considered fixed objects.



51. Glovebag technique: shall mean a method for removing asbestos-containing material from heating, ventilation and air conditioning (HVAC) ducts, short piping runs, valves, joints, elbows, and other nonplanar surfaces. The glovebag assembly is a manufactured device consisting of a large bag (constructed of at least 6-mil transparent plastic), two inward-projecting long sleeve gloves, one inward-projecting waterwand sleeve, an internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or area to be decontaminated and contains all asbestos fibers released during the removal process.
52. HEPA-Filter: High efficiency particulate air filter capable of trapping and retaining 99.97 percent of particles (asbestos fibers) greater than 0.3 micrometers mass median aerodynamic equivalent diameter.
53. HEPA vacuum equipment: "HEPA vacuum equipment" shall mean vacuuming equipment with a HEPA filter.
54. Holding Area: Chamber in the equipment decontamination enclosure located between the washroom and an uncontaminated area.
55. Homogeneous Work Area: Portion of the Work Area that contains one type of ACM and/or where one type of abatement is used.
56. Industrial Hygiene: Science and art devoted to the recognition, evaluation, and control of those environmental factors or stresses, arising in or from the work place, which may cause sickness, impaired health and well being, or significant discomfort and inefficiency among worker or among the citizens of the community.
57. Industrial Hygienist: Individual having a college or university degree or degrees in Engineering, Chemistry, Physics or Medicine, or related Biological Sciences who, by virtue of special studies and training, has acquired competence in industrial hygiene. Such special studies and training must have been sufficient in all of the above cognate sciences to provide the abilities:
  - a. To recognize the environmental factors and to understand their effect on people and their well being; and
  - b. To evaluate, on the basis of experience and with the aid of quantitative measurement techniques, the magnitude of these stresses in terms of ability to impair people's health and well being; and
  - c. To prescribe methods to eliminate, control, or reduce such stresses when necessary to alleviate their efforts.





58. **Isolation Barrier:** The construction of partitions, the placement of solid materials, and the plasticizing of apertures to seal off the work place from surrounding areas and to contain asbestos fibers in the work area.
59. **Large Asbestos Project:** Asbestos project involving the disturbances (e.g., removal, enclosure, encapsulation) of 260 linear feet or more of ACM or 160 square feet or more of ACM.
60. **Log:** An official record of all activities that occurred during the project. At a minimum, the log shall identify the building owner, agent, asbestos abatement contractor, and workers, and other pertinent information including daily activities, cleanings and waste transfers, names and certificate numbers of asbestos handler supervisors and asbestos handlers; results of inspections of decontamination systems, barriers, and negative pressure ventilation equipment; summary of corrective actions and repairs; work stoppages with reason for stoppage; manometer readings at least twice per work shift; daily checks of emergency and fire exits and any unusual events.
61. **Minor Project:** A project involving the disturbance (e.g., removal, enclosure, encapsulation, repair) of 25 linear feet or less of asbestos containing material or 10 square feet or less of asbestos containing material.
62. **Movable Object:** Unit of equipment or furniture in the Work Area that can be removed from the Work Area.
63. **Negative Air Pressure Equipment:** Portable local exhaust system equipped with HEPA filtration. The system shall be capable of creating a negative pressure differential between the outside and inside of the Work Area.
64. **NESHAPS:** National Emission Standards for Hazardous Air Pollutants.
65. **NFPA:** The National Fire Protection Association.
66. **NIOSH:** National Institute for Occupational Safety and Health.
67. **DEP or NYCDEP:** New York City Department of Environmental Protection
68. **NYSDOL:** New York State Department of Labor.
69. **NYSDOL ICR 56:** "NYSDOL ICR 56" shall mean Part 56 of the Official Compilation of Codes, Rules and Regulations of the State of New York or 12 NYCRR Part 56.
70. **NYSDOH:** The New York State Department of Health.



71. **Obstruction:** The blocking of a means of egress with any temporary structure or barrier. A double layer of fire-retardant 6-mil polyethylene sheeting shall not be considered an obstruction when it is prominently marked as an exit with photo luminescent signage or paint and cutting tools (knife, razor) are attached to the work area side of the sheeting for use in the event that the sheeting must be cut to permit egress. A corridor shall not be considered obstructed when there is a clear path measuring at least three (3) feet wide.
72. **Occupied Area:** Area of the work site where abatement is not taking place and where personnel or occupants normally function or where workers are not required to use personal protective equipment.
73. **OSHA:** Occupational Safety and Health Administration.
74. **Outside air:** "Outside air" shall mean the air outside the work place.
75. **Person:** Individual, partnership, company, corporation, association, firm, organization, governmental agency, administration, or department, or any other group of individuals, or any officer or employee thereof.
76. **Personal Air Monitoring:** Method used to determine employees' exposure to airborne asbestos fibers. The sample is collected outside the respirator in the worker's breathing zone.
77. **Personal Protective Equipment (PPE):** Appropriate protective clothing, gloves, eye protection, footwear, and head gear.
78. **Phase Contrast Microscopy (PCM):** The measurement protocol for the assessment of the fiber content of air. (NIOSH Method 7400).
79. **Physician:** Person licensed or otherwise authorized under Article 131 Section 65.22 of the New York State Education Law.
80. **Plasticize:** To cover floors and walls with fire retardant plastic sheeting as herein specified or by using spray plastics as acceptable to the Department.
81. **Polarized Light Microscopy (PLM):** The measurement protocol for the assessment of the asbestos content of bulk materials. (Interim Method for the Determination of Asbestiform Materials in Bulk Insulation Samples- 40 CFR Part 763, Subpart F, Appendix A as amended on September 1, 1982)
82. **Project Designer:** A person who holds a valid Project Designer Certificate issued by the New York State Department of Labor.
83. **Project Monitor:** A person who holds a valid Project Monitor Certificate issued by the New York State Department of Labor.



84. **Qualitative Fit Test:** Individual test subject's responding (either voluntarily or involuntarily) to a chemical challenge outside the respirator face-piece. Acceptable methods include irritant smoke test, odorous vapor test, and taste test.
85. **Quantitative Fit Test:** Exposing the respiratory wearer to a test atmosphere containing an easily detectable, nontoxic aerosol, vapor or gas as the test agent. Instrumentation, which samples the test atmosphere and the air inside the face-piece of the respirator, is used to measure quantitatively the leakage into the respirator. There are a number of test atmospheres, test agents, and exercises to perform during the test.
86. **Registered Design Professional:** A person licensed and registered to practice the professions of architecture or engineering under the Education Law of the State of New York.
87. **Removal:** Stripping of any asbestos- containing materials from surfaces or components of a facility or taking out structural components in accordance with 40 CFR 61 Subparts A and M.
88. **Renovation:** An addition or alteration or change or modification of a building or the service equipment thereof, that is not classified as an ordinary repair as defined in §27-125 of the Administrative Code of the City of New York.
89. **Repair:** Corrective action using specified work practices (e.g., glovebag, plastic tent procedures, etc.) to minimize the likelihood of fiber release from minimally damaged areas of ACM.
90. **Replacement material:** Any material used to replace ACM that contains less than .01 percent asbestos.
91. **Shift:** A worker's, or simultaneous group of workers', complete daily term of work.
92. **Shower Room:** Room between the clean room and the equipment room in the worker decontamination enclosure with hot and cold running water controllable at the tap and arranged for complete showering during decontamination.
93. **Small Asbestos Project:** Asbestos project involving the disturbance (e.g., removal, enclosure, encapsulation) of more than 25 and less than 260 linear feet of ACM or more than ten and less than 160 square feet of ACM.
94. **Staging Area:** Work Area near the waste transfer airlock where containerized asbestos waste has been placed prior to removal from the Work Area.



95. Strip: To remove asbestos materials from any part of the facility.
96. Structural Member: Load-supporting member of a facility, such as beams and load-supporting walls, or any non-load-supporting member, such as ceiling and non-load-supporting walls.
97. Surface barriers: The plasticizing of walls, floors, and fixed objects within the work area to prevent contamination from subsequent work.
98. Surfactant: Chemical wetting agent added to water to improve penetration.
99. Transmission Electron Microscopy (TEM): The measurement protocol for the assessment of the asbestos fiber content of air. Interim Transmission Electron Microscopy Analytical Methods-40 CFR Part 763, Subpart E, Appendix A.
100. Visible Emissions: Emissions containing particulate material that are visually detectable without the aid of instruments.
101. Washroom: Room between the Work Area and the holding area in the equipment decontamination enclosure system where equipment and waste containers are wet cleaned and/or HEPA-vacuumed prior to disposal.
102. Waste decontamination enclosure system: "Waste decontamination enclosure system" shall mean the decontamination enclosure system designated for the controlled transfer of materials and equipment, consisting of a washroom and a holding area.
103. Wet Cleaning: "Wet cleaning" shall mean the removal of asbestos fibers from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water.
104. Wet methods: "Wet methods" shall mean the use of amended water or removal encapsulants to minimize the generation of fibers during ACM disturbance.
105. Work Area: Designated rooms, spaces, or areas of the building or structure where asbestos abatement activities take(s) place.
106. Worker Decontamination Enclosure System: Portion of a decontamination enclosure system designed for controlled passage of workers and authorized visitors, consisting of a clean room, a shower room, and an equipment room separated from each other and from the Work Area by airlocks and curtained doorways.
107. Work Place: The work area and the decontamination enclosure system(s).



108. Work Place Safety Plan: Construction documents prepared by a registered design professional and submitted for review by DEP in order to obtain an asbestos abatement permit. Such plan shall include, but not be limited to, plans, sections, and details of the work area clearly showing the extent, sequence, and means and methods by which the work is to be performed.
109. Work Site: Premises where abatement activity is being performed. May be composed of one or more Work Areas.

#### **1.06 STANDARD OPERATING PROCEDURES**

- A. Develop and implement a written standard procedure for abatement work to ensure maximum protection and safeguard from asbestos exposure of the workers, visitors, employees, public, and environment.

- B. TELEPHONE DEVICE

The asbestos abatement contractor or his authorized representative shall, at all times during the normal workday or during periods of overtime work under this Contract, carry a mobile telephone. He/she shall supply the Department of Design and Construction with the phone number for the device and he/she is liable to respond back to the calls from DDC within the next one (1) hour period after he/she receives calls from DDC. The cost to the asbestos abatement contractor for this device and all charges accruing thereto is deemed included in the work.

- C. The standard operating procedure shall ensure:

1. Tight security from unauthorized entry into the workspace.
2. Restriction of asbestos abatement contractor's personnel to the immediate Work Area and access/egress routes.
3. Donning of proper protective clothing and respiratory protection prior to entering the Work Area.
4. Safe work practices in the work place, including provisions for inter-room communications, exclusion of eating, drinking, smoking, or in any way breaking the respiratory protection.
5. Proper exit practices from the work space to the outside through the showering and decontamination facilities.
6. Removing asbestos in a way that minimizes release of fibers.



7. Packing, labeling, loading, transporting, and disposing of contaminated material in a way that minimizes exposure and contamination.
  8. Emergency evacuation procedures, for medical or safety situations, to minimize the potential exposure to airborne asbestos fibers for emergency personnel, building occupants, and building environment.
  9. Safety from accidents in the workspace, especially from electrical shocks, fall hazards associated with scaffolding, slippery surfaces, and entanglements in loose hoses and equipment.
  10. Provisions for effective supervision, air monitoring and personnel monitoring for exposure during the work.
  11. Engineering controls that minimize exposure to fibers within the workspace.
  12. The asbestos abatement contractor shall provide a 24-hour fire watch throughout the entire term of the project, to protect against fire and unauthorized entry into the workspace. Fire watch shall be performed by an individual who is a certified asbestos worker capable of entering the Work Area for regular inspections.
- D. Provide an Asbestos Handler Supervisor to provide continuous supervision of all work, and to be responsible for the following:
1. Ensure that individuals are using proper personal protective equipment, are trained in its use and hold valid NYCDEP and NYSDOL Asbestos Handler certificates
  2. Maintain entry log records and ensure that they are recorded in accordance with the provisions of Title 15, Chapter 1 of RCNY and NYSDOL ICR 56.
  3. Surveillance of the Work Areas at a minimum of once per work shift or as required by Title 15, Chapter 1 of RCNY and NYSDOL ICR 56 -7.3, to ensure the integrity of work place isolation, negative pressure equipment and workers personal protective equipment is not torn or ripped and that respiratory protection is worn at all times.
  4. Ensure that sufficient personal protective equipment is stored in the clean room.
  5. Take precautions to prevent heat stress. Precautions include, but are not limited to, selecting lightweight protective clothing, reducing the work rate, and providing adequate fluid breaks.



6. Perform work area inspection with project monitor prior to the commencement of final clearance air monitoring.
7. The asbestos abatement contractor shall retain the asbestos handler supervisor to perform a visual inspection prior to the post-abatement clearance air monitoring to confirm that all containerized waste has been removed from work and holding areas and there is no visible ACM debris or residue on or about all abated surfaces.

**E. ENGINEERING CONTROLS**

1. The 8-hour time weighted average airborne concentration of fibers to which any passerby may be exposed shall not exceed 0.01 fibers per cubic centimeter of air when fibers have a physical dimension longer than 5 micrometers as determined by the method prescribed in these Specifications.
2. All asbestos projects shall utilize negative pressure ventilation equipment.
  - a. The asbestos abatement contractor shall use a manometer to document the pressure differential. The asbestos abatement contractor shall install and make the manometer operational once the negative pressure has been established in the work area. Magnahelic manometers shall be calibrated at least every six months and a copy of the current calibration certification shall be available at the work site.
3. Negative pressure ventilation equipment shall be installed and operated to provide at least one air change in the work area every 15 minutes. Where there are no floor or wall barriers because floor or wall material is being abated, there shall be at least one air change in the work area every ten minutes.
4. The negative pressure ventilation equipment shall operate continuously, 24 hours a day, from the establishment of isolation barriers through successful clearance air monitoring. If such equipment shuts off, adjacent areas shall be monitored for asbestos fibers.
5. A static negative air pressure of 0.02 inches (minimum) water column shall be maintained at all times in the work place during abatement to ensure that contaminated air in the Work Area does not filter back to uncontaminated areas.
6. If the contaminated area of an asbestos project covers the entire floor of the affected building, or an area greater than 15,000 square feet on any given floor, the installation of a negative air cut off switch or switches shall be required at a single location outside the work place, such as inside a stairwell, or at a secured location in the ground floor lobby when conditions warrant.



The required switch or switches shall be installed by a licensed electrician pursuant to a permit issued by the Department of Buildings. If negative pressure ventilation equipment is used on multiple floors, the cut off switch shall be able to turn off the equipment on all floors.

7. On loss of negative pressure or electric power to the negative pressure ventilating units, abatement shall stop immediately and shall not resume until power is restored and negative pressure ventilation equipment is operating again.
8. Negative pressure ventilation equipment shall be exhausted to the outside of the building away from occupied areas.
  - a. All openings (including but not limited to operable windows, doors, vents, air intakes or exhausts of any mechanical devices) less than 15 feet from the exterior exhaust duct termination location shall be plasticized with two layers of fire retardant 6-mil polyethylene sheeting, or a second negative pressure ventilation unit with the primary unit's capacity shall be connected in series prior to exhausting to the outside.
  - b. Negative pressure ventilation equipment shall exhaust away from areas accessible to the public.
  - c. All ducting shall be sealed and braced or supported to maintain airtight joints. Ducts shall be reinforced and shall be installed so as to prevent breakage. Damage to ducts must be repaired immediately.
9. Where ducting to the outside is not possible, a second negative pressure ventilation unit compatible with the primary unit's capacity shall be connected in series. The area receiving the exhaust shall have sufficient, non-recycling exhaust capacity to the outside of the structure.
10. In the event that there is a failure of the containment system or a breach in the Isolation Barriers, all abatement work will cease and the asbestos abatement contractor will immediately correct the condition. Abatement work will not resume until the Work Area has been smoke tested by the third party laboratory and approved by the Construction Project Manager.

**F. LOCKDOWN ENCAPSULATION PROCEDURES**

1. The following procedures shall be followed to seal in non-visible residue while conducting lockdown encapsulation on all surfaces from which ACM has not been removed:





- a. Only encapsulants rated as acceptable or marginally acceptable on the basis of Battelle Columbus Laboratory test procedures and rating requirements developed under the 1978 USEPA Contract shall be used for lockdown encapsulation.
- b. The encapsulant solvent or vehicle shall not contain a volatile hydrocarbon unless reviewed and approved by DEP.
- c. Latex paint with solids content greater than 15 percent shall be considered a lockdown sealant for coating all non-metallic surfaces.
- d. Encapsulants shall be applied using airless spray equipment. Spraying is to occur at the lowest pressure range possible to minimize fiber release from encapsulant impact at the surface. It shall be applied with a consistent horizontal or vertical motion.
- e. The cleaned layer of the surface barriers shall be removed from walls and floors.

The isolation barriers shall remain in place throughout cleanup. Decontamination enclosure systems shall remain in place and be utilized. A thin coat of lockdown encapsulant shall be applied to all surfaces in the work area which were not the subject of removal or abatement, including the cleaned layer of the surface barriers, but excepting sprinklers, standpipes, and other active elements of the fire suppression system.

#### **1.07 NOTIFICATIONS, PERMITS, WARNING SIGNS, LABELS, AND POSTERS**

- A. The asbestos abatement contractor shall submit an Asbestos Project Notification (ACP-7) to the NYCDEP listing each work area within the building separately one week in advance of the start of work.
- B. The registered design professional shall obtain an asbestos abatement permit authorizing the performance of construction work as required for asbestos projects involving one or more of the following activities:
  1. Obstruction of an exit door leading to an exit stair or the exterior of the building;
  2. Obstruction of an exterior fire escape or access to that fire escape;
  3. Obstruction of a fire-rated corridor leading to an exit door;
  4. Removal of handrails in an exit stair or ramp;



5. Removal or dismantling of any fire alarm system component including any fire alarm-initiating device (e.g., smoke detectors, manual pull station);
  6. Removal or dismantling of any exit sign or any component of the exit lighting system, including photo luminescent exit path markings;
  7. Removal or dismantling of any part of a sprinkler system including piping or sprinkler heads;
  8. Removal or dismantling of any part of a standpipe system including fire pumps or valves;
  9. Removal of any non-load bearing / non-fire-rated wall (greater than 45 square feet or 50 percent of a given wall);
  10. Any plumbing work other than the repair or replacement of plumbing fixtures;
  11. Removal of any fire-resistance rated portions of a wall, ceiling, floor, door, corridor, partition, or structural element enclosure including spray-on fire resistance rated materials;
  12. Removal of any fire damper, smoke damper, fire stopping material, fire blocking, or draft stopping within fire-resistance rated assemblies or within concealed spaces;
  13. Any work that otherwise requires a permit from the DOB (full demolitions, alterations, renovations, modifications or plumbing work).
- C. The asbestos abatement contractor shall provide a floor plan showing the areas of the building under abatement and the location of all fire exits in said areas. It shall be prominently posted in the building lobby or comparable location, along with a notice stating the location within the building of the negative air cutoff switch, if applicable.
- D. The general contractor shall submit, as required, an asbestos abatement permit due to one or more of the activities listed in 1.07 (B) (1-8) and (B) (13) of this specification. The asbestos abatement contractor is responsible for submitting, with an asbestos project notification, a work place safety plan (WPSP) and any other applicable construction documents. These documents must be prepared by a registered design professional.
- E. A WPSP is not required for projects requiring an asbestos abatement permit due to one or more of the activities listed in 1.07 (B) (9-12) of this specification. The asbestos abatement contractor shall submit, together with the asbestos project notification, all applicable asbestos abatement permit construction documents.



- F. The general contractor shall retain a Registered Design Professional to perform the inspections required pursuant to Title 28 of the Administrative Code, including but not limited to special inspections required by Chapter 17 of the Building Code, as follows:
1. A final inspection shall be performed by a registered design professional retained by the asbestos abatement contractor after all work authorized by the asbestos abatement permit is completed. The person performing the inspection shall note all failures to comply with the provisions of the Building Code or approved asbestos abatement permit and shall promptly notify the owner in writing. All defects noted in such inspection shall be corrected. The final inspection report shall either:
    - a. Confirm:
      - (1) That the construction work is complete, including the reinstallation or reactivation of any building fire safety or life safety component.
      - (2) That any defects previously noted have been corrected.
      - (3) That all required inspections were performed.
      - (4) That the work is in substantial compliance with the approved asbestos abatement permit construction documents, the Building Code, and other applicable laws and rules.
    - b. Confirm:
      - (1) That the construction work does not return the building (or portion thereof) affected by the abatement project to a condition compliant with the building code and other applicable laws and rules, but that the registered design professional has reviewed an application for asbestos abatement permit construction documents approval that has been approved by the department of buildings, and the subsequent scope of work as approved will, upon completion, render all areas affected by the asbestos project in full compliance with the building code and all applicable laws and rules.
      - (2) That any defects previously noted that are not addressed by the subsequent scope of work as approved by the department of buildings, have been corrected.



- (3) That all required inspections that are not addressed by the subsequent scope of work as approved by the department of buildings were performed.
  - (4) That all completed work pursuant to an asbestos abatement permit is in substantial compliance with the approved asbestos abatement permit construction documents.
- G. The general contractor shall provide the final inspection reports to be filed with DEP on A-TR1 form. Records of final inspections made by registered design professionals shall be submitted to DDC as part of the close out document package.
- H. Erect bilingual (English-Spanish) warning signs around the work space and at every point of potential entry from the outside and at main entrance to building which can be viewed by the public without obstruction, in accordance with OSHA 29 CFR 1926.1101 (K) (Sign Specifications) and Title 15, Chapter 1 of RCNY. The warning signs shall be a bright color so that they will be easily noticeable. The size of the sign and the size of the lettering shall be no less than OSHA requirements.
- I. Provide the required labels for all polyethylene bags and all drums utilized to transport contaminated material to the landfill in accordance with OSHA 29 CFR 1926.1101 (K)(2) and by 49 CFR Parts 171 and 172 of the Department of Transportation regulations.
- J. Provide any other signs, labels, warnings, and posted instructions that are necessary to protect, inform and warn people of the hazard from asbestos exposure. Post in a prominent and convenient place for the workers a copy of the latest applicable regulations from OSHA, EPA, NIOSH, State of New York and New York City and any additional items mandated for posting by the aforementioned regulations.
- K. Furnish all permits, variances and notices required to perform the Work.

#### **1.08 EMERGENCY PRECAUTIONS**

- A. Establish emergency and fire exits from the Work Area. The clean side of all emergency exits shall be equipped with two full sets of protective clothing and respirators at all times.
- B. Notify local medical emergency personnel, both ambulance crews and hospital emergency room staff prior to commencement of abatement operations as to the possibility of having to handle contaminated or injured workmen, and shall be advised on safe decontamination.
- C. Prepare to administer first aid to injured personnel after decontamination. Seriously injured personnel shall be treated immediately or evacuated immediately for decontamination. When an injury occurs, precautions shall be taken to reduce



airborne fiber concentrations (i.e., misting of the air with water) until the injured person has been removed from the Work Area.

- D. Notify, before actual removal of the asbestos material, the local police and fire departments to the danger of entering the Work Area. Asbestos abatement contractor shall make every effort to help these agencies form plans of action should their personnel need to enter the contaminated area.

## **1.09 SUBMITTALS**

### **A. Pre-Construction Submittals:**

1. Attend a pre-construction meeting scheduled by the City of New York Department of Design and Construction. This meeting shall also be attended by a designated representative of the City of New York third party air monitoring firm, facility manager and the Construction Project Manager. At this meeting, the asbestos abatement contractor shall present three copies of the following items, bound and indexed. The detailed plan of action must be submitted at least five (5) days prior to the pre-construction meeting.
  - a. Asbestos abatement contractor's scope of work, work plan and schedule.
  - b. Asbestos project notifications, approved variances and plans to Government Agencies.
  - c. Copies of Permits, clearance and licenses if required.
  - d. Schedules: the asbestos abatement contractor shall provide to the Construction Project Manager a copy of the following schedules for approval. Once approved, schedules shall be maintained and updated as received. Asbestos abatement contractor shall post a copy of all schedules at the site:
    - (1) A construction schedule stating critical dates of the project including, but not limited to, mobilization, Work Area preparation, demolition, gross removal, fine cleaning, encapsulation, inspections, clearance monitoring, and phase of refinishing and final inspections. The schedule shall be updated biweekly, at a minimum.
    - (2) A schedule of staffing stating number of workers per shift per activity, name and number of supervisor(s) per shift, shifts per day, and total days to be worked.



- (3) Submit all changes in schedule or staffing to the Construction Project Manager prior to implementation.
  - (4) A schedule of equipment to be used including numbers and types of all major equipment such as HEPA Air Filtration Units, HEPA-vacuums, airless sprayers, Water Atomizing Devices and Type "C" compressors.
- e. A written plan and shop drawings for preparation of work site and decontamination chamber.
  - f. Description of protective clothing and approved respirator to be used, make, model, NIOSH approval numbers.
  - g. Delineation of responsibility of work site supervision, including competent person, with names, resumes, and home telephone numbers.
  - h. Explanation of decontamination sequence and isolation techniques.
  - i. Description of specific equipment to be utilized, including make and model number of air filtration devices, vacuums, sprayers, etc.
  - j. Description of any prepared methods, procedures, techniques, or equipment other than those specified in the Contract Documents.
  - k. Explanation of the handling of asbestos contaminated wastes including EPA and NYCDEP identification numbers of Waste Hauler.
  - l. Description of the final clean-up procedures to be used.
  - m. Name and qualifications of asbestos abatement contractor's Air Monitor including AIHA accreditation, and proof of NIOSH PAT and NIST/NVLAP Bulk Quality Assurance Proficiency of OSHA samples for approval by the City of New York Department of Design and Construction.
  - n. Written description of emergency procedures to be followed in case of injury or fire. This section must include evacuation procedures, source of medical assistance (name and telephone number) and procedures to be used for access by medical personnel (examples: first aid squad and physician). NOTE: Necessary Emergency Procedures Shall Take Priority Over All Other Requirements of These Specifications.
  - o. Safety Data Sheets (SDS) for encapsulants, sealants, firestopping foam, cleaners/disinfectants, spray adhesive and any and all potentially hazardous materials that may be employed on the project. No work



involving the aforementioned will be allowed to proceed until SDS are reviewed.

- p. **Worker Training and Medical Surveillance:** Asbestos abatement contractor shall submit a list of the persons who will be employed by him in the removal work. Present evidence that workers have received proper training required by the regulations and the medical examinations required by OSHA 29 CFR 1926.1101.
- q. **Logs:** Specimen copies of daily progress log, visitor's log, and disposal log.
  - (1) The asbestos abatement contractor shall provide a permanently bound log book of minimum 8-1/2" x 11" size at the entrance to the Worker and Waste Decontamination enclosure system as hereinafter specified. Log book shall contain on title page the project name, name, address and phone number of Environmental Control Representative; name, address and phone number of asbestos abatement contractor; name, address and phone number of asbestos abatement contractor and City's air testing entity; emergency numbers including, but not limited to local Fire/Rescue Department. Log book shall contain a list of personnel approved by the laboratory for entry into the Work Area.
  - (2) All entries into the log shall be made in non-washable, permanent ink and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted. Any significant events occurring during the abatement project shall be entered into the log. Upon completion of the job, the Asbestos abatement contractor shall submit a copy of the logbook containing a day-to-day record of personnel log entries countersigned by the Construction Project Manager every day.
- r. **Worker's Acknowledgments:** Submit statements signed by each employee that the employee has received training in the proper handling of ACM, understands the health implications and risks involved; and understands the use and limitations of the respiratory equipment to be used.

B. Submit copies of the following items to the Construction Project Manager during the work:



1. Security and safety logs showing names of person entering workspace, date and time of entry and exit, record of any accident, emergency evacuation, and any other safety and/or health incident.
  2. Progress logs showing the number of workers, supervisors, hours of work and tasks completed shall be submitted daily to the Construction Project Manager.
  3. Floor plans indicating asbestos abatement contractor's current work progress shall be submitted for review by the Construction Project Manager at weekly progress meetings.
  4. All asbestos abatement contractors' air monitoring and inspection results.
- C. Project Closeout Submittals:  
Upon completion of the project and as a condition of acceptance, the asbestos abatement contractor shall present two copies of the following items, bound and indexed:
1. Lien Waivers from asbestos abatement contractor, Sub-asbestos abatement contractors and Suppliers,
  2. Daily OSHA air monitoring results,
  3. All Waste Manifests (Asbestos and Construction Debris), seals and disposal logs,
  4. Field Sign-In/Sign-Out Logs for every shift,
  5. Copies of all Building Department Forms and Permits,
  6. A Letter of Compliance stating that all the work on this project was performed in accordance with the Specifications and all applicable Federal, State and Local regulations,
  7. All Warranties as stated in the Specifications,
    - a. Fully executed disposal certificates and transportation manifest.
  8. Project Record: The asbestos abatement contractor shall maintain a project record for all small and large asbestos projects. During the project, the project record shall be kept on site at all times. Upon completion of the project, the project record shall be maintained by the building owner. The project record shall be submitted to DDC as part of the close out documents. The project record shall consist of:





- a. Copies of licenses of all asbestos abatement contractors involved in the project;
  - b. Copies of DEP and NYSDOL supervisor and handler certificates for all workers engaged in the project;
  - c. Copies of all project notifications and reports filed with DEP and NYSDOL for the project, with any amendments or variances;
  - d. Copies of all asbestos abatement permits, including associated approved plans and work place safety plan;
  - e. A copy of the air sampling log and all air sampling results;
  - f. A copy of the abatement asbestos abatement contractor's daily log book;
  - g. All data related to bulk sampling including the results of any asbestos surveys performed by an asbestos investigator;
  - h. Copies of all asbestos waste manifests;
  - i. A copy of all Project Monitor's Reports (ACP-15).
  - j. A copy of each ATR-1 Form completed for the asbestos project (if required).
  - k. A copy of each Asbestos Project Conditional Closeout Report (ACP-20).
  - l. A copy of the Asbestos Project Completion Form (ACP-21).
9. The asbestos abatement contractor shall submit one of the following certifications to the DOB, with a copy provided to DDC:
- a. Asbestos Project Completion Form. If an asbestos project has been performed, a copy of the asbestos project completion form issued by DEP shall be submitted to DOB, with a copy being provided to DDC, prior to the issuance of a DOB permit and to any amendment of the underlying construction document approval which increases the scope of the project to include (a) work area(s) not previously covered.
  - b. An Asbestos Project Conditional Close-out Form. If an asbestos project has been performed a copy of the asbestos project conditional close-out form issued by DEP shall be submitted to DOB, with a copy



being provided to DDC, prior to the issuance of a DOB permit and to any amendment of the underlying construction document approval which increases the scope of the project to include (a) work area(s) not previously covered.

## **1.10 QUALITY ASSURANCE**

- A. All work required for the completion of this project or called for in this Specification must be executed in a workmanlike manner by using the appropriate methods established by regulatory requirements and/or industrial standards. All workmanship or work methods are subject to review and acceptance by the Construction Project Manager. Throughout the Specification, reference is made to codes and standards which establish qualities, levels or types of workmanship which will be considered acceptable. It is the asbestos abatement contractor's responsibility to comply with these codes and standards during the execution of this work.
- B. All materials and equipment required or consumed during the work of this Contract must meet the minimum acceptable criteria established by codes and standards referenced elsewhere in this Specification. Materials and equipment must be submitted for prior approval as part of the asbestos abatement contractor's "Shop Drawings".
- C. It is the asbestos abatement contractor's responsibility, when so required by the Specification or upon written request from the Commissioner or his representative to furnish all required proof that workmanship, materials and/or equipment meet or exceed the codes and standards referenced. Such proof shall be in the form requested, typically a certified report or test conducted by a testing entity approved for that purpose by DDC.
- D. The asbestos abatement contractor shall furnish proof that employees working under his supervision have had instruction on the dangers of asbestos exposure, on respirator use, decontamination, and OSHA regulations. This proof shall be in the form of a notarized affidavit to the effect that the above requirements have been satisfied.
- E. The asbestos abatement contractor will have at all times in his possession and in view at the job site the OSHA regulations 29 CFR 1910.1001, and 1926.1101 Asbestos, and Environmental Protection Agency 40 CFR, Part 61, subpart B: National Emission Standard for asbestos, asbestos stripping, work practices and disposal of asbestos waste. He shall also have one copy of NYC Title 15, Chapter 1 of RCNY and NYS DOL ICR 56 at the job site at all times.
- F. Familiarity with Pertinent Codes and Standards: In procuring all items used in this work, it is the asbestos abatement contractor's responsibility to verify the detailed requirements of the specifically named codes and standards and to verify that the



items procured for use in this work meet or exceed the specified requirements, and are suitable for their intended use.

- G. **Rejection of Non Complying Items:** The Commissioner reserves the right to reject items incorporated into the work that fail to meet the specified minimum requirements. The Commissioner further reserves the right, and without prejudice to other recourse that maybe taken, to accept non-complying items subject to an adjustment in the Contract amount as approved by the City.
- H. **Applicable Regulations, Codes and Standards:** Applicable standards listed in these Specifications include, but are not necessarily limited to, standards promulgated by the following agencies and organizations:
1. **American National Standards Institute (ANSI)**  
(Successor to USASI and ASA)  
25 West 43<sup>rd</sup> Street (between 5<sup>th</sup> and 6<sup>th</sup> Avenue) 4<sup>th</sup> Floor  
New York, NY 10036  
212-642-4900
  2. **American Society for Testing and Materials (ASTM)**  
100 Bar Harbor Drive  
West Conshohocken, PA 19428-2959  
610-832-9500
  3. **National Institute for Occupational Safety and Health (NIOSH)**  
Robert A. Taft Laboratory  
4676 Columbia Pkwy  
Mailstop R12 Cincinnati, Ohio 45226  
513-841-4428
  4. **National Electrical Code (NEC)**  
See NFPA
  5. **National Fire Protection Association (NFPA)**  
1 Batterymarch Park  
Quincy, Massachusetts 02169-7471  
617-770-3000
  6. **New York City Fire Department (FDNY)**  
9 Metrotech Center  
Brooklyn, NY 11201-5431  
718-999-2117
  7. **New York City Department of Buildings (NYC DOB)**  
Enforcement Division  
280 Broadway, New York, New York 10007  
212- 566-2850



8. New York City Department of Environmental Protection (NYCDEP)  
Bureau of Environmental Compliance  
Asbestos Control Program  
59-17 Junction Boulevard, 8<sup>th</sup> Floor  
Corona, New York 11368  
718-595-3682
  9. New York City Department of Health and Mental Hygiene (NYC DOHMH)  
Environmental Investigation  
125 Worth Street  
New York, New York 10013  
212-442-3372
  10. New York State Department of Labor (NYSDOL)  
Division of Safety and Health  
Engineering Services Unit  
State Office Building Campus  
Albany, New York 12240-0010
  11. New York City Department of Sanitation  
125 Worth Street, Room 714  
New York, New York 10013  
212-566-1066
  12. Occupational Safety and Health Administration (OSHA)  
Region II - Regional Office  
201 Varick Street, Room 908  
New York, New York 10014  
212-337-2378
  13. United States Environmental Protection Agency (EPA or USEPA)  
Region II  
Asbestos NESHAPS Contact  
Air and Waste Management Division  
(Air Compliance Branch) – USEPA  
290 Broadway, 21<sup>st</sup> Floor  
New York, New York 10007-1866  
212-637-3660
- I. Post all applicable regulations in a conspicuous place at the job site. Assure that the regulations are not altered, defaced or covered by other materials. One copy of each regulation must also be kept at the Asbestos abatement contractor's office.



**1.11 CITY/ASBESTOS ABATEMENT CONTRACTOR RESPONSIBILITIES**

- A. The normal occupants of the Work Areas will be relocated by the City prior to the performance of the abatement work and returned there to at the conclusion of the abatement work, at no cost to the asbestos abatement contractor. However, the asbestos abatement contractor shall protect all furniture and equipment in the Work Areas in a manner as hereinafter specified. In addition, the asbestos abatement contractor shall perform the work of this Contract in a manner that will be least disruptive to the normal use of the non-Work Areas in the building.
- B. Asbestos abatement contractor shall be responsible for cleaning all portable items not specifically addressed by the Facility, in the Work Areas, or dispose of same as asbestos contaminated waste.
- C. Facility to provide asbestos abatement contractor with a list of items that cannot be removed and need special attention.
- D. Facility to stop all deliveries that may be scheduled to the Work Area while work is in progress.
- E. Facilities to have authorized personnel on site at all times or supply the asbestos abatement contractor with means of contacting such personnel without unreasonable delay. Such personnel shall have access to all areas, have knowledge of electrical, and air handling equipment. Such personnel shall assist the asbestos abatement contractor in case of any power failure or breakdown to shut down air supply systems, to reset and control all protective systems such as alarms, sprinklers, locks, etc. The Facility shall ensure no active air handling systems are operating within the Work Area.
- F. City will not occupy the portions of the building, in which work is being performed during the entire asbestos removal operation, including completion of clean up.
- G. Asbestos abatement contractor shall provide a plan for 24 hour job security both for prevention of theft and for barring entry of curious but unprotected personnel into Work Areas.
- H. Asbestos abatement contractor shall provide surveillance by a fire watch and set forth procedures to be taken for the safety of building occupants in the event of an emergency, in accordance with the WSPS.
- I. Should the failure of any utility occur, the City will not be responsible to the asbestos abatement contractor for loss of time or any other expense incurred.
- J. Facility will be responsible to notify the asbestos abatement contractor of any planned electrical power shutdowns in order to ensure that there are no power interruptions in the negative air pressure systems.



- K. Asbestos abatement contractor shall remove all flammable materials from the work area and all sources of ignition (including but not limited to pilot lights) shall be extinguished.
- L. Asbestos abatement contractor shall require a competent person (as defined in OSHA 1926.1101) to perform the following functions and to be on-site continuously for the duration of the project:
  - 1. Monitor the set up of the Work Area enclosure and ensure its integrity.
  - 2. Control entry and exit into the work enclosure.
  - 3. Ensure that employees are adequately trained in the use of engineering controls, proper work practices, proper personal protective equipment and in decontamination procedures.
  - 4. Insure that employees use proper engineering controls, proper work practices, proper personal protective equipment and proper decontamination procedures.
  - 5. The competent person (as defined in OSHA1926.1101) shall check for rips and tears in work suits, and ensure that they are mended immediately or replaced.

#### **1.12 USE OF BUILDING FACILITIES**

- A. City shall make available to the asbestos abatement contractor, from existing outlets and supplies, all reasonably required amounts of water and electric power at no charge.
- B. Electric power to all Work Areas shall be shut down and locked out except for electrical equipment that must remain in service. Safe temporary power and lighting shall be provided by asbestos abatement contractor in accordance with applicable codes. All power to Work Areas shall be brought in from outside the area through ground-fault interrupter circuits installed at the source. Stationary electrical equipment within the Work Area, which must remain in service, shall be adequately protected, enclosed and ventilated. The Facility will identify all electric lines that must remain in service. Asbestos abatement contractor shall protect all lines.
- C. Asbestos abatement contractor shall provide, at his own expense, all electrical, water, and waste connections, tie-ins, extensions, and construction materials, supplies, etc. All water tie-ins shall be hard piped with polyethylene or copper piping. At the end of each shift, asbestos abatement contractor shall disconnect all hoses within the work zone and place in equipment room of the worker decontamination unit. Asbestos abatement contractor shall ensure positive shutoff of all water to Work Area during non-working hours.



**D. Utilities:**

**1. General:**

All temporary facilities required to be installed, shall be subject to the approval of the Commissioner. Prior to starting the work at any site; specify clearly the temporary locations of facilities preferably with sketches and submit the same to the Construction Project Manager for approval.

**2. Water:**

The Department of Design and Construction will furnish all water needed for construction, at no cost to the asbestos abatement contractor in buildings under their jurisdiction. All temporary plumbing or adaptations to supply the needs of the Work Area shall be installed and removed by the asbestos abatement contractor and the cost thereof included in the Lump Sum price for abatement work. Shower water for the decontamination unit shall be provided hot. Heating of water, if necessary, shall be provided by the asbestos abatement contractor.

**3. Electricity:**

The Department of Design and Construction will furnish all electricity needed for construction, at no cost to the asbestos abatement contractor in buildings under their jurisdiction. All temporary electrical work or adaptations to supply the needs of the Work Area shall be installed and removed by the asbestos abatement contractor and the cost thereof included in the Lump Sum price for abatement work.

In leased spaces, arrangements for water supplies and electricity must be made with the landlord. However, all such arrangements must be made through and are subject to approval of the Department of Design and Construction. Utilities will be provided at no cost to the Asbestos abatement contractor. However, it is the asbestos abatement contractor's (or the General contractor's) responsibility to furnish and install a suitable distribution system to the Work Area. This system will be provided at no cost to the City.

A dedicated power supply for the negative pressure ventilating units shall be utilized. The negative air equipment shall be on a ground fault circuit interrupter (GFCI) protected circuit separate from the remainder of the work area temporary power circuits.

- E.** Asbestos abatement contractor shall shut down and lock out all electric power to all work areas except for electrical equipment that must remain in service. Safe temporary power and lighting shall be provided in accordance with all applicable codes. Existing light sources (e.g., house lights) shall not be utilized. All power to work areas shall be brought in from outside the area through ground-fault circuit interrupter at the source.



1. If electrical circuits, machinery, and other electrical systems in or passing through the work area must stay in operation due to health and safety requirements, the following precautions must be taken:
    - a. All unprotected cables, except low-voltage (less than 24 volts) communication and control system cables, panel boxes of cables and joints in live conduit that run through the work area shall be covered with three (3) independent layers of six (6) mil fire retardant polyethylene. Each layer shall be individually duct taped and sealed. All three (3) layers of polyethylene sheeting shall be left in place until satisfactory clearance air sampling results have been obtained.
    - b. Any energized circuits remaining in the work area shall be posted with a minimum two (2) inch high lettering warning sign which reads: DANGER LIVE ELECTRICAL - KEEP CLEAR. A sign shall be placed on all live covered barriers at a maximum of ten (10) foot intervals. These signs shall be posted in sufficient numbers to warn all persons authorized to enter the work area of the existence of the energized circuits.
  2. Any source of emergency lighting which is temporarily blocked as a result of work place preparation shall be replaced for the duration of the project by battery operated or temporary exit signs, exit lights, or photo luminescent path markings.
- F. Asbestos abatement contractor shall provide a separate temporary electric panel board to power asbestos abatement contractor's equipment. The Facility will designate an existing electrical source in proximity to the Work Area. Asbestos abatement contractor's licensed electrician shall provide temporary tie-in via cable, outlet boxes, junction boxes, receptacles and lights, all with ground fault interruption. At no time shall extension cords greater than 50-feet in length be allowed. All temporary electrical installation shall be in accordance with OSHA regulations. The electric shut down for power panel tie-in will be on off-hours and must be coordinated with the Facility. Asbestos abatement contractor shall provide to the City a specification and drawing outlining his power requirements at the pre-construction meeting.
- G. Additional electrical equipment (i.e., transformers, etc.), which is necessary due to the lack of existing power on the floor, shall be at the asbestos abatement contractor's expense.
- H. Asbestos abatement contractor shall provide fire protection in accordance with all State and Local fire codes.





- I. Sprinklers, standpipes, and other fire suppression systems shall remain in service and shall not be plasticized.
- J. When temporary service lines are no longer required, they shall be removed by the asbestos abatement contractor. Any parts of the permanent service lines, grounds and buildings, disturbed or damaged by the installation and/or removal of the temporary service lines, shall be restored to their original condition by the asbestos abatement contractor. Senior Stationary Engineer will inspect and test all switches, controls, gauges, etc. and shall submit a list to the Construction Project Manager of any equipment damaged by the asbestos abatement contractor.
- K. Asbestos abatement contractor shall supply hot shower water necessary for use in the decontamination unit.

### **1.13 USE OF THE PREMISES**

- A. Asbestos abatement contractor shall confine his apparatus, the storage of materials, and supplies, and the operation of his workmen to limits established by law, ordinances, and the directions of the Construction Project Manager and the Facility. All flammable or combustible materials shall be properly stored to obviate fire and in areas approved by the Facility.
- B. Asbestos abatement contractor shall assure that no exits from the building are obstructed, that appropriate safety barriers are established to prevent access, and that Work Areas are kept neat, clean, and safe.
- C. Asbestos abatement contractor shall maintain exits from the work area or alternative exits shall be established, in accordance with section 1027 of the New York City Fire Code. Exits shall be checked at the beginning and end of each work shift against blockage or impediments to exiting.
- D. If the openings of temporary structural partitions related to abatement work areas block egress, the partition shall consist of two sheets of fire retardant 6-mil plastic, prominently marked as an exit with photo luminescent paint or signage. Cutting tools (e.g., knife, razor) shall be attached to the work area side of the sheeting for use in the event that the barrier must be cut open to allow egress.
- E. All surrounding work, fixtures, soil lines, drains, water lines, gas pipes, electrical conduit, wires, utilities, duct work railings, shrubbery, landscaping, etc. which are to remain in place shall be carefully protected and, if disturbed or damaged, shall be repaired or replaced as directed by the City, at no additional cost.
- F. All routes through the building to be used by the asbestos abatement contractor shall first be approved by the Construction Project Manager and the Facility.



- G. Attention is specifically drawn to the fact that other asbestos abatement contractors, performing the work of other Contracts, may be (or are) brought upon any of the work sites of this Contract. Therefore, the asbestos abatement contractor shall not have exclusive rights to any site of his work and shall fully cooperate and coordinate his work with the work of other asbestos abatement contractors who may be on (or are on) any site of the work of this Contract. Regulated area exempted.
- H. Temporary toilet facilities must be provided by the asbestos abatement contractor on the site. Coordinate location of facilities with Construction Project Manager. No toilet facilities will be allowed in the Work Area.

#### **1.14 PROTECTION AND DAMAGE**

- A. The asbestos abatement contractor is responsible to cover all furniture and equipment that cannot be removed from Work Areas. Moveable furniture and equipment will be removed from Work Areas by asbestos abatement contractor prior to start of work and returned upon successful completion of the final air testing. At the conclusion of the work (after clearance level of air testing reaches the acceptable limit), the asbestos abatement contractor will remove all plastic covering from the walls, floors, furniture, equipment and reinstall furniture and equipment in the cleaned Work Area. The asbestos abatement contractor shall remove all shades, curtains and drapes from the Work Area, and reinstall the same following the final clean up.
- B. Prior to plasticizing, the proposed work areas shall be pre-cleaned using HEPA filtered vacuum equipment and/or wet cleaning methods. Methods that raise dust, such as sweeping or vacuuming with equipment not equipped with HEPA filters, are prohibited.
- C. Use rubber tired vehicles that use non-volatile fuels for conveying material inside building and provide temporary covering, as necessary, to protect floors.
- D. No materials or debris shall be thrown from windows or doors of the building. Building waste system shall NOT be used to remove refuse.
- E. Debris shall be removed from the work site daily. Premises shall be left neat and clean after each work shift, so that work may proceed the next regular workday without interruption. Limited bag storage may take place within the Work Area when approved by the Construction Project Manager.
- F. Protect floors and walls along removal routes from damage, wear and staining with contamination control flooring. All finished surfaces to be protected with Masonite or other rigid sheathing material.



- G. A preliminary inspection for pre-existing damage shall be conducted by asbestos abatement contractor and representative of the City before commencement of the project.

#### **1.15 RESPIRATORY PROTECTION REQUIREMENTS**

- A. Respiratory protection shall be worn by all individuals who may be exposed to asbestos fibers from the initiation of the asbestos project until all areas have successfully passed clearance air monitoring in accordance with Regulations and these Specifications.
- B. Asbestos abatement contractor shall develop and implement a written respiratory protection program with required site-specific procedures and elements. The program shall be administered by a properly trained individual. The written respiratory protection program shall include the requirements set forth in OSHA Standard 29 CFR 1910.134, at a minimum.
- C. The Asbestos abatement contractor shall provide workers with individually issued and marked respiratory equipment. Respiratory equipment shall be suitable for the asbestos exposure level(s) in the Work Area(s), as specified in OSHA Standards 26 CFR 1910.134 and 29 CFR 1926.1101, NIOSH Standard 42 CFR 84, or as more stringently specified otherwise, herein.
- D. Where respirators with disposable filter parts are employed, the asbestos abatement contractor will provide sufficient filter parts for replacement as necessary or as required by the applicable regulation.
- E. All respiratory protection shall be NIOSH approved. All respiratory protection shall be provided by asbestos abatement contractor, and used by workers in conjunction with the written respiratory protection program.
- F. Asbestos abatement contractor shall provide respirators selected by an Industrial Hygienist that meet the following requirements:

Table 1. -- Assigned Protection Factors<sup>5</sup>

Type of Respirator <sup>1,2</sup>	Half mask	Full facepiece	Helmet/hood
1. Air-Purifying Respirator	<sup>3</sup> 10	50	.....
2. Powered Air-Purifying Respirator (PAPR)	50	1,000	<sup>4</sup> 25/1,000
3. Supplied-Air Respirator (SAR) or Airline Respirator			
• Demand mode	10	50	.....
• Continuous flow mode	50	1,000	<sup>4</sup> 25/1,000
• Pressure-demand or other positive-pressure mode	50	1,000	.....
4. Self-Contained Breathing Apparatus (SCBA)			
• Demand mode	10	50	50
• Pressure-demand or other positive-pressure mode (e.g., open/closed circuit)	.....	10,000	10,000

Notes:

<sup>1</sup>Employers may select respirators assigned for use in higher workplace concentrations of a hazardous substance for use at lower concentrations of that substance, or when required respirator use is independent of concentration.

<sup>2</sup>The assigned protection factors in Table 1 are only effective when the employer implements a continuing, effective respirator program as required by this section (29 CFR 1910.134), including training, fit testing, maintenance, and use requirements.

<sup>3</sup>This APF category includes filtering facepieces, and half masks with elastomeric facepieces.

<sup>4</sup>The employer must have evidence provided by the respirator manufacturer that testing of these respirators demonstrates performance at a level of protection of 1,000 or greater to receive an APF of 1,000. This level of performance can best be demonstrated by performing a WPF or SWPF study or equivalent testing. Absent such testing, all other PAPRs and SARs with helmets/hoods are to be treated as loose-fitting facepiece respirators, and receive an APF of 25.

<sup>5</sup>These APFs do not apply to respirators used solely for escape. For escape respirators used in association with specific substances covered by 29 CFR 1910 subpart Z, employers must refer to the appropriate substance-specific standards in that subpart. Escape respirators for other IDLH atmospheres are specified by 29 CFR 1910.134 (d)(2)(ii).



- G. Selection of high efficiency filters:
1. All high efficiency filters shall have a nominal efficiency rating of 100 (99.97-percent effective) when tested against 0.3-micrometer monodisperse diethyl-hexyl phthalate (DOP) particles.
  2. Choose N-, R-, or P-series filters based upon the presence or absence of oil particles.
    - a. N-series filters shall only be used for non-oil solid and water based aerosols or fumes.
    - b. R- and P-series filters shall be used when oil aerosols or fumes (i.e., lubricants, cutting fluids, glycerin, etc.) are present. The R-series filters are oil resistant and the P-series filters are oil proof.
    - c. Follow filter manufacture recommendations.
  3. If a vapor hazard exists, use an organic vapor cartridge in combination with the high efficiency filter.
- H. Historical airborne fiber level data may serve as the basis for selection of the level of respiratory protection to be used for an abatement task. Historical data provided by the asbestos abatement contractor shall be based on personal air monitoring performed during work operations closely resembling the processes, type of material, control methods, work practices, and environmental conditions present at the site. Documentation of aforementioned results may be requested by the City and/or Third-Party Air Monitor for review. This will not relieve the asbestos abatement contractor from providing personal air monitoring to determine the time-weighted average (TWA) for the work under contract. The TWA shall be determined in accordance with 29 CFR 1926.1101.
- I. At no time during actual removal operations shall half-mask air purifying respirators be allowed unless a full 8-hour TWA and excursion limit have been conducted, and reviewed by the Construction Project Manager. If the TWA and excursion limit have not been conducted, a Supplied-Air Respirator (SAR) or Airline Respirator or Self-Contained Breathing Apparatus (SCBA) must be used. Use of single use dust respirators is prohibited for the above respiratory protection.
- J. Workers shall be provided with personally issued and individually marked respirators. Respirators shall not be marked with any equipment that will alter the fit of the respirator in any way. Only waterproof identification markers shall be used.



- K. Asbestos abatement contractor shall ensure that the workers are qualitatively or quantitatively fit tested by an Industrial Hygienist initially and every 12 months thereafter with the type of respirator he/she will be using.
- L. Whenever the respirator design permits, workers shall perform the positive and negative air pressure fit test each time a respirator is worn. Powered air-purifying respirators shall be tested for adequate flow as specified by the manufacturer.
- M. No facial hairs (beards) shall be permitted to be worn when wearing respiratory protection that requires a mask-to-face seal.
- N. If a worker wears glasses, a spectacle kit to fit their respirator shall be provided by the asbestos abatement contractor at the asbestos abatement contractor's expense.
- O. Respiratory protection maintenance and decontamination procedures shall meet the following requirements:
  - 1. Respiratory protection shall be inspected and decontaminated on a daily basis in accordance with OSHA 29 CFR 1910.134 (b); and
  - 2. High efficiency filters for negative pressure respirators shall be changed after each shower; and
  - 3. Respiratory protection shall be the last piece of worker protection equipment to be removed. Workers must wear respirators in the shower when going through decontamination procedures as stated in Section 3.03 and/or 3.04.
  - 4. Airline respirators with high efficiency filtered disconnect shall be disconnected in the equipment room and worn into the shower. Powered air-purifying respirator face pieces shall be worn into the shower. Filtered/power pack assemblies shall be decontaminated in accordance with manufacturers recommendations; and
  - 5. Respirators shall be stored in a dry place and in such a manner that the face-piece and exhalation valves are not distorted; and
  - 6. Organic solvents shall not be used for washing of respirators.
- P. Authorized visitors shall be provided with suitable respirators and instruction on the proper use of respirators whenever entering the Work Area. Qualitative fit test shall be done to ensure proper fit of respirator.

#### **1.16 PROTECTIVE CLOTHING**

- A. Provide worker protection as required by the most stringent OSHA and/or EPA standards applicable to the work. Provide to all workers, foremen, superintendents,



authorized visitors and inspectors, protective disposable clothing consisting of full body coveralls, head covers, gloves and 18-inch high boot type covers or reusable footwear.

- B. In addition to personal protective equipment for workers, the asbestos abatement contractor shall make available at each worksite at least four (4) additional uniforms and required respiratory equipment each day for personnel who are authorized to inspect the work site. He/she shall also provide, for the duration of the work at any site involving a decontamination unit for worksite access, a lockable storage locker for use by the Construction Project Manager. In addition to respiratory masks for workers, the asbestos abatement contractor must have on hand at the beginning of each work day, at least four (4) masks each with two sets of fresh filters, for use by personnel who are authorized to inspect the worksite. The asbestos abatement contractor shall check for proper fit of the respirators of all City personnel authorized to enter the Work Area.
- C. Asbestos handlers involved in tent procedures shall wear two (2) disposable suits, including gloves, hood and footwear, and appropriate respiratory equipment. All street clothes shall be removed and stored in a clean room within the work site. The double layer personal protective equipment shall be used for installation of the tent and throughout the procedure, if a decontamination unit (with shower and clean room) is contiguous to the Work Area, only one (1) layer of disposable personal protective equipment shall be required; in this case, prior to exiting the tent the worker shall HEPA vacuum and wet clean the disposable suit.
- D. The outer disposable suit (if 2 suits are worn) shall be removed and remain in the tent upon exiting. Following the tent disposal and work site clean up the workers shall immediately proceed to a shower at the work site. The inner disposal unit and respirator shall be removed in the shower after appropriate wetting. The disposal clothing shall be disposed of as asbestos-containing waste material. The workers shall then fully and vigorously shower with supplied liquid bath soap, shampoo, and clean dry towels.
- E. Coveralls: provide disposable full-body coveralls and disposable head covers. Require that they be worn by all workers in the Work Area. Provide a sufficient number for all required changes for all workers in the Work Area.
- F. Boots: provide work boots with non-skid soles, and where required by OSHA, foot protection, for all workers. Provide boots at no cost to workers. Paint uppers of all boots yellow with waterproof enamel. Do not allow boots to be removed from the Work Area for any reason after being contaminated with ACM and/or dust.
- G. Hard Hats: provide hard hats as required by OSHA for all workers, and provide a minimum of four spares for Inspectors, visitors, etc. Label all hats with same warning label as used on disposal bags. Require hard hats to be worn at all times that work is in progress that may cause potential head injury. Provide hard hats of the



type with polyethylene strap suspension. Require hats to remain in the Work Area throughout the work. Thoroughly clean and decontaminate and bag hard hats prior to removing them from the Work Area at the end of the work.

- H. Goggles: provide eye protection (goggles) as required by OSHA for all workers involved in any activity that may potentially cause eye injury. Require them to be worn at all times during these activities. Thoroughly clean and decontaminate goggles before removing them from the Work Area.
- I. Gloves: provide work gloves to all workers, of the type dictated by the Work and OSHA Standards. Do not remove gloves from the Work Area. Dispose of as asbestos-asbestos contaminated waste at the end of the work. Gloves shall be worn at all times, except during Work Area Preparation activities that do not disturb ACM.
- J. Reusable footwear, hard hats and eye protection devices shall be left in the contaminated Equipment Room until the end of the Asbestos Abatement Work.
- K. Disposable protective clothing shall be discarded and disposed of as asbestos waste every time the wearer exits from the workspace to the outside through the decontamination facility.
- L. Respirators, disposable coveralls, head covers and foot covers shall be provided by the asbestos abatement contractor for the Facilities Representative, Construction Project Manager and any other authorized representative who may inspect the Work Area. Provide two respirators and six respirator filter changes per day.

#### **1.17 AIR MONITORING - ASBESTOS ABATEMENT CONTRACTOR**

- A. Asbestos abatement contractor shall employ a qualified industrial hygiene laboratory to analyze air samples in accordance with OSHA Regulations, 1926.1101 (Asbestos Standards for Construction) and New York City regulations.
- B. The industrial hygiene laboratory shall be a current proficient participant in the American Industrial Hygiene Association (AIHA) PAT Program. The laboratory identification number shall be submitted and approved by the City. The laboratory shall be accredited by the AIHA and New York State Department of Health Environmental Laboratory Approval Program (ELAP).
- C. Industrial hygiene laboratory shall also be a current proficient participant in the NIST/NVLAP Quality Assurance Program for the identification of bulk samples. Laboratory identification number shall be submitted to and approved by the City.
- D. Air monitoring responsibilities for the asbestos abatement contractor's employees, shall be performed by a representative of the industrial hygiene laboratory retained by the asbestos abatement contractor.





- E. Asbestos abatement contractor shall submit to the City all credentials of the designated (as defined in OSHA 1926.1101) and industrial hygiene laboratory representative for approval.
- F. Air monitoring and inspection shall be conducted by the Asbestos abatement contractor's competent person (as defined in OSHA 1926.1101).
- G. Continuous (daily or per shift) monitoring and inspection will include Work Area samples, personnel samples from the breathing zone of a worker to accurately determine the employees' 8-hour TWA (unless Type C respirators are used) and decontamination unit clean room samples.
- H. Work Area samples and employee personnel samples shall be taken using pumps whose flow rates can be determined to an accuracy of +5-percent, at a minimum of two liters per minute. This must be demonstrated at the job site.
- I. Sampling and analysis methods shall be per NIOSH 7400A.
- J. Test Reports:
  - 1. Promptly process and distribute one copy of the test results, to the Commissioner.
  - 2. Prompt reports are necessary so that if required, modifications to work methods and/or practices may be implemented as soon as possible.
  - 3. Asbestos abatement contractor shall by facsimile notify the Commissioner within 24 hours of the results of each test, followed by written notification within three days.
- K. Competent person shall conduct inspections and provide written reports daily. Inspections will include checking the standard operating procedures, engineering control systems, respiratory protection and decontamination systems, packaging and disposal of asbestos waste, and any other aspects of the project which may affect the health and safety of the people and environment.
- L. All costs for required air monitoring by the asbestos abatement contractor's competent person shall be borne by the asbestos abatement contractor.
- M. The City reserves the right to conduct air and surface dust sampling in conjunction with and separate from the Third-Party Air Monitor for the purposes of Quality Assurance.
- N. All samples shall be accompanied by a Chain of Custody Record that shall be submitted to the Construction Project Manager upon completion of analysis.



**1.18 THIRD PARTY MONITORING AND LABORATORY**

- A. The NYCDDC, at its own expense, will employ the services of an independent Third Party Air Monitoring Firm and Laboratory. The Third Party Air Monitor will perform air sampling activities and project monitoring at the Work Site.
- B. The Laboratory will perform analysis of air samples utilizing Phase Contrast Microscopy (PCM) and/or Transmission Electron Microscopy (TEM). This laboratory shall meet the standards stated in Paragraph 1.17. B.
- C. Observations will include, but not be limited to, checking the standard operating procedures, engineering control systems, respiratory protection, decontamination systems, packaging and disposal of asbestos waste, and any other aspects of the project that may affect the health and safety of the environment, Asbestos abatement contractor, and/or facility occupants.
- D. The Third Party Air Monitoring Firm and the designated Project Monitor shall have access to all areas of the asbestos removal project at all times and shall continuously inspect and monitor the performance of the asbestos abatement contractor to verify that said performance complies with this Specification. The Third-Party Air Monitor shall be on site throughout the entire abatement operation.
- E. The NYCDDC will be responsible for costs incurred with the Third Party Air Monitoring Firm and laboratory work. Any subsequent additional testing required due to limits exceeded during initial testing shall be paid for by the Asbestos abatement contractor.
- F. At a minimum, air sampling shall be conducted in accordance with the following schedule:

<b>Abatement Activity</b>	<b>Pre-Abatement</b>	<b>During Abatement</b>	<b>Post-Abatement</b>
Equal to or greater than 10,000 square feet or 10,000 linear feet of ACM	PCM	PCM	TEM
Less than 10,000 square feet or 10,000 linear feet of ACM	PCM	PCM	PCM

Note: TEM is acceptable wherever PCM is required.

- G. The number of air samples required per stage of abatement and size of abatement project is listed in the table below:



		Pre-Abatement	During Abatement	Post Abatement
<b>Large Asbestos Projects</b>				
1.	Full Containment	10	5	10
2.	Glovebag inside Tent	5 <sup>a</sup>	5 <sup>a</sup>	5 <sup>a</sup>
3.	Exterior Foam and Vertical Surfaces	-	5 <sup>c</sup>	5 <sup>d</sup>
4.	Interior Foam	10	5 <sup>c</sup>	10 <sup>d</sup>
<b>Small Asbestos Projects</b>				
1.	Full Containment	6	3	6
2.	Glovebag inside Tent	3 <sup>b</sup>	3 <sup>b</sup>	3 <sup>b</sup>
3.	Tent	3 <sup>b</sup>	3 <sup>b</sup>	3 <sup>b</sup>
4.	Exterior Foam and Vertical Surfaces	-	3 <sup>c</sup>	3 <sup>d</sup>
5.	Interior Foam	6	3 <sup>c</sup>	6 <sup>d</sup>
<b>Minor Projects</b>				
1.	Glovebag inside Tent	-	-	1 <sup>d</sup>
2.	Tent	-	-	1 <sup>d</sup>
3.	Exterior Foam and Vertical Surfaces	-	-	1 <sup>d</sup>
4.	Interior Foam	-	-	1 <sup>d</sup>

**Notes:**

- a. if more than three (3) tents then two (2) samples required per enclosure.
- b. if more than three (3) tents then one (1) sample required per enclosure.
- c. samples shall be taken within the work area(s).
- d. area sampling is required only if:
  - visible emissions are detected during the project
  - during-abatement area sampling results exceeded 0.01 f/cc or the pre-abatement area sampling result(s) for interior projects where applicable.
  - work area to be reoccupied is an interior space at a school, healthcare, or daycare facility.

H. Prior to commencement of abatement activities, the Third Party Air Monitoring Firm will collect a minimum number of area samples inside each homogeneous work area.

- 1. Samples will be taken during normal occupancy activities and circumstances at the work site.



2. Samplers shall be located within the proposed work area and at all proposed isolation barrier locations.
  3. Samples shall be analyzed using PCM.
  4. The number of samples to be collected will be determined by the size of the project and the abatement methods to be utilized.
- I. Frequency and duration of the air sampling during abatement shall be representative of the actual conditions during the abatement. The size of the asbestos project will be a factor in the number of samples required to monitor the abatement activities. The following minimum schedule of samples shall be required daily.
1. For large asbestos projects employing full containment, area air sampling shall be performed at the following locations:
    - a. Two area samples outside the work area in uncontaminated areas of the building, remote from the decontamination facilities.
      - (1) Primary location selection shall be within 10 feet of isolation barriers.
      - (2) Where negative ventilation exhaust runs through uncontaminated building areas, one of the area samples will be required in these areas to monitor any potential fiber release.
      - (3) Where exhaust tubes have been grouped together in banks of up to five (5) tubes, with each tube exhausting separately and the bank of tubes terminating together at the same controlled area, one area air sample shall be taken.
    - b. One area sample within the uncontaminated entrance to each decontamination enclosure system.
    - c. Where adjacent non-work areas do not exist, an exterior area sample shall be taken.
    - d. One area sample within 5 feet of the unobstructed exhaust from a negative pressure ventilation system exhausting indoors but not within a duct.
    - e. One area sample outside, but within 25 feet of, the building or structure, if the entire building or structure is the work area.
  2. For large asbestos projects involving interior foam method, area air sampling shall be performed at the following sampling locations:



- a. One area sample taken outside the work area within 10 feet of isolation barriers.
  - b. One area sample taken within the uncontaminated entrance to each worker decontamination and waste decontamination enclosure system.
  - c. One area sample within 5 feet of the unobstructed exhaust from a negative pressure ventilation system exhausting indoors but not within a duct, if applicable.
  - d. Three area samples inside the work area.
  - e. One area sample where the negative ventilation exhaust ducting runs through uncontaminated building areas, if applicable.
3. For large asbestos projects employing the glovebag procedure within a tent, a minimum of five continuous air samples shall be taken concurrently with the abatement for each work area, unless there are more than three enclosures, in which case two area samples per enclosure are required.
- a. Four area samples taken outside the work area within ten feet of tent enclosure(s).
  - b. One area sample taken within the uncontaminated entrance to each worker and waste decontamination enclosure system.
  - c. One area sample within five feet of the unobstructed exhaust from a negative pressure ventilation system exhausting indoors, but not within a duct, if applicable.
  - d. One area sample where negative ventilation exhaust ducting runs through uncontaminated building areas, if applicable.
4. For large asbestos projects involving exterior foam method or removal of ACM from vertical surfaces, a minimum of five continuous area samples shall be taken concurrently with the abatement for each work area using the following minimum requirements:
- a. Three area samples inside the work area and remote from the decontamination systems.
  - b. One area sample within the uncontaminated entrance to each worker and waste decontamination enclosure system.
  - c. One area sample outside the work area within 25 feet of the building or structure, if the entire building or structure is the work area.



- d. One area sample inside the building or structure at the egress point to the work area, if applicable.
5. For small asbestos projects employing full containment, a minimum of three continuous area samples shall be taken concurrently with the abatement for each work area at the following locations:
- a. Two area samples taken outside the work area within ten feet of the isolation barriers.
  - b. One area sample within the uncontaminated entrance to each worker or waste decontamination enclosure system.
  - c. One area sample within five feet of the unobstructed exhaust from a negative pressure ventilation system exhausting indoors, but not within a duct, if applicable.
  - d. One area sample where negative ventilation exhaust ducting runs through an uncontaminated building area, if applicable.
6. Tent Procedures:  
For projects involving more than 25 linear feet or 10 square feet, a minimum of three continuous samples shall be taken concurrently throughout abatement.
- J. Post-abatement clearance air monitoring for projects not solely employing glove-bag procedures shall include a minimum number of area samples inside each homogeneous work area and outside each homogeneous work area (five samples inside/five samples outside for Large Projects and three samples inside/three samples outside for Small Projects). In addition to the five sample inside/five sample outside minimum for Large Projects, one additional representative area sample shall be collected inside and outside the work area for every 5,000 square feet above 25,000 square feet of floor space where ACM has been abated.
- K. Post-abatement clearance air monitoring for Small Projects solely employing glove-bag procedures is not required unless one or more of the following events occurs. In such cases, post-abatement clearance air monitoring procedures shall be followed. The events requiring post-abatement clearance air monitoring are:
1. The integrity of the glove-bag was compromised,
  2. Visible emissions are detected outside the glove-bag, and/or
  3. Ambient levels exceed 0.01 f/cc during abatement.



- L. Monitoring requirements for other than post-abatement clearance air monitoring are as follows:
  - 1. The sampling zone for indoor air samples shall be representative of the building occupants' breathing zone.
  - 2. If possible, outdoor ambient and baseline samplers should be placed about 6 feet above the ground surface in reasonable proximity to the building and away from obstructions and drafts that may unduly affect airflow.
  - 3. For outdoor samples, if access to electricity and concerns about security dictate a rooftop site, locations near vents and other structures on the roof that would unduly affect airflow shall be avoided.
  - 4. Air sampling equipment shall not be placed in corners of rooms or near obstructions such as furniture.
  - 5. Samples shall have a chain of custody record.
  
- M. Area air sampling during abatement shall be conducted as specified in the following documents except as restricted or modified herein:
  - 1. Measuring Airborne Asbestos Following an Abatement Action, US EPA document 600/4-85-049 (Nov., 1985);
  - 2. Guidance for Controlling Asbestos-Containing Materials in Buildings; US EPA Publication 560/5-85- 024 (June, 1984);
  - 3. Methodology for the Measurement of Airborne Asbestos by Electron Microscopy US EPA Contract No. 68-02- 3266;
  - 4. Mandatory and non-mandatory Electron Microscopy Methods set forth in 40 CFR Part 763, Subpart E, Appendix A.
  - 5. NIOSH 7400 method using "A" counting rules
  
- N. In accordance with the above criteria, area samples (see NYCDEP Asbestos Control Program Regulations) shall conform to the following schedule:

<b>Area Samples for Analysis by</b>	<b>Minimum Volume</b>	<b>Flow Rate</b>
PCM, 25mm cassettes	560 liters	5 to 15 liters/minute
TEM, 25mm cassettes	560 liters	1 to 10 liters/minute
TEM, 37mm cassettes	1,250 liters	1 to 10 liters/minute

- O. Post-abatement clearance air monitoring requirements are as follows:

1. Sampling shall not begin until at least one hour after wet cleaning has been completed and no visible pools of water or condensation remain.
  2. Samplers shall be placed at random around the work area. If the work area contains the number of rooms equivalent to the number of required samples based on floor area, a sampler shall be placed in each room. When the number of rooms is greater than the required number of samples, a representative sample of rooms shall be selected.
  3. The representative samplers placed outside the work area but within the building shall be located to avoid any air that might escape through the isolation barriers and shall be approximately 50 feet from the entrance to the work area, and 25 feet from the isolation barriers.
- P. The following aggressive sampling procedures shall be used within the work area during all clearance air monitoring:
1. Before starting the sampling pumps, use forced air equipment (such as a one horsepower leaf blower) to direct exhaust air against all walls, ceilings, floors, ledges and other surfaces in the work area. This pre-sampling procedure shall take at least five minutes per 1,000 square feet of floor area; then
  2. Place a 20-inch diameter fan in the center of the room. Use one fan per 10,000 cubic feet of room space. Place the fan on slow speed and point it toward the ceiling.
  3. Start the sampling pumps and sample for the required time or volume.
  4. Turn off the pump and then the fan(s) when sampling is completed.
  5. Collect a minimum number of area samples inside and outside each homogeneous work area (five inside/five outside samples for Large Projects and three inside/three outside samples for Small Projects). In addition to the minimum for Large Projects, one representative area samples shall be collected inside and outside the work area for every 5,000 square feet above 25,000 square feet of floor space where ACM has been abated.
- Q. For post-abatement monitoring, area samples shall conform to the following schedule:

Area Samples for Analysis by	Minimum Volume	Flow Rate
PCM	1,800 liters	5 to 15 liters/minute
TEM	1,250 liters	1 to 10 liters/minute





1. Each homogeneous work area that does not meet the clearance criteria shall be thoroughly re-cleaned using wet methods, with the negative pressure ventilation system in operation. New samples shall be collected in the work area as described above. The process shall be repeated until the work site meets the clearance criteria.
2. For an asbestos project with more than one homogeneous work area, the release criterion shall be applied independently to each work area.
3. Should airborne fiber concentrations exceed the clearance criteria, the asbestos abatement contractor shall re-clean the work area utilizing wet wiping and HEPA-vacuuuming techniques. Following completion of re-cleaning activities, the Third-Party Air Monitor will perform an observation of the Work Area. If the Third-Party Air Monitor determines that the work was performed in accordance with the specifications, the appropriate settling period will be observed and additional air sampling will be performed.
4. All costs resulting from additional air tests and observations shall be borne by the asbestos abatement contractor. These costs may include, but are not limited to, labor, analysis fees, materials, and expenses.
5. After the area has been found to be in compliance, the asbestos abatement contractor may remove Isolation Barriers and perform final cleaning as specified.

**R. Clearance and/or Re-occupancy Criteria:**

1. The clearance criteria shall be applied to each homogeneous work area independently.
2. For PCM analysis, the clearance air monitoring shall be considered satisfactory when each of the 5 inside/5 outside samples for Large Projects and/or 3 inside/3 outside samples for Small Projects is less than or equal to 0.01 f/cc or the background concentrations, whichever is greater.
3. For TEM analysis, the clearance air monitoring shall be considered satisfactory when the requirements stated in 40 CFR Part 763, Subpart E, Appendix A, Section IV are met.
4. As soon as the air monitoring tests are completed, the Third-Party Air Monitor will send the results of such tests to the City and notify the Asbestos abatement contractor.
5. The asbestos abatement contractor shall initiate the appropriate closeout information into the DEP ARTS database within 24 hours of work area



completion to allow the Third Party Air Monitoring Firm to complete and submit the ACP-15 forms for each specific work area.

6. The asbestos abatement contractor shall provide the ACP-20 and ACP-21 forms to the Third Party Air Monitoring Firm within 48 hours of receipt.

### **1.19 TAMPERING WITH TEST EQUIPMENT**

All parties to this Contract are hereby notified that any tampering with testing equipment will be considered an attempt at falsifying reports and records to federal and state agencies and each offense will be prosecuted under applicable state and federal criminal codes to the fullest extent possible.

### **1.20 GUARANTEE**

- A. Work performed in compliance with this Contract shall be guaranteed for a period of one year from the date the completed work is accepted by the City.
- B. The asbestos abatement contractor shall not be held liable for the guarantee where the repair required under the guarantee is a result of obvious abuse or vandalism, as determined by the Commissioner.
- C. The City will notify the asbestos abatement contractor in writing regarding defects in work under the guarantee.

## **PART 2 – PRODUCTS**

### **2.01 MATERIAL HANDLING**

- A. Deliver all materials to the job site in their manufacturer's original container, with the manufacturer's label intact and legible.
  1. Maintain packaged materials with seals unbroken and labels intact until time of use.
  2. Store all materials on pallets, away from any damp and/or wet surface. Cover materials in order to prevent damage and/or contamination.
  3. Promptly remove damaged materials and unsuitable items from the job site, and promptly replace with material meeting the specified requirements, at no additional cost to the City.
- B. The Construction Project Manager may reject as non-complying such material and products that do not bear identification satisfactory to the Construction Project Manager as to manufacturer, grade, quality and other pertinent information.



## **2.02 MATERIALS**

- A. Wetting agents: (Surfactant) shall consist of resin materials in a water base, which have been tested to ensure materials are non-toxic and non-hazardous. Surfactants shall be installed according to the manufacturer's written instructions.
- B. Encapsulants: Liquid material which can be applied to asbestos-containing material which temporarily controls the possible release of asbestos fibers from the material or surface either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant). A thin coat of lockdown encapsulant shall be applied to all surfaces in the work area which were not the subject of removal or abatement, including the cleaned layer of the surface barriers, but excepting sprinklers, standpipes, and other active elements of the fire suppression system.
- C. During abatement activities, replacement materials shall be stored outside the work area in a manner to prevent contamination. Materials required for the asbestos project (i.e., plastic sheeting, replacement filters, duct tape, etc.) shall be stored to prevent damage or contamination.
- D. Framing Materials and Doors: As required to construct temporary decontamination facilities and isolation barriers. Lumber shall be high grade, new, finished one side and fire retardant.
- E. Fire Retardant Polyethylene Sheeting: minimum uniform thickness of 6-mil. Provide largest size possible to minimize seams. All materials used in the construction of temporary enclosures shall be noncombustible or fire-retardant in accordance with NFPA 701 and 255.
- F. Fire Retardant Reinforced Polyethylene Sheeting: For covering floor of decontamination units, provide translucent, nylon reinforced or woven polyethylene laminated, fire retardant polyethylene sheeting. Provide largest size possible to minimize seams, minimum uniform thickness 6-mil. All materials used in the construction of temporary enclosures shall be noncombustible or fire-retardant in accordance with NFPA 701 and 255.
- G. Drums: Asbestos-transporting drums, sealable and clearly marked with warning labels as required by OSHA and EPA.
- H. Polyethylene Disposal Bags: Asbestos disposal bags, minimum of fire retardant 6-mil thick. Bags shall be clearly marked with warning labels as required by OSHA and EPA.
- I. Signs: Asbestos warning signs for posting at perimeter of Work Area, as required by OSHA and EPA.



- J. Waste Container Bag Liners and Flexible Trailer Trays: One piece leak-resistant flexible tray with absorbent pad.
- K. Tape: Provide tape which is of high quality with an adhesive that is formulated to aggressively stick to sheet polyethylene.
- L. Spray Adhesive: Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.
- M. Flexible Duct: Spiral reinforced flex duct for air filtration devices.
- N. Protective Clothing: Workers shall be provided with sufficient sets of properly fitting, full-body, disposable coveralls, head covers, gloves, and 18-inch high boot-type foot covers. Protective clothing shall conform to OSHA Standard 29 CFR 1926.1101.
- O. Surfactants, strippers, sealers, or any other chemicals used shall be non-carcinogenic and non-toxic.
- P. Materials used in the construction of temporary enclosures shall be noncombustible or fire-retardant in accordance with NFPA 701 and 255.

## **2.03 TOOLS AND EQUIPMENT**

- A. Air Filtration Device (AFD): AFDs shall be equipped with High Efficiency Particulate Air (HEPA) filtration systems and shall be approved by and listed with Underwriter's Laboratory.
- B. Scaffolding: All scaffolding shall be designed and constructed in accordance with OSHA (29 CFR 1926/1910), New York City Building Code, and any other applicable federal, state and local government regulations. Whenever there is a conflict or overlap of the above references the most stringent provisions are applicable. All scaffolding and components shall be capable of supporting without failure a minimum of four times the maximum intended load, plus an allowance for impact. All scaffolding and staging must be certified in writing by a Professional Engineer licensed to practice in the State of New York.
  - 1. Equip rungs of all metal ladders, etc., with an abrasive, non-slip surface.
  - 2. Provide non-skid surface on all scaffold surfaces subject to foot traffic. Scaffold ends and joints shall be sealed with tape to prevent penetration of asbestos fibers.
- C. Transportation Equipment: Transportation Equipment, as required, shall be suitable for loading, temporary storage, transit and unloading of asbestos contaminated waste without exposure to persons or property. Any temporary storage containers



positioned outside the building for temporary storage shall be metal, closed and locked.

- D. Vacuum Equipment: All vacuum equipment utilized in the Work Area shall utilize HEPA filtration systems.
- E. Vacuum Attachments: Soft Brush Attachment, Asbestos Scraper Tool, Drill Dust Control Kit.
- F. Electric Sprayer: An electric airless sprayer suitable for application of encapsulating material and shall be approved by and listed with Underwriters Laboratory.
- G. Water Sprayer: The water sprayer shall be an airless or other low-pressure sprayer for amended water application.
- H. Water Atomizer: Powered air-misting device equipped with a ground fault interrupter and equipped to operate continuously.
- I. Brushes: All brushes shall have nylon bristles. Wire brushes are excluded from use due to their potential to shred asbestos fibers into small, fine fibers. Wire brushes maybe used for cleaning pipe joints within glove-bags upon written approval of the Construction Project Manager.
- J. Power tools used to drill, cut into, or otherwise disturb ACM shall be manufacturer-equipped with HEPA filtered local exhaust ventilation. Abrasive removal methods, including the use of beadblasters, are prohibited.
- K. Other Tools and Equipment: Asbestos abatement contractor shall provide other suitable tools for the stripping, removal, encapsulation, and disposal activities including but not limited to: hand-held scrapers, sponges, rounded-edge shovels, brooms, and carts.
- L. Fans and Leaf Blower: Provide Leaf Blower (one leaf blower per floor) and one 20-inch diameter fans for each 10,000 cubic feet of Work Area volume to be used for aggressive sampling technique for clearance air testing.
- M. Fire Extinguishers: At least one fire extinguisher with a minimum rating 2-A:10-B:C shall be required for each work place. In the case of large asbestos projects, at least two such fire extinguishers shall be required.
- N. First Aid Kits: Asbestos abatement contractor shall maintain adequately stocked first aid kits in the clean rooms of the decontamination units and within Work Areas. The first aid kit shall be approved by a licensed physician for the work to be performed under this Contract.
- O. Water Service:



1. **Temporary Water Service Connection:** All connections to the Facilities water system shall include back flow protection. Valves shall be temperature and pressure rated for operation of the temperature and pressures encountered. After completion of use, connections and fittings shall be removed without damage or alteration to existing water piping, and equipment. Leaking or dripping fittings/valves shall be repaired and or replaced as required.
2. **Water Hoses:** Employ new heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system to provide water into each Work Area and to each Decontamination Enclosure Unit. Provide fittings as required for connection to existing wall hydrants or spouts, as well as temporary water heating equipment, branch piping, showers, shut-off nozzles and equipment.
3. **Water Heater:** Provide UL rated 40-gallon electric water heaters to supply hot water for Personal Decontamination Enclosure System Shower. Activate from 30 Amp Circuit breakers located within the Decontamination Enclosure sub panel. Provide relief valve compatible with water heater operations, pipe relief valve down to drip pan at floor level with type 'L' copper piping. Drip pans shall be 6-inch deep and securely fastened to water heater. Wiring of the water heater shall comply with NEMA, NECA, and UL standards.

**P. Electrical Service:**

1. **General:** Comply with applicable NEMA, NECA and UL standards and governing regulations for materials and layout of temporary electric service.
2. **Temporary Power:** Provide service to decontamination unit sub panel with minimum 60 AMP, two pole circuit breaker or fused disconnect connected to the building's main distribution panel. Sub panel and disconnect shall be sized and equipped to accommodate all electrical equipment required for completion of the work.
3. **Voltage Differences:** Provide identification warning signs at power outlets that are other than 110-120 volt power. Provide polarized outlets for plug-in type outlets, to prevent insertion of 110-120 volt plugs into higher voltage outlets. Dry type transformers shall be provided where required to provide voltages necessary for work operations.
4. **Ground Fault Protection:** Equip all circuits for any purpose entering Work Area with ground fault circuit interrupters (GFCI). Locate the GFCIs outside the Work Area so that all circuits are protected prior to entry to Work Area. Provide circuit breaker type ground fault circuit interrupters (GFCI) equipped with test button and reset switch for all circuits to be used for any purpose in



- Work Area, decontamination units, exterior, or as otherwise required by NEC, OSHA or other authority.
5. Power Distribution System: Provide circuits of adequate size and proper characteristics for each use. In general run wiring overhead, and rise vertically where wiring will be least subject to damage from operations.
  6. Temporary Wiring: In the Work Area shall be type UF non-metallic sheathed cable located overhead and exposed for surveillance. Provide liquid tight enclosures or boxes for all wiring devices. Do not wire temporary lighting with plain, exposed (insulated) electrical conductors.
  7. Electrical Power Cords: Use only grounded extension cords; use hard service cords where exposed to traffic and abrasion. Use single lengths of cords only.
  8. Temporary Lighting: All lighting within the Work Area shall be liquid and moisture proof and designed for the use intended.
    - a. Provide sufficient temporary lighting to ensure proper workmanship everywhere; by combined use of daylight, general lighting, and portable plug-in task lighting.
    - b. Provide lighting in the Decontamination Unit as required to supply a minimum 50-foot candle light level.
  9. If electrical circuits, machinery, and other electrical systems in or passing through the work area must stay in operation due to health and safety requirements, the following precautions must be taken:
    - a. All unprotected cables, except low-voltage (less than 24 volts) communication and control system cables, panel boxes of cables and joints in live conduit that run through the work area shall be covered with three (3) independent layers of six (6) mil fire retardant polyethylene. Each layer shall be individually duct taped and sealed. All three (3) layers of polyethylene sheeting shall be left in place until satisfactory clearance air sampling results have been obtained.

## 2.04 CLEANING

- A. Throughout the construction period, the asbestos abatement contractor shall maintain the building as described in this Section.
  1. The asbestos abatement contractor shall prevent building areas other than the Work Area from becoming contaminated with asbestos-containing dust or debris. Should areas outside the Work Area become contaminated with asbestos-containing dust or debris as a consequence of the asbestos abatement



contractor's work practices, the asbestos abatement contractor shall be responsible for cleaning these areas in accordance with the procedures appended in Title 15, Chapter 1 of RCNY and NYSDOL ICR56. All costs incurred in cleaning or otherwise decontaminating non-Work Areas and the contents thereof shall be borne by the asbestos abatement contractor at no additional cost to the City.

2. The asbestos abatement contractor shall provide to all personnel and laborers the required equipment and materials needed to maintain the specified standard of cleanliness.

**B. General**

1. Waste water from asbestos removal operations, including shower water, may be discharged into the public sewer system only after approved filtration is on operation to remove asbestos fibers.
2. Asbestos wastes shall be double bagged in six mil (.006") fire retardant polyethylene bags approved for ACM disposal and shall be properly labeled and handled before disposal.
3. All waste generated shall be bagged, wrapped or containerized immediately upon removal. The personal and waste decontamination enclosure systems and floor and scaffold surfaces shall be HEPA vacuumed and wet cleaned at the end of each work shift at a minimum.
4. The asbestos abatement contractor shall use corrugated cartons or drums for disposal of asbestos-containing waste having sharp edged components (e.g., nails, screws, metal lathe and tin sheeting) that may tear polyethylene bags and sheeting. The waste within the drums or cartons must be double bagged.
5. The asbestos abatement contractor shall transport all bags of waste to disposal site in thirty gallon capacity metal or fiber drums with tight lids, or in locked steel dumpster.
6. Dumping of debris, waste or bagged waste will not be permitted.
7. The waste decontamination enclosure system shall be wet cleaned twice using wet cleaning methods upon completion of waste removal. When the worker decontamination enclosure shower room alternates as a waste container wash room, the shower room shall be washed immediately with cloths or mops saturated with a detergent solution prior to wet cleaning.
8. Excessive water accumulation or flooding in the work area shall require work to stop until the water is collected and disposed of properly.





9. ACM shall be collected utilizing rubber dust pans and rubber squeegees.
10. HEPA vacuums shall not be used on wet materials unless specifically designed for that purpose.
11. Metal shovels shall not be used within the work area.
12. Mastic solvent when used will be applied in moderation (e.g., by airless sprayer). Saturation of the concrete floor with mastic solvent must be avoided.
13. The asbestos abatement contractor shall retain all items in the storage area in an orderly arrangement allowing maximum access, not impeding traffic, and providing the required protection of all materials.
14. The asbestos abatement contractor shall not allow accumulation of scrap, debris, waste material, and other items not required for use in this work. When asbestos contaminated waste must be kept on the work site overnight or longer, it shall be double bagged and stored in accordance with New York City Department of Sanitation (NYCDOS) regulation Title 16 Chapter 8, and Federal, State and City laws.
15. At least twice a week (more if necessary), the asbestos abatement contractor shall completely remove all scrap, debris and waste material from the job site.
16. The asbestos abatement contractor shall provide adequate storage space for all items awaiting removal from the job site, observing all requirements for fire protection and concerns for the environment.
17. All respiratory protection equipment shall be selected from the latest NIOSH Certified Equipment list.
18. Daily and more often, if necessary, the asbestos abatement contractor shall inspect the Work Areas and adjoining spaces, and pick up all scrap, debris, and waste material. All such items shall be removed to the place designated for their storage.
19. Weekly, and more often, if necessary, the asbestos abatement contractor shall inspect all arrangements of materials stored on the site; re-stack and tidy them or otherwise service them to meet the requirements of these Specifications.
20. The asbestos abatement contractor shall maintain the site in a neat and orderly condition at all times.

**PART 3 – EXECUTION**

**3.01 WORKER DECONTAMINATION FACILITY**

**A. Large Asbestos Projects (Small Project Option):**

1. Provide a worker decontamination facility in accordance with, Title 15, Chapter 1, OSHA Standard 29 CFR 1926.1101, 12NYCRR Part 56 and as specified herein. Unless approved by NYCDEP and the City, worker decontamination facilities shall be attached to the Work Areas

**a. Structure:**

- (1) Use modular systems or build using wood or metal frame studs, joists, and rafters placed at a maximum of 16 inches on-center.
- (2) When worker decontamination unit is located outdoors, in areas with public access, or in correctional facilities, frame work shall be lined with minimum 3/8" thickness fire rated plywood sheathing. Sheathing shall be caulked or taped airtight at all joints and seams.
- (3) Interior shall be covered with two layers of fire retardant 6-mil polyethylene sheeting, with a minimum overlap of 12 inches at seams. Seal seams airtight using tape and adhesive. The interior floor shall be covered with two (2) layers of reinforced fire-retardant polyethylene sheeting with a minimum overlap on the walls of twelve inches.
- (4) Entrances to the decontamination unit shall be secured with lockable hinged doors. Doors shall be open at all times when abatement operations are in progress. Doors shall be louvered to allow for air movement through the decontamination units into Work Area.

**b. Curtained Doorways:** A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms.

**c. Air Locks:** Air locks shall consist of two curtained doorways placed a minimum of three feet apart.

**d. Decontamination Enclosure System** shall be placed adjacent to the Work Area and shall consist of three totally enclosed chambers, separated from Work Area and each other by airlocks, as follows:



- (1) **Equipment Room:** The equipment room shall have a curtain doorway to separate it from the Work Area, and share a common airlock with the shower room. The equipment room shall be large enough to accommodate at least one worker (allowing them enough room to remove their protective clothing and footwear), and a fire retardant 6-mil disposal bag for collection of discarded clothing and equipment. The equipment room shall be utilized for the storage of equipment and tools after decontamination using a HEPA-vacuum and/or wet cleaning. A one-day supply of replacement filters, in sealed containers, for HEPA-vacuums and negative air machines, extra tools, containers of surfactant, and other materials and equipment required for the project shall be stored here. A walk-off pan filled with water shall be placed in the Work Area just outside the equipment room for persons to clean foot coverings when leaving the Work Area. Contaminated footwear and reusable work clothing shall be stored in this room.
  
- (2) **Shower Room:** The shower room shall have two airlocks (one that separates it from the equipment room and one that separates it from the clean room). The shower room shall contain at least one shower, with hot and cold water adjustable at the tap, per six workers. Careful attention shall be given to the shower to ensure against leaking of any kind and shall contain a rigid catch basin at least six inches deep. Asbestos abatement contractor shall supply towels, shampoo and liquid soap in the shower room at all times. Shower water shall be continuously drained, collected, and filtered through a system with at least a 5-micron particle size collection capacity. A system containing a series of several filters with progressively smaller pore sizes shall be used to avoid rapid clogging of the filters by large particles. Pumps shall be installed, maintained and utilized in accordance with manufacturer's recommendations. Filtered water shall be discharged in accordance with applicable codes. Contaminated filters shall be disposed of as asbestos waste.
  
- (3) **Clean Room:** The clean room shall share a common airlock with the shower room and shall have a curtained doorway to separate it from outside non-contaminated areas. Lockers, for storage of workers' street clothing, and shelves, for storing respirators, shall be provided in this area. Clean disposable clothing, replacement filters for respirators, and clean dry towels shall be provided in the clean room. The clean room shall not be used for the storage of tool, equipment or other materials.



- B. Small Asbestos Projects:
1. Provide a worker decontamination facility in accordance with, Title 15, Chapter 1, OSHA Standard 29 CFR 1926.1101, 12NYCRR Part 56 and as specified herein. Unless approved by NYCDEP and the City, worker decontamination facilities shall be attached to the Work Areas.
  2. The worker decontamination enclosure system shall consist of, as a minimum, an equipment room, a shower room, and a clean room separated from each other and from the work area by curtained doorways. The equipment storage, personnel gross decontamination and removal of disposal clothing shall occur in the equipment room prior to entering the shower. All other requirements shall be the same as described above for a large asbestos project.
  3. For small asbestos projects with only one exit from the work area, the shower room may be used as a waste washroom. The clean room shall not be used for waste storage. All other requirements shall be the same as described above for a large asbestos project.
- C. Decontamination Enclosure System Utilities: Lighting, heat, and electricity shall be provided as necessary by the Asbestos abatement contractor, and as specified herein.

### **3.02 WASTE DECONTAMINATION FACILITY**

- A. Large Asbestos Project (Small Project Option)
1. Provide a worker decontamination facility in accordance with, Title 15, Chapter 1, OSHA Standard 29 CFR 1926.1101, 12NYCRR Part 56 and as specified herein. Unless approved by NYCDEP and the City, worker decontamination facilities shall be attached to the Work Areas.
    - a. Structure:
      - (1) Use modular systems or build using wood or metal frame studs, joists, and rafters placed at a maximum of 16 inches on-center.
      - (2) When worker decontamination unit is located outdoors, in areas with public access, or in correctional facilities, frame work shall be lined with minimum 3/8" thickness fire rated plywood sheathing. Sheathing shall be caulked or taped airtight at all joints and seams.
      - (3) Interior walls shall be covered with two layers of fire retardant 6-mil polyethylene sheeting, with a minimum overlap of 12

inches at seams. Seal seams airtight using tape and adhesive. The interior floor shall be covered with two (2) layers of reinforced fire-retardant polyethylene sheeting with a minimum overlap on the walls of twelve inches.

- (4) Entrances to the decontamination unit shall be secured with lockable hinged doors. Doors shall be open at all times when abatement operations are in progress. Doors shall be louvered to allow for air movement through the decontamination units into the Work Area.
  - b. **Curtained Doorways:** A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms.
  - c. **Air Locks:** Air locks shall consist of two curtained doorways placed a minimum of three feet apart.
  - d. **Decontamination Enclosure System** shall be located outside the work area and attached to all locations through which ACM waste will be removed from the work area and shall consist of two totally enclosed chambers, separated from the Work Area and each other by airlocks, as follows:
    - (1) **Washroom:** An equipment washroom shall have two air locks (one separating the unit from the Work Area and one common air lock that separates it from the holding area). The washroom shall have facilities for washing material containers and equipment. Gross removal of dust and debris from contaminated material containers and equipment shall be accomplished in the Work Area, prior to moving to the washroom.
    - (2) **Holding Area:** A holding area shall share a common air lock with the equipment washroom and shall have a curtained doorway to outside areas. A hinged, lockable door shall be placed at the holding area entrance to prevent unauthorized access into the Work Area.
- B. **Small Asbestos Project:**
1. The worker decontamination enclosure system shall consist of, as a minimum, an equipment room, a shower room, and a clean room separated from each other and from the work area by curtained doorways. The equipment storage, personnel gross decontamination and removal of disposal clothing shall occur in the equipment room prior to entering the shower. All other requirements shall be the same as described above for a large asbestos project.



2. For small asbestos projects with only one exit from the work area, the shower room may be used as a waste washroom. The clean room shall not be used for waste storage. All other requirements shall be the same as described above for a large asbestos project.
- C. Decontamination Enclosure System Utilities: Lighting, heat, and electricity shall be provided as necessary by the Asbestos abatement contractor, and as specified herein.

**3.03 PERSONNEL ENTRANCE AND DECONTAMINATION PROCEDURES FOR REMOVAL OPERATIONS UTILIZING REMOTE DECONTAMINATION FACILITIES**

- A. All individuals who enter the Work Area shall sign the entry log, located in the clean room, upon each entry and exit. The log shall be permanently bound and shall fully identify the facility, agents, asbestos abatement contractor(s), the project, each Work Area, and worker respiratory protection employed. The job supervisor shall be responsible for the maintenance of the log during the abatement activity. The log shall be submitted to the NYC DDC within 48 hours of request.
- B. Each worker shall remove street clothes in the clean room; wear two disposable suits, including gloves, hoods and non-skid footwear; and put on a clean respirator (with new filters) before entering the Work Area.
- C. Each worker shall, before leaving the Work Area or tent, clean the outside of the respirators and outer layer of protective clothing by wet cleaning and/or HEPA-vacuuming. The outer disposable suit shall be removed in the airlock prior to proceeding to the Worker Decontamination Unit. The inner disposable suit and respirator shall be wet wiped and HEPA vacuumed thoroughly before removing and prior to aggressive shower.
- D. Following showering and drying off, each worker or authorized visitor shall proceed directly to the clean room, dress in street clothes, and exit the decontamination enclosure system immediately.

**3.04 PERSONNEL ENTRANCE AND DECONTAMINATION PROCEDURES FOR REMOVAL OPERATIONS UTILIZING ATTACHED DECONTAMINATION FACILITIES**

- A. All workers and authorized visitors shall enter the Work Area through the worker decontamination facility.
- B. All individuals who enter the Work Area shall sign the entry log, located in the clean room, upon each entry and exit. The log shall be permanently bound and shall identify fully the facility, agents, asbestos abatement contractor(s), the project, each



Work Area and worker respiratory protection employed. The site supervisor shall be responsible for the maintenance of the log during the abatement activity. The log shall be submitted to the NYC DDC within 48 hours of request.

- C. Each worker or authorized visitor shall, upon entering the job site, remove street clothes in the clean room and put on a clean respirator with filters, and clean protective clothing before entering the Work Area through the shower room and equipment room.
- D. Each worker or authorized visitor shall, each time he leaves the Work Area, remove gross contamination from clothing before leaving the Work Area; proceed to the equipment room and remove clothing except the respirator; still wearing the respirator, proceed to the shower room; clean the outside of the respirator with soap and water while showering; remove filters, wet them, and dispose of them in the container provided for that purpose; wash and rinse the inside of the respirator; and thoroughly shampoo and wash himself/herself.
- E. Following showering and drying off, each worker or authorized visitor shall proceed directly to the clean room, dress in street clothes, and exit the decontamination enclosure system immediately. Disposable clothing of the type worn inside the Work Area is not permitted outside the Work Area.

### **3.05 MAINTENANCE OF DECONTAMINATION ENCLOSURE FACILITIES AND BARRIERS**

The following procedures shall be followed during abatement activities.

- A. All polyethylene barriers inside the work place and partitions constructed to isolate the Work Area from occupied areas shall be inspected by the asbestos handler supervisor at least twice per shift.
- B. Smoke tubes shall be used to test the integrity of the Work Area barriers and the decontamination enclosure systems daily before abatement activity begins and at the end of each shift.
- C. Damage and defects in the decontamination enclosure system shall be repaired immediately upon discovery. The decontamination enclosure system shall be maintained in a clean and sanitary condition at all times.
- D. At any time during the abatement activity, if visible emissions are observed, or elevated asbestos fiber counts outside the Work Area are measured, or if damage occurs to barriers, abatement shall stop. The source of the contamination shall be located, the integrity of the barriers shall be restored and extended to include the contaminated area, and visible residue shall be cleaned up using appropriate HEPA-vacuuming and wet cleaning.



- E. Inspections and observations shall be documented in the daily project log by the asbestos handler supervisor.
- F. The daily inspection to ensure that exits have been checked against exterior blockage or impediments to exiting shall be documented in the log book. If exits are found to be blocked, abatement activities shall stop until the blockage is cleared.

### **3.06 MODIFICATIONS TO HVAC SYSTEMS**

- A. Shut down, isolate or seal, all existing HVAC units, fans, exhaust fans, perimeter convection air units, supply and/or return air ducts, etc., situated in, traversing or servicing the work zone.
- B. Seal all seams with duct tape. Wrap entire duct with a minimum of two layers of fire retardant 6-mil polyethylene sheeting. All shutdowns are to be coordinated with the Facility. Where systems must be maintained, i.e., traversing Work Areas to non-Work Areas, only supply ducts will be maintained, protect as described above. All returns must be blanked off in Work Area and adjacent areas, including floor above and below Work Area. When required Asbestos abatement contractor shall apply for a clarification from NYCDEP. The Asbestos abatement contractor shall implement the following engineering procedures:
  - 1. Maintenance of a positive pressure within the HVAC system of 0.01 inch water gauge (or greater) with respect to the ambient pressure outside the Work Area. The conditions for this system shall be maintained and be operational 24 hours per day from the initiation of Work Area preparation until successful final air clearance. Positive pressurization of HVAC system shall be applied only under the direction and control of professional engineer, or other knowledgeable licensed professional;
  - 2. The positive pressurization of the duct shall be tested, inspected and recorded both at the beginning and at the end of each shift;
  - 3. The positive pressurization shall be monitored using instrumentation which will provide a written record of pressurization and that will trigger an audible alarm, if the static pressure falls below the set value;
  - 4. The supply air fan and the supply air damper for the active positive-pressurized duct shall be placed in the manual "on" positions to prevent shutdown by fail-safe mechanisms;
  - 5. The return air fan and the return air dampers shall be shut down and locked-out;
  - 6. All the seams of the HVAC ducts that pass through the Work Area shall be sealed;





7. The HVAC ducts that pass through the Work Area shall be covered with two (2) layers of fire retardant 6-mil polyethylene sheeting, and all seams and edges of both layers shall be sealed airtight;
  8. The supply air fans, return air fans, and all dampers servicing the Work Area itself shall be shut down and locked-out. All openings within the Work Area of supply and return air ducts shall be sealed with 3/8-inch fire rated plywood and two layers of fire retardant 6-mil polyethylene;
  9. When abatement occurs during periods while the HVAC system is shut down an alternative method of pressurization of the duct passing through the Work Area should be employed (e.g., by low-pressure "blowers", etc., directly coupled into the duct). Item #4 above shall be deleted and shall be replaced by the requirement to set the dampers of the HVAC duct in the manual closed positions, in order to effect pressurization.
- C. Asbestos abatement contractor to coordinate this item with the Facility and Construction Project Manager at the commencement of work. Where present HVAC systems (ducts) service an area and that air system cannot be shut down, asbestos abatement contractor shall isolate and seal the ducts, both supply and return, at the boundary of that zone.
1. To isolate, cap, or seal a duct, the asbestos abatement contractor shall remove insulation from duct (if necessary), then disconnect linkage to fold shut all fire dampers. Asbestos abatement contractor shall seal all edges and seams with caulk and duct-tape.
  2. Asbestos abatement contractor shall then cut existing duct and fold metal in and secure with approved fasteners. Asbestos abatement contractor shall caulk and duct-tape all seams and edges.
  3. All ducts shall then be completely wrapped and sealed with duct-tape and three (3) layers of reinforced polyethylene sheeting.
  4. All ducts shall be restored to original working order at the end of the project.
- D. Where present HVAC systems (ducts) service occupied areas (non-Work Areas), the Asbestos abatement contractor shall blank off the ducts.
1. To isolate or seal the return duct, the asbestos abatement contractor shall remove any insulation (if necessary) from the duct. Then disconnect linkage to fold shut all fire dampers and insert a fiberglass board within the duct. Asbestos abatement contractor shall seal all edges and seams with caulk, duct-tape and three (3) layers of reinforced polyethylene sheeting.



2. All isolation of return ducts and any other activity that requires removal of ceiling by the asbestos abatement contractor shall be conducted under controls. Work is to be coordinated with the Construction Project Manager and the Facility and is described as follows:
  - a. Work shall occur as scheduled.
  - b. Horizontal surfaces near the blanking operations shall be protected with fire retardant 6-mil polyethylene sheeting.
  - c. Plastic drapes shall be used to enclose the immediate area.
  - d. Asbestos abatement contractor to position and operate air filtration devices and HEPA-vacuums in the area to clean space after blanking operations.
  - e. All personnel involved with this work shall receive personal protection (i.e., respirators and disposable suits).
- E. Upon loss of negative pressure or electric power, all work activities in an area shall cease immediately and shall not resume until negative pressure and/or electric power has been fully restored. When a power failure or loss of negative pressure lasts, or is expected to last, longer than thirty (30) minutes, the following sequence of events shall occur.
  1. All make up air inlets shall be sealed airtight.
  2. All decontamination facilities shall be sealed airtight after evacuation of all personnel from the Work Area.
  3. All adjacent areas shall be monitored for potential fiber release upon discovery of and subsequently throughout, power failure.

### **3.07 LOCKOUT OF HVAC SYSTEMS, ELECTRIC POWER, AND ACTIVE BOILERS**

Prior to the start of any prep work, the asbestos abatement contractor shall employ skilled tradesmen with limited asbestos licenses for the following work:

- A. Disable all ventilating systems or other systems bringing air into or exhausting air out of the Work Area. Disable system by disconnecting wires removing circuit breakers, by lockable switch or other positive means to ensure against accidental re-starting of equipment.



- B. Lock out power to the Work Area by switching off all breakers and removing them from panels or by switching and locking entire panel. Label panel with following notation: "DANGER CIRCUIT BEING WORKED ON". Give all keys to Facility.
- C. Lock out power to circuits running through Work Area whenever possible by switching off and removing breakers from panel. If circuits must remain live, the Facility shall notify asbestos abatement contractor in order that he may secure a variance from NYCDEP. The asbestos abatement contractor shall protect all conduit and wires to remain and label all active circuits at intervals not to exceed 3 feet with tags having the following notation: "DANGER LIVE ELECTROCUTION HAZARD". The asbestos abatement contractor shall label all circuits in all locations including hidden locations that may be affected by the work in a similar manner.
- D. All boilers and other equipment within the work area shall be shut down, locked out, tagged out and the burner/boiler/equipment accesses and openings shall be sealed until abatement activities are complete. If the boiler or other exhausted equipment will be subject to abatement, all breeching, stacks, columns, flues, shafts, and double-walled enclosures serving as exhausts or vents shall be segregated from the affected boiler or equipment and sealed airtight to eliminate potential chimney effects within the work area.

#### **PART 4 – PREPARATION OF WORK AREA AND REMOVAL PROCEDURES**

##### **4.01 REMOVAL OF ASBESTOS-CONTAINING MATERIAL**

###### **A. Asbestos abatement contractor Responsibility**

Asbestos abatement contractor shall be responsible for the proper removal of ACM from the Work Area using standard industry techniques. The Third-Party Air Monitor representative shall observe the Work.

###### **1. General Requirements:**

- a. Removal of ACM shall be performed using wet methods. Dry removal of ACM is prohibited.
- b. Spray ACM with amended water with sufficient frequency and quantity to enhance penetration. Sufficient time shall be allowed for amended water to penetrate the material to the substrate prior to removal. All ACM shall be thoroughly wetted while work is being conducted.
- c. Accumulation of standing water on the floor of the Work Area is prohibited.



- d. Apply removal encapsulants, when used, in accordance with the manufacturer's recommendations and guidelines.
- e. Containerize ACM immediately upon detachment from the substrate. Alternately, ACM may be dropped in to a flexible catch basin and promptly bagged. Detached ACM is not permitted to lie on the floor for any period of time. Excess air within the bag shall be removed before sealing. ACM shall not be dropped from a height of greater than 10 feet. Above 10 feet, dust free inclined chutes may be used. Maximum inclination from horizontal shall be 60-degrees for all chutes.
- f. Exits from the work area shall be maintained, or alternative exits shall be established, in accordance with section 1027 of the New York City Fire Code. Exits shall be checked at the beginning and end of each work shift against blockage or impediments to exiting.
- g. Signs clearly indicating the direction of exits shall be maintained and prominently displayed within the work area.
- h. No smoking signs shall be maintained and prominently displayed within the work place.
- i. At least one fire extinguisher with a minimum rating 2-A:10-B:C shall be required for each work place. In the case of large asbestos projects, at least two such fire extinguishers shall be required.
- j. If the containment area of an asbestos project covers the entire floor of the affected building, or an area greater than 15,000 square feet on any given floor, the installation of a negative air cut off switch or switches shall be required at a single location outside the work place, such as inside a stairwell, or at a secured location in the ground floor lobby when conditions warrant. The required switch or switches shall be installed by a licensed electrician pursuant to a permit issued by the Department of Buildings. If negative pressure ventilation equipment is used on multiple floors the cut off switch shall be able to turn off the equipment on all floors.

**B. Removal of ACM Utilizing Full Containment Procedures shall be as follows:**

**1. Preparation Procedures:**

- a. Ensure that the Third-Party Air Monitor has performed area monitoring and established a background count prior to the preparatory operations for each removal area, as applicable.



- b. Shut down, isolate, and lock out or tag heating, ventilating, and air conditioning (HVAC) systems which serve or which pass through the Work Area. Vents within the Work Area and seams in HVAC components shall be sealed with tape and two layers of fire retardant polyethylene sheeting. Filters in HVAC systems shall be removed and treated as asbestos-asbestos contaminated waste.
- c. Shut down, disconnect, and lock out or tag all electric power to the Work Area so that there is no possibility of its reactivation until after clearance testing of the Work Area.
- d. Provide and install decontamination enclosure systems in accordance with Sections 3.01 and 3.02 of this Section.
- e. Remove ACM that may be disturbed by the erection of partitions using tent procedures and wet removal methods. Removal shall be limited to a one-foot wide strip running the length/height of the partition.
- f. Pre-clean and remove moveable objects from the Work Area. Pre-cleaning shall be accomplished using HEPA-vacuum and wet-cleaning techniques. Store moveable objects at a location determined by the City.
- g. Protect carpeting that will remain in the Work Area.
  - (1) Pre-clean carpeting utilizing wet-cleaning techniques.
  - (2) Install a minimum of two layers of fire retardant 6-mil reinforced polyethylene sheeting over carpeting.
  - (3) Place a rigid flooring material, minimum thickness of 3/8-inch, over polyethylene sheeting.
- h. Pre-clean all fixed objects to remain within the Work Area using HEPA-vacuum and wet-cleaning techniques.
- i. Seal fixed objects with two individual layers, minimum, of 6-mil fire retardant polyethylene sheeting.
- j. Pre-clean entire Work Area utilizing HEPA-vacuum and wet-cleaning techniques. Methods of cleaning that raise dust; such as dry sweeping or use of vacuum equipment not equipped with HEPA-filters, is prohibited.



- k. Install isolation barriers (i.e., sealing of all openings, including but not limited to windows, corridors, doorways, skylights, ducts, grills, diffusers, and other penetrations within the Work Area) using two layers of 6-mil fire retardant polyethylene sheeting and duct-tape.
- l. Construct rigid framework to support Work Area barriers.
  - (1) Framework shall be constructed using 2-inch by 4-inch wooden or metal studs placed 16 inch on center when existing walls and/or ceiling do not exist for all openings greater than 32 square feet. Framework is not required except where one dimension is one foot or less or the opening will be used as an emergency exit.
  - (2) Apply a solid construction material, minimum thickness of 3/8-inch to the Work Area side of the framing. In secure interior areas, not subject to access from the public or building occupants, an additional layer of 6-mil fire retardant polyethylene sheeting may be substituted for the rigid construction material.
  - (3) Caulk all wall, floor, ceiling, and fixture joints to form a leak tight seal.
- m. Seal floor drains, sumps, shower tubs, and other collection devices with two layers of 6-mil fire retardant plastic and fire rated plywood, as necessary, and provide a system to collect all water used by the asbestos abatement contractor. Collected water shall be passed through a water filtration system prior to being discharged into the sanitary sewer.
- n. Remove ceiling mounted objects not previously sealed that will interfere with removal operations. Mist object and surrounding ACM with amended water prior to removal to minimize fiber dispersal. Clean all moveable objects using HEPA-vacuum and wet-cleaning techniques prior to removal from the Work Area.
- o. Fiberglass insulation with intact coverings shall be protected in place during abatement activities. These materials shall be protected with two layers of 6-mil fire retardant polyethylene sheeting as isolation barriers and two additional layers of 6-mil fire retardant polyethylene sheeting serving as primary and secondary surface barriers.
- p. Install and initiate operation of AFDs to provide a negative pressure and a minimum of four air changes per hour within the Work Area relative to surrounding non-Work Areas. Do not shut down AFDs until



the Work Area is released to the City following final clearance procedures. The use of HEPA-filtered vacuum to produce a negative air pressure inside the enclosure is prohibited.

- q. Maintain emergency and fire exits from the Work Areas or establish alternative exits satisfactory to the local fire officials. Emergency exits and routes shall be established and clearly marked with florescent paint or other effective designations to permit easy location from anywhere within the Work Area. Cutting tools (e.g., knife, razor) shall be attached to the work area side of the sheeting for use in the event that the barrier must be cut open to allow egress. Emergency exits shall be secured to prevent access from uncontaminated areas and yet permit emergency exiting. Exits shall be checked daily against exterior blockage or impediments to exiting.
- r. Temporary lighting within the Work Area and decontamination system shall be provided as required to achieve minimum illumination levels.
- s. Hand power tools used to drill, cut into, or otherwise disturb ACM shall be manufacturer-equipped with HEPA filtered local exhaust ventilation.
- t. Prior to being plasticized, the Work Areas shall be cleaned using HEPA vacuum equipment and/or wet cleaning methods as appropriate. Methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters, shall not be used.
- u. Plasticize the area after pre-cleaning, using the following procedures.
  - (1) Cover floors with one layer of 6-mil fire retardant polyethylene sheeting, turning layer a minimum of 6 inches up wall, and seal layer to wall.
  - (2) Cover walls with one layer of 6-mil fire retardant polyethylene sheeting, overlapping wall layer a minimum of 6 inches, and seal layer to floor layer.
  - (3) Cover floors with a second layer of 6-mil fire retardant polyethylene sheeting, turning layer a minimum of 12 inches up wall, and seal layer to wall.
  - (4) Cover walls with a second layer of fire retardant 6-mil polyethylene sheeting, overlapping wall layer a minimum of 12 inches, and seal layer to floor layer.



- (5) In areas where demolition is required to access ACM, a layer of fire retardant 6-mil reinforced polyethylene sheeting shall be placed on the floor of the enclosure.
  - (6) Perform demolition required to access ACM. Debris resulting from demolition activities shall be disposed of as ACM waste as described in this Specification.
  - (7) Repeat preparation of areas accessed by demolition activities as described above.
- v. Suspended ceiling tiles and T-grid components shall remain in place until the preparation of the Work Area below the ceiling tiles are completed and personnel and equipment decontamination enclosures have been constructed.
- w. Scaffolds shall be provided for workers engaged in work that cannot safely be performed from the ground or other solid Work Area surface.
- x. Means of egress shall not be obstructed by hardwall barriers.
- y. Pre-Removal Inspections.
- (1) Prior to removal of any ACM, the asbestos abatement contractor shall notify the Third-Party Air Monitor and request a pre-removal inspection. Posting of warning signs, building of decontamination enclosure systems, and all other preparatory steps have been taken prior to notification of the Third-Party Air Monitor.
  - (2) Asbestos abatement contractor shall correct any deficiencies observed by Third-Party Air Monitor at no additional cost to City.
  - (3) Following the Third-Party Air Monitor's approval of the Work Area preparations, removal of ACM may commence.
2. Removal of ACM Within Full Containment:
- a. Mist material with amended water. Allow sufficient time for the amended water to penetrate the material to be removed.
  - b. Remove the material using hand tools such as scrapers or putty knives. Wire-mesh or wood lathe reinforcing, when present, shall be cut into manageable pieces and disposed of as ACM.





- c. Remove any residual material from the substrate using wet cleaning methods and nylon-bristled hand brushes.
  - d. Place the removal material immediately into a properly labeled fire retardant 6-mil polyethylene bag. All material shall be properly containerized and decontaminated prior to removal from the Work Area.
  - e. Following the completion of removal of insulation, all visible residue shall be removed from the substrate.
3. Following Removal of ACM utilizing Full Containment Procedures:
- a. First Cleaning:
    - (1) Remove any visible accumulation of asbestos material and debris. HEPA-vacuumping and wet cleaning shall be performed on all surfaces inside the Work Area. All sealed drums, plastic bags, and equipment used in the Work Area shall be removed from the Work Area.
    - (2) Upon request of the asbestos abatement contractor, the Third-Party Air Monitor will perform a visual inspection. Evidence of asbestos contamination identified during the inspection will necessitate further cleaning as heretofore specified.
    - (3) Remove first layer of plastic sheathing inside the Work Area. The isolation barriers and decontamination facility shall remain in place and be utilized.
  - b. Second Cleaning:
    - (1) After the first cleaning, the Work Area shall be vacated for twelve hours to allow fibers to settle.
    - (2) All objects and surfaces in the Work Area shall be HEPA - vacuumed and wet cleaned for a second cleaning.
    - (3) A thin coat of lockdown encapsulant shall be applied to all plastic covered surfaces in the Work Area.
    - (4) When the encapsulant is dry, second layer of polyethylene sheeting on the walls, ceiling and floors shall be removed. Do not remove seals from doors, windows, Isolation Barriers or disconnect the negative pressure equipment.



c. **Third Cleaning:**

- (1) A minimum of four hours after the second cleaning, all the surfaces in the Work Area shall be HEPA-vacuumed and wet cleaned for a third cleaning.
- (2) Upon the request of the asbestos abatement contractor, the Third-Party Air Monitor will do final visual inspection for re-occupancy. Evidence of asbestos contamination identified during the inspection will necessitate further cleaning as heretofore specified.
- (3) When the Work Area passes the Third-Party Air Monitor's visual re-occupancy inspection, air sampling shall not begin until at least one hour after the completion of the third cleaning. The Third-Party Air Monitor shall perform air monitoring using aggressive testing techniques. The Third-Party Air Monitor will approve re-occupancy if the specified fiber count in the Work Area is achieved according to the Third-Party Air Monitor.
- (4) When the Work Area passes the re-occupancy test, all controls and seals established shall be removed.
- (5) The cleaned layer of the surface barriers shall be removed from walls and floors.
- (6) The isolation barriers shall remain in place throughout cleanup. Decontamination enclosure systems shall remain in place and be utilized. A thin coat of lockdown encapsulant shall be applied to all surfaces in the work area which were not the subject of removal or abatement, including the cleaned layer of the surface barriers, but excepting sprinklers, standpipes, and other active elements of the fire suppression system.

d. **Final Barrier Removal:**

- (1) Upon receipt of acceptable clearance testing results, polyethylene sheeting and Isolation Barriers shall be removed and disposed accordingly as asbestos-containing material.
- (2) The area surrounding the abatement work place shall be cleaned of any visible debris utilizing HEPA vacuum and wet methods.

- e. The Third-Party Air Monitor will conduct a final visual observation. Approval must be granted prior to break down of decontamination facility and asbestos abatement contractor demobilization.



- C. Removal of ACM Roofing and Flashing Materials utilizing NYC DEP § 1-107 Foam Procedure for Roof Removal shall be as follows:
1. Preparation procedures:
    - a. These procedures apply only to the removal of asbestos-containing roofing material (ACRM) from exterior roof surfaces. The work area on the roof shall be cordoned off with clearly visible barriers such as caution tape, and only authorized persons shall have access.
    - b. The foam or viscous liquid shall be non-toxic, shall not require special respiratory protection for handling, and shall not affect the handling and disposal of the waste.
    - c. The foam or viscous liquid shall coat and maintain a stable blanket (minimum 1" thickness) for the duration of the removal process and shall leave an identifiable colored residue when it dissipates.
    - d. The foam or viscous liquid shall wet the ACRM. The ACRM shall be kept wet through the bagging process.
    - e. Persons entering the work area shall wear correctly-fitting, good traction rubber boots.
    - f. Abatement shall not be carried out during adverse weather conditions (e.g., precipitation, high winds, ambient temperature below 32 degrees Fahrenheit, etc.).
    - g. The worker decontamination unit may be attached to each work area at an entry/exit from each work area, or may be remote, in which case it shall be equipped with an airlock at the entrance. In addition to the shower head(s), the shower room shall be equipped with a flexible hose for waste decontamination for removal of less than 1,000 square feet of ACRM. For 1,000 square feet or more of ACRM removal, a separate waste decontamination facility shall be located at an entry/exit from each work area. Remote holding areas for the asbestos containing waste shall comply with Title 16, Chapter 8, Rules of the City of New York (16 RCNY 8 et. seq.).
    - h. Movable objects shall be removed from the work area, or kept in place and wrapped in one sheet of fire retardant 6 mil plastic sheeting.
    - i. Provisions shall be made to ensure a safe and adequate air supply to affected building(s). All vents, skylights, air intakes, windows and doors opening onto the roof, and all other openings shall be sealed with



2 layers of fire retardant 6 mil plastic or fitting with HEPA filters when appropriate. Temporary extensions may be installed to a height of 10 feet to ensure adequate air exchange instead of sealing vents, air intakes, etc., with 2 layers of plastic or HEPA filters. Drains may be equipped with 5 micron filtering system in lieu of being sealed.

- j. Fixed objects including perimeter walls, bulkheads, cooling towers, ducts and other rooftop appurtenances shall be covered in one sheet of fire retardant 6 mil plastic up to a height of at least six feet.
- k. THE ASBESTOS ABATEMENT CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF THE INTERIOR SPACES BENEATH THE ROOF.
- l. All office equipment and furniture, including but not limited to desks, chairs, computers, printers, cabinets, etc., carpeted and wooden floors shall be covered with one layer of 6- mil plastic sheeting.
- m. THE ASBESTOS ABATEMENT CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE THAT MAY OCCUR IN THE INTERIOR SPACES, INCLUDING BUT NOT LIMITED TO OFFICE EQUIPMENT, FURNITURE, FLOORS, ETC., BENEATH THE ROOF DURING ALL PHASES OF THE ROOF ABATEMENT.
- n. The asbestos abatement contractor shall provide temporary roof protection consisting of 10-mil polyethylene sheeting following abatement over the open roof areas. Strict coordination with the General Asbestos abatement contractor, Construction Project Manager and/or Architect is required and necessary during this phase of abatement.
- o. Preliminary examination shall be conducted and precautions shall be taken to prevent damage to the interior of the building, including but not limited to office equipment, furniture, carpeted and wooden floors, etc., and to ensure no adverse effect on the structural stability of the roof due to the abatement activity.
- p. Abatement activities shall not be carried out during adverse weather conditions (e.g., precipitation, heavy winds, etc.).
- q. The floor area between the remote decontamination facility and the Work Area must be protected with 2 layers of 6-mil. polyethylene sheeting suitably anchored.
- r. Provisions shall be made to ensure a safe and adequate air supply to affected building(s). All vents, skylights, air intakes, windows and



doors opening onto the roof, and all other openings are to be sealed with two layers of 6-mil plastic or fitted with HEPA-filters where appropriate. In lieu of sealing vents, air intakes, etc., with two layers of plastic or HEPA-filters, temporary extensions may be installed to a height of 10 feet to ensure adequate air exchange. Drains may be equipped with 5 micron filtering systems in lieu of being sealed.

s. **Pre-Removal Inspections:**

- (1) Prior to removal of any ACM, the Asbestos abatement contractor shall notify the Third-Party Air Monitor and request a pre-removal inspection. Posting of warning signs, building of decontamination enclosure systems, and all other preparatory steps have been taken prior to notification of the Third-Party Air Monitor.
- (2) Asbestos abatement contractor shall correct any deficiencies observed by Third-Party Air Monitor at no additional cost to City.
- (3) Following the Third-Party Air Monitor's approval of the Work Area preparations, removal of ACM may commence.

2. **Removal of ACM Roofing and Flashing Materials:**

- a. The asbestos abatement contractor shall be responsible for the removal of all roofing components, including multiple layers of built-up membrane, tar, vapor barrier and/or flashing down to the substrate/deck.
- b. Prior to actual removal, the built-up roofing shall be blanketed and wetted with a minimum 1" coating of the acceptable foam or viscous liquid which shall be maintained for the duration of the removal until the material is bagged. The foam or viscous liquid shall be confined to the work area.
- c. Hand-held power tools used to drill, cut into, or otherwise disturb the ACM shall be equipped with the HEPA-filtered local exhaust ventilation and operated to prevent potential fiber release.
- d. Abatement shall not be performed in adverse weather conditions (e.g., precipitation, heavy winds, etc.). Asbestos abatement contractor shall protect all exposed roof during adverse weather conditions.
- e. Portable HEPA-vacuum machines shall be available during abatement.



- f. After the ACM removal and bagging, the bagged waste shall be HEPA-vacuumed, and then wet-cleaned and transferred into the shower room for double bagging. The double-bagged waste shall be transferred outside the clean room for its final transfer for storage in an enclosed waste container.

3. Following Removal of ACM Roofing and/or Flashing:

- a. Upon completion of the abatement in roof work area, clean-up procedures shall involve removal and bagging of:
  - b. The asbestos containing roofing material (ACRM)
  - c. Visible accumulations of asbestos containing waste
  - d. All excess foam or similar viscous liquid
  - e. All debris, and shall be followed by a thorough wet cleaning.
  - f. All tools shall be wet cleaned and HEPA-vacuumed, and then removed from the work area upon completion.
  - g. Following the removal of all debris, the work area shall be thoroughly wet cleaned. The work area shall be allowed to dry completely before the visual inspection is conducted. The inspection shall confirm the absence in the work area of:
    - (1) ACM, debris, bagged ACM waste,
    - (2) Excess foam or other viscous liquid.
  - h. If the work area fails visual inspection, it shall undergo another wet cleaning and/or HEPA vacuuming until it passes the visual inspection.
  - i. When the visual inspection and clearance testing is successful, all plastic may be removed.
  - j. Air monitoring shall be conducted in accordance with the relevant provisions of Air sampling shall be conducted in compliance with NYC DEP Title 15 Chapter 1, §1-41 Air Sampling Schedule.

**4.02 MAINTENANCE OF CONTAINED WORK AREA AND DECONTAMINATION ENCLOSURE SYSTEMS**

- A. Ensure that barriers are installed in a manner appropriate to the expected weather conditions during the project and for its duration. Repair damaged barriers and



remedy defects immediately upon their discovery. Visually inspect barriers at the beginning and end of each work period.

- B. Visually inspect non-Work Areas and the decontamination enclosure system for water leakage. Check the floor below, ceiling and walls, and view beneath/or around the decontamination enclosure system, for signs of leakage. Perform the visual inspection a minimum of two times for each 8-hour work shift.

## **PART 5 – ASBESTOS WASTE MANAGEMENT**

### **5.01 ACM WASTE REQUIREMENTS**

- A. The asbestos abatement contractor and all sub-asbestos abatement contractors are specifically alerted to the illegal practice of combining asbestos-containing waste (ACW) from one project with the ACW of other projects without using the services of a permitted waste transfer station as defined by 6 NYCRR Part 360 and 364. As part of the shop drawing submittals, the Asbestos abatement contractor must submit for approval the proposed method of transportation and disposal that will be utilized to manage the ACW of this Contract. If a permitted transfer station is to be used, the cost shall be included in the work. The asbestos abatement contractor must submit a waste manifest consistent with whatever approved method is utilized as part of the invoicing and payment procedures.
- B. The asbestos abatement contractor shall maintain compliance with the strictest set of regulations of Title 15, Chapter 1 of RCNY, NYC LL 70/85, NYS DOL ICR 56, USEPA, Asbestos Regulation 40 CFR Section 61.152, 29 CFR 1926.1101, 29 CFR 1910.1200 (F) of OSHA's Hazard Communication Standards, and other applicable standards.

**NOTE:** Any penalties incurred for failure to comply with any of the above regulations will be the sole responsibility for fines imposed due to negligence of the Asbestos abatement contractor.

- C. When presenting ACW for storage at the generation site, the Asbestos abatement contractor shall:
  - 1. Wet down ACW in a manner sufficient to prevent all visible emissions of dust into the air.
  - 2. Seal material in a leak tight container while wet.
  - 3. Keep ACW separate from any other waste.
- D. When presenting ACW for storage away from the site of generation, the Asbestos abatement contractor shall:



1. Ensure that ACW has been properly packaged as per requirements above.
  2. Examine the containers of ACW to ensure that there are no breaks in the containers and that no visible dust is being released into the air.
  3. If examination reveals damage to a container of ACW the Asbestos abatement contractor or person accepting the waste shall immediately wet down the ACW and repackage it into a clean leak tight container. The subsequent repackaging shall be the financial responsibility of the Asbestos abatement contractor and occur at no extra cost to the City.
  4. Keep ACW separate from any other waste.
- E. When storing ACW – The Asbestos abatement contractor shall:
1. Ensure that the ACW has been sufficiently wetted down in tight containers.
  2. Re-wet and repackage any damaged containers.
  3. Maintain at storage site an adequate supply of spare leak tight containers.
  4. Maintain at storage site an adequate supply of amended water.
  5. Keep ACW separate from any other waste.
  6. Keep ACW in a secured, enclosed, and locked container.
  7. If the Asbestos abatement contractor has intention of sorting a quantity of ACW greater than or equal to 50 cubic yards, the Asbestos abatement contractor shall:
    - a. Submit a written request and receive written approval from the City.
- F. When presenting for transport, the Asbestos abatement contractor shall:
1. Ensure that ACW has been sufficiently wetted down.
  2. Examine the integrity of the container's airtight seal.
  3. Re-wet and repackage any damaged containers.
  4. Keep ACW separate from all other waste.
  5. Ensure that a person transporting asbestos waste holds a valid permit issued pursuant to law.
  6. Frequency of Waste Removal:





- a. Properly packaged and labeled asbestos waste shall be removed from the site on a daily basis. Under no circumstance shall asbestos waste be stored on site without written approval from the City. The Waste Hauler and landfill shall be as indicated on the notifications to regulatory agencies.
- G. **Waste Load-out Through Equipment Decontamination Enclosure (Full Decontamination Facility):** Place asbestos waste in disposal bags. Large items not able to fit into disposal bags shall be wrapped in one layer of 6-mil thick polyethylene sheeting. Clean outer covering of asbestos waste package by wet cleaning and/or HEPA-vacuuming in a designated part of the Work Area. Move wrapped asbestos waste to the equipment washroom, wet clean each bag or object and place it inside a second disposal bag, or a second layer of 6-mil polyethylene sheeting, as the item's physical characteristics demand. Air volume shall be minimized, and the bags or sheeting shall be sealed airtight with tape.
1. The clean containerized items shall be moved to the equipment decontamination enclosure holding area pending load-out to storage or disposal facilities.
  2. Workers who have entered the equipment decontamination enclosure system from the uncontaminated non-Work Area shall perform load-out of containers from the decontamination enclosure holding area. Dress workers moving asbestos waste to storage or disposal facilities in clean overalls of a color different than from that of coveralls used in the Work Area. Ensure that workers do not enter from uncontaminated areas into the equipment washroom or the Work Area. Ensure that contaminated workers do not exit the Work Area through the equipment decontamination enclosure system.
  3. Thoroughly clean the equipment decontamination enclosure system immediately upon completion of the waste load-out activities, and at the completion of each work shift.
  4. Labeled ACM waste containers or bags shall not be used for non-ACM debris or trash. Any materials placed in labeled containers or bags, including those turned "inside-out", shall be handled and disposed of as ACM waste.
- H. All asbestos materials, wastes, shower water, polyethylene, disposable equipment and supplies shall be disposed of as asbestos contaminated waste, in accordance with the EPA regulation (40 CFR, Section 61.150) and those requirements of the New York Department of Environmental Conservation and New York City Department of Sanitation.



- I. All asbestos materials shall be prepared for transportation in accordance with this specification and all applicable Federal, State, County and City Regulations. asbestos abatement contractor shall submit the following documentation:
  1. Where applicable, an EPA Generator's identification number which has been obtained from the EPA for all asbestos waste generated from the project.
  2. Applicable State Waste Hauler license and registration numbers.
  3. Federal Hazardous Materials Waste Hauler number.
  4. Designated landfill EPA Permit numbers.
- J. Prior to loading asbestos waste the enclosed cargo areas (dumpster) shall be prepared as follows:
  1. Clean via HEPA-vacuum and wet wipe techniques the enclosed cargo areas of all visible debris prior to preparing with polyethylene.
  2. Line the cargo area with two layers of 6-mil polyethylene sheeting to prevent contamination from damaged or leaking containers. Floor sheeting shall be installed first and extend up the walls a minimum of 24-inches. Wall sheeting shall be overlapped and taped securely into place.
- K. Asbestos-containing waste shall be placed on level surfaces in the cargo area of the dumpster and shall be packed tightly to prevent any shifting or tipping of the waste during transportation.
- L. Asbestos-containing waste shall not be thrown into or dropped from the dumpster. All material shall be handled carefully to prevent rupture of the containers.
- M. All personnel engaged in handling and loading of asbestos contaminated waste outside of the Work Area shall wear protective clothing. The disposable clothing shall include head, body and foot protection and color of clothing shall be different from abatement personnel in the Work Area. Minimum respiratory protection shall be half face, dual cartridge, air purifying respirators with HEPA-filters.
- N. Asbestos abatement contractor shall immediately clean debris or residue observed on containers or surfaces outside of the Work Area. Cleaning shall be via HEPA equipped wet/dry vacuums only.
- O. All asbestos-containing waste shall be transported from the abatement site to the landfill by a registered Waste Hauler. When transporting ACW:
  1. Ensure that the ACW has been sufficiently wetted down in a leak tight container.



2. Re-wet and repackage any damaged containers.
  3. Maintain at storage site an adequate supply of spare leak tight containers.
  4. Maintain at storage site an adequate supply of amended water.
  5. Keep ACW separate from any other waste.
- P. Keep ACW in a secured, enclosed, and locked container.
- Q. Waste transport documents shall conform to the requirements of the U.S. Department of Transportation, Hazardous Materials Transportation Regulation, 49 CFR Part 173 and EPA 40 CFR 61.150 (d)(1)(2). Shipping documents shall be clearly marked with the required designation "RQ Asbestos". Asbestos abatement contractor shall provide a copy of this document to the City.
- R. A uniform hazardous waste manifest shall be prepared by the asbestos abatement contractor and signed by the asbestos abatement contractor each time the asbestos abatement contractor ships a dumpster load of Asbestos-Containing Waste Material. The uniform hazardous waste manifest shall include the site of waste generation, the names and addresses of the Transporter, the asbestos abatement contractor, and the landfill operator with information on the type and number of asbestos-waste containers, time and date. Asbestos abatement contractor shall provide the Construction Project Manager, Third-Party Air Monitor or authorized designated representative with signed copies of the waste manifest before each departure.
- S. Asbestos abatement contractor or his registered hazardous Waste Hauler shall transport asbestos-containing waste material from the abatement site directly to the specified disposal site. Asbestos abatement contractor or their Waste Hauler shall not accept material from any other site when transporting asbestos-containing waste material from the abatement site. The authorized DDC representative or Construction Project Manager reserves the right to travel with asbestos abatement contractor's Waste Hauler to the waste disposal site. No intermediate storage of waste material (i.e., asbestos abatement contractor's warehouse) shall be permitted.
- T. Final or progress application for payments will not be processed unless all hazardous waste manifests generated to date have been received and reviewed by the Construction Project Manager.
- U. All asbestos materials, wastes, shower water, polyethylene disposable equipment and supplies shall be disposed of as asbestos contaminated waste, in accordance with the EPA regulation (40 CFR, Section 61.150) and those requirements of the New York State Department of Environmental Conservation and the New York Department of Sanitation.



- V. Asbestos abatement contractor shall transport all sealed drums to a landfill disposal site approved by the Department of Environmental Conservation and the EPA. Transportation shall be performed by a New York State registered Waste Hauler, where required. When presenting the ACW for disposal the Asbestos abatement contractor or sub Asbestos abatement contractor shall:
1. Ensure that waste container is properly labeled according to the National Emission Standard for Hazardous Air Pollutants (NESHAP); Asbestos Revision, 40 CFR, Part 61, Subpart M. The labels shall include the name of the waste generator and the location where the waste was generated.
  2. Comply with all applicable orders issued pursuant to asbestos disposal.
  3. Ensure that ACW has been sufficiently wetted down.
  4. Re-wet and repackage any damaged containers.
  5. Keep ACW separate from all other wastes.
- W. Asbestos abatement contractor shall notify the waste disposal site, at least 24 hours prior to transportation of asbestos contaminated waste to be delivered. Asbestos abatement contractor shall determine if a larger notification period is required.
- X. At the site asbestos abatement contractors or Waste Hauler trucks shall approach the dump location as close as possible for unloading asbestos waste. Containers shall be carefully placed in the ground. Do not throw containers from truck.
- Y. Asbestos abatement contractor or Waste Hauler shall inspect containers as they are unloaded at the disposal site. Material in damaged containers shall be repacked in empty containers, as necessary.
- Z. Asbestos abatement contractor or Waste Hauler shall not remove asbestos-containing waste Material from drums unless required to do so by the disposal site City. Used drums shall be disposed of as asbestos-asbestos contaminated waste.
- AA. All personnel engaged in unloading of the containers at the waste site shall wear protective clothing. The disposable clothing shall include head, body and foot protection. Minimum respiratory protection shall be half face, dual cartridge, air purifying respirators with HEPA-filters. Workers shall remove their protective clothing at the disposal site, place it in labeled disposal bags and leave them with the deposited waste shipment.
- BB. For the compaction operation, the asbestos abatement contractor shall ensure that disposal sites personnel have been provided with personal protective equipment by the disposal operator. If the disposal site City has not provided this protective equipment, the asbestos abatement contractor shall supply protective clothing and



respiratory protection for the duration of this operation (PAPR respirators are mandatory).

- CC. If containers are broken or damaged, the asbestos abatement contractor or Waste Hauler shall, using personnel who are properly trained and wearing proper protective equipment, shall repackage the waste in properly labeled containers. Asbestos abatement contractor shall then clean the entire truck and its contents using HEPA-vacuums and wet cleaning techniques until no visible residue is observed.
- DD. Following the removal of all containerized waste, the asbestos abatement contractor shall decontaminate the truck cargo area using HEPA-vacuums and/or wet cleaning techniques until no residue is observed. All 6-mil polyethylene sheeting shall be removed and discarded as asbestos-containing waste material along with contaminated cleaning material and protective clothing, in containers at the disposal site.
- EE. The transporter(s) of all asbestos waste shall not back-haul any items on his return from landfill/disposal site.
- FF. All asbestos waste shall be disposed of in an approved Asbestos Landfill site only.
  - 1. NO PERSON UNDER ANY CIRCUMSTANCES SHALL ABANDON ACW. The same shall be disposed of only by certified persons in approved landfills.
  - 2. A manifest form will be signed by the Landfill documenting receipt and acceptance of the asbestos-containing waste. This manifest will be furnished to the City of New York within thirty calendar days from the project completion date.
  - 3. It is the responsibility of the Asbestos abatement contractor to determine current waste handling, transportation and disposal regulations for the work site and for each waste disposal landfill. The Asbestos abatement contractor must comply fully with these regulations and all appropriate U.S. Department of Transportation, EPA and other Federal, State and Local entities' regulations and all other current legal requirements.
  - 4. The asbestos abatement contractor shall obtain an agreement from the transporter (s) that the practice of "Back-Hauling" will not be engaged in, with respect to any and all waste loads taken from this site during the work.
  - 5. The asbestos abatement contractor will document actual disposal of the waste at the designated landfill by having completed a Disposal Certificate and will provide a copy of the same to the Department of Design and Construction.

**PART 6 – ACCEPTANCE**

**6.01 ACCEPTANCE**

Upon satisfactory completion of all decontamination procedures, a certificate will be issued by the Construction Project Manager with copies to all parties.

- A. A letter of Compliance stating that all the work on the project was performed in accordance with the Specifications and all applicable Federal, State and Local regulations.
- B. All warranties as stated in the Specifications.

**END OF SECTION 028213**

**PAGE LEFT INTENTIONALLY BLANK**



**Department of  
Design and  
Construction**

FMS No. HWKKP005  
Issue Date: 12/29/2017

**APPENDIX A**  
**ASBESTOS ABATEMENT DRAWINGS**



**PAGE LEFT INTENTIONALLY BLANK**

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

CONTINGENCY ITEM LIST

- NOTE:
- (1) The Bid multiplier located on Page C-4 of the BID BOOKLET shall be applied to each of the fixed unit prices in the contingency item list, excluding items with "F.S." ("Fixed Sum") as the unit of measurement and that adjusted unit price shall represent the 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 fixed unit prices, in this Percentage Bid Contract, adjusted by the Bid multiplier are to be paid for the actual quantities of the several classes of work in the completed work or structure, and those adjusted unit prices 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) Prospective bidders must examine the Contingency Item List 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 Contingency Item List are numbered consecutively, as follows: D-1 through D-5.

(NO TEXT ON THIS PAGE)

**BMP - Pages**

**SPECIFICATIONS FOR CONSTRUCTION OF  
BEST MANAGEMENT PRACTICE (BMP) AND  
MITIGATION AREA**

---

**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)

RECONSTRUCTION OF DUMBO/VINEGAR HILL  
BROOKLYN, NY

SPECIFICATIONS FOR

CONTRACT HWKKP005

SPECIFICATIONS FOR SEDIMENT AND EROSION CONTROL,  
GRADING AND EARTHWORK, AND LANDSCAPING FOR  
THE CONSTRUCTION SITES

February 2018

Prepared for the NYC Department of Design and Construction

By Hazen and Sawyer, D.P.C./AKRF Engineering, P.C.  
A Joint Venture

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

**TABLE OF CONTENTS**

---

**CONSTRUCTION OF BEST MANAGEMENT PRACTICES**

**SPECIFIC PROVISIONS**

<b><u>Section No.</u></b>	<b><u>Title</u></b>	<b><u>Page No.</u></b>
7.01	Location of Work.....	BMP-4
7.02	Work Included.....	BMP-4
7.03	Inspection Before Bidding.....	BMP-7
7.04	Standard Sewer Specifications.....	BMP-7
7.05	Inspection by the City, State and Federal Government.....	BMP-7
7.06	Existing Utilities.....	BMP-7
7.07	Permits Required.....	BMP-8
7.08	Land for Contractor's Use.....	BMP-9
7.09	Licensed Surveyor for Engineer's Use.....	BMP-9
7.10	Construction – Special Requirements.....	BMP-10
7.11	Transportation and Handling of Materials and Equipment.....	BMP-13
7.12	Protection of Materials and Equipment at the Site.....	BMP-15
7.13	Final Cleaning.....	BMP-16
7.14	OSHA Requirements.....	BMP-17
7.15	No Separate Payment.....	BMP-17
7.16	Bid Breakdown.....	BMP-17
7.17	Detailed Work Description.....	BMP-17

**STRUCTURES AND MISCELLANEOUS EQUIPMENT**

<b><u>Section No.</u></b>	<b><u>Title</u></b>	<b><u>Page No.</u></b>
7.101	Work Included.....	BMP-19
7.102	Dewatering.....	BMP-20
7.107-B	Rip-Rap Stone/Angular Natural Field Stone.....	BMP-31
7.109-B	Separation Geotextile Fabric.....	BMP-35

DIVISION VII - DETAILED SPECIFICATIONS -  
CONTRACT HWKKP005

EARTHWORK AND GRADING

<u>Section No.</u>	<u>Title</u>	<u>Page No.</u>
7.300	Work Included.....	BMP-36
7.307-A	Grading.....	BMP-43

LANDSCAPING AND RESTORATION

<u>Section No.</u>	<u>Title</u>	<u>Page No.</u>
7.400	Work Included.....	BMP-45
7.404-B	Erosion and Sediment Control Licensed/Certified Professional....	BMP-50
7.418-A	Clean Sand for Restored Area.....	BMP-68

EROSION AND SEDIMENTATION CONTROL MEASURES

<u>Section No.</u>	<u>Title</u>	<u>Page No.</u>
7.500	Soil Erosion and Sedimentation Control Measures.....	BMP-70
7.502	Construction Limit Fence.....	BMP-74
7.510	Portable Sediment Tank.....	BMP-83
7.516	Turbidity Curtain.....	BMP-90



DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

OUTFALL CONSTRUCTION  
DIVISION VII

SPECIFIC PROVISIONS

7.01 LOCATION OF WORK

Work under this Contract is to be performed within the public right-of-way at the north area of Dumbo in Brooklyn, New York. Specifically, the work will occur north of the intersection of John Street and Adam Street. The site is on property owned and regulated by the City of New York.

7.02 WORK INCLUDED

The work under this Contract includes the erosion and sediment control measures during the construction of a new outfall and the installation of a splash pad. The following descriptions of work included under this Contract are general descriptions only and shall not be construed as a complete description of the work to be performed.

A. The principal items of work include:

1. Erosion and sediment control measures during construction:

This shall entail the erosion and sediment control measures during the construction of the storm sewer outfall. Specifications and plans for this work are included in this set.

2. Outfall Construction for Storm Sewer Networks

This entails excavation of trenches and layout of storm sewer outfall pipelines. The specifications and plans for this work are included elsewhere in these Contract Documents, not in this document.

3. Splash Pad Installation

This entails the construction and installation of a splash pad for the new storm sewer outfall. Specifications and plans for this work are included herein and on Section 3 of the New York State Standards and Specifications for Erosion and Sediment Control, 2016 edition.

4. Site Restoration

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

The entire Project site will be restored upon project completion as per the Contract Drawings. Specifications and plans for this work are included in this set and elsewhere in these Contract Documents.

B. Involved Agencies and Firms

Before bidding, the contractor must become familiar with the following involved agencies and firms and their respective responsibilities in the project:

1. New York City Department of Design and Construction (NYCDDC)

The NYCDDC will administer and inspect the Contractor's work with regard to all aspects of the Contract, including managing the overall project schedule, sequencing of the project and construction. The NYCDDC will handle permit compliance in relation to the sewer outfall construction. Whenever reference is made in these specifications to "the Engineer", it means the Resident Engineer on site, hired by NYCDDC.

2. New York City Department of Environmental Protection (DEP)

This City agency will maintain the facilities where the outfall is to be re-constructed under this project.

3. New York State Department of Environmental Conservation (NYSDEC)

This State Agency will be issuing a tidal wetland permit authorizing work in regulated areas to be performed under this Contract. This Agency has the regulatory authority to inspect the work site in order to ensure that permit requirements are not violated.

4. Hazen and Sawyer, D.P.C.

This engineering firm is the design consultant for all the work contained in these specifications. They are engaged by NYCDDC.

5. United States Army Corp of Engineers

This Federal Agency issues permits for all work within Federal jurisdiction wetlands. This agency has the regulatory authority to

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

inspect the work site in order to ensure that permit requirements are not violated.

6. Restoration Specialist (Construction Monitor)

The Restoration Specialist shall be retained by the Contractor. The Restoration Specialist shall supervise all restoration work performed by the Contractor and his/her Subcontractors for the duration of the project, in accordance with the plans, specifications and directions of the Engineer. The individual or firm filling this position will be responsible for oversight of the complete outfall and splash pad installation. This individual or firm will be familiar with the erosion and sediment control plan for the entire outfall site, and oversee all work in wetland areas and ensuring that the work adheres to permit requirements. The Restoration Specialist is responsible for compliance with the permit as it relates to outfall construction. The exact powers of the Restoration Specialist (Construction Monitor) are stipulated in the wetland permit.

C. Qualifications of Contractor/Subcontractor

1. The Contractor must have performed at least three (3) contracts that included the installation and maintenance of soil erosion and sediment control devices for the construction of a project.

To support the Contractor's contention that he/she is qualified, the Contractor must be able to provide the following information in a Statement of Qualifications, as detailed in the paragraph below.

Provide specific details on the projects (i.e., location, size, cost, client, etc.). Provide client contact person's name and telephone number. Describe regulatory requirements of the erosion control devices. Describe any problems encountered during construction and operation of the devices. Discuss corrective actions taken to remedy the problem. Describe any violations issued by regulatory agencies. How were the violations resolved? Provide chronological photos recording the progress of construction and operation of the erosion control devices, including preconstruction through operation during site construction and restoration after construction.

Within three (3) days upon request by the City the Contractor must identify a Certified Professional in Erosion and Sediment Control who will be responsible for implementation of this aspect of the

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

project. The Contractor must also provide a copy of the certification for the person so identified.

2. The Contractor must be able to complete and submit to DCC the Statement of Qualifications described in this Section within three (3) calendar days after requested to do so by DCC.

7.03 INSPECTION BEFORE BIDDING

Before bidding the Contractor shall visit the site of the work. The Contractor must obtain all necessary information, and make his own determinations of any and all conditions which may affect in any way the performance of his work and his bid prices under these Contracts. All pertinent data and dimensions with regard to existing construction shall be verified by the Contractor.

Access to the site for inspection purposes prior to bidding is on a continual basis, since the site is a public property.

7.04 STANDARD SPECIFICATIONS

- a. Roadway Repair and Resurfacing

Unless otherwise specified, all work, materials, and equipment shall conform to the applicable sections of the City of New York Department of Transportation Standard Highway Specifications.

- b. Sewer Work

Unless otherwise specified, all work, materials, and equipment shall conform to the applicable sections of the New York City Department of Environmental Protection Bureau of Water and Sewer Operations Standard Sewer and Water Main Specifications.

7.05 INSPECTION BY THE CITY, STATE AND FEDERAL GOVERNMENT

The Contractor must provide proper facilities for inspection and access to the work at all times, whenever it is in preparation and progress, for authorized representatives of the City, State and Federal Governments, the latter two in the presence of the Engineer.

7.06 EXISTING UTILITIES

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

All subsurface utility and structure information shown on the Contract Drawings were obtained from various plans and maps and field investigations, however, it is not guaranteed to be complete or accurate. It shall be the Contractor's responsibility to locate all such necessary utilities or structures by the digging of test pits prior to the start of construction and/or by contracting the Joint Underground Locating Service (JULS). No separate payment will be made for test pits or any other work related to locating existing utilities. During the progress of the work, the Contractor must protect from damage any existing utilities or services within the work areas until, if required, they have been re-routed, disconnected or capped off.

7.07

PERMITS REQUIRED

The Contractor is advised that NYCDDC has filed a joint application for permit with the New York State Department of Environmental Conservation (NYSDEC), the United States Army Corps of Engineers (USACE), the New York State Department of State (NYSDOS) and the New York City Department of City Planning. No work shall commence until the above-mentioned permit has been obtained for this project. As the application is being processed, it shall be the Contractor's responsibility to obtain and update the said permit.

The Contractor must also become familiar with the following permits approvals which will be obtained by NYCDDC:

- New York State Department of Environmental Conservation – Excavation and Fill in Navigable Waters;
- New York State Department of Environmental Conservation – 401 Water Quality Certification;
- New York State Department of Environmental Conservation – Tidal Wetlands;
- New York State Department of Environmental Conservation – SPDES General Permit GP-0-15-002;
- U.S. Army Corps of Engineers Nationwide Permit 7 – Outfall Structures and Associated Intake Structures;
- New York State Department of State - Coastal Consistency Concurrence;

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

- New York City Planning Commission Waterfront Revitalization (Coastal Zone) Consistency Determination.

The Contractor must obtain all necessary permits as outlined in NYCDOT Standard Specifications, Section 1.06.23.

The Contractor is responsible for performing all work in compliance with all permit requirements, including the 5-year monitoring requirement required by the NYSDEC/USACE permits. No separate or additional payment shall be made to the Contractor for complying with the above requirements, and obtaining and updating of said permits. The cost of such work shall be deemed included in the prices bid for all contract items of work.

7.08 LAND FOR CONTRACTOR'S USE

It is the responsibility of the Contractor to acquire land for staging area and/or use as a construction equipment and material storage yard. Staging area, stock pile sites, and other storage locations shall be protected from erosion and stormwater runoff.

7.09 LICENSED SURVEYOR FOR ENGINEER'S USE

A. Work Included

The Contractor must engage the services of a New York State licensed surveyor as approved by the Engineer and reporting directly to the Engineer to make such surveys, as-builts, soundings, cross sections or other measurements as may be required by the Engineer for wetland mitigation construction. Surveying services included in the item are for the sole use of the Engineer. The surveyor may be used by the Engineer to verify grades, but surveying services needed for activities not related to wetland mitigation construction is the responsibility of the Contractor and is not provided under this item.

The Contractor for this Contract shall include in his total bid a per diem cost for the services performed by the Licensed Surveyor. This cost shall be shown on the Bid Schedule of Prices as Item No. BMP-7.09.

The cost proposals shall include unit prices on a per diem basis and shall include all necessary equipment, including vehicles for the Surveyors.

The cost proposals shall be submitted to the Engineer for evaluation and selection.

DIVISION VII - DETAILED SPECIFICATIONS -  
CONTRACT HWKKP005

B. Measurement and Payment

Measurement for payment shall be on a per diem basis. One day shall consist of any eight (8) hour time period from 7:00 AM to 6:00 PM Monday through Friday plus travel time, not including holidays. The per diem rate shall include the services of a three man surveying crew. The Engineer shall be present during the progress of Work and the Engineer shall deem as to whether a full eight hour period had been employed in completing the Work, and as to whether the Contractor has utilized his crew at the productivity output required to complete the Work as anticipated. The surveyor will submit invoices to the Engineer, which will be forwarded to the Contractor for prompt payment. Payments shall be made for invoiced costs only, with no payment for overhead and profit.

7.10 CONSTRUCTION - SPECIAL REQUIREMENTS

A. Field Measurements

The Contractor must take all necessary measurements in the field to determine the exact dimensions for all work and verify all pertinent data and dimensions shown on the Contract Drawings.

B. Excavated Material

Unsuitable excavated material shall be removed from the site together with all debris encountered in the excavations and the costs of such removal and disposal shall be included in the unit price bid for the applicable items in this Contract.

C. Access Requirements

The Contractor is advised that he shall provide access to the sites of the work for all other Contractors and that access to the sites of the work performed under all contracts shall be closely coordinated and scheduled with all other Contractors at the various sites during the life of this Contract.

D. Connections to Existing Piping

Connections to existing piping shall be made to permit ready disconnection of equipment with minimum disturbance of adjoining piping and equipment. The Contractor must be responsible for the exact alignment of all piping with the existing piping and associated equipment and under no circumstances will pipe springing be allowed.

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

E. Noise Control

The Contractor must implement noise control measures during construction including limits on the hours of operation and compliance with sound level standards. Those measures will comply with NYC and Federal noise requirements. The Contractor must comply with the NYC Noise Code and NYC Council Introduction 1653-2017. No separate payment shall be made for this work; the cost thereof shall be included in the bid price for other items.

F. Dust Control

During construction, all appropriate fugitive dust control, including watering of exposed areas and using dust covers for trucks shall be employed. These measures include satisfying Section 1402.2-9.11 of the New York City Air Pollution Code. To prevent fugitive dust from construction activities from becoming airborne, the following measures are proposed:

- Use of water or surfactant to control dust in the construction operations and during the clearing and grading of land;
- Application of water to dirt paths, materials, stockpiles, and other surfaces that can generate airborne dust over extended periods. Construction of access ways would be built with properly sized stone or concrete equivalent over filtering material;
- Covering open-body trucks transporting materials likely to generate airborne dust at all times when in motion; and
- Prompt removal of earth or other material from paved streets where earth or other material has been deposited by trucking or earth-moving equipment, erosion by water, or other means.

No separate payment shall be made for this work; the cost thereof shall be included in the bid price for other items.

G. Sequence of Construction

All work shall be completed in accordance with the Contract Drawings, and upon approval of the Project Engineer and the Restoration Specialist. All work shall be done in a manner to minimize disturbance to the natural



DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

area and existing vegetation. Stake out and receive approval from the Engineer for the limits of work before beginning any clearing.

1. Install perimeter erosion control measures including construction limit fencing, around the work area. If clearing is required for installation of a particular measure, all measures not requiring clearing shall be installed first. Clearing of the necessary land for installation of the particular measure may then proceed.
2. Construction entrance will be from street in coordination with sewer construction.
3. Perform site clearing, grubbing, and debris removal.
4. Install approved dewatering measures to discharge below the mean lower low water line. A portable sediment tank, or approved equal, shall be used to treat dewatering effluent prior to discharge. Discharge location shall be in a location that will not cause erosion and must be approved by the engineer. The engineer may direct the contractor to install an approved erosion control measure such as a rip rap apron for dewatering effluent if necessary to prevent erosion. Installation of such a measure will be at no additional cost and included in the price bid for all work.
5. Install turbidity curtain as shown or as approved by the engineer. Install cofferdam, or other approved method, following turbidity curtain installation. Top of cofferdam shall be at least 2 feet above the mean higher high water line to isolate the work area from tidal influence. The work area shall contain no standing water and all work below the mean higher high water line shall be conducted within the confines of a cofferdam or other approved method. Construction materials including but not limited to debris, sediment, and fresh concrete shall be prevented from entering the waterways.
6. Install the proposed splash pad, sewer pipe, and outfall structure. Perform site grading as necessary to establish final grades of the splash pad as shown.
7. Perform site clearing and site restoration. All disturbed areas shall be restored to existing conditions unless otherwise shown on the Outfall Plan and Profile drawing, and as directed by the Engineer.
8. Once all areas have been stabilized, remove temporary perimeter erosion and sediment control measures. Stabilize and landscape the areas within the footprint of the temporary perimeter erosion and sediment control measures
9. Existing pavement shall be restored to existing conditions.

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.11 TRANSPORTATION AND HANDLING OF MATERIALS AND  
EQUIPMENT

A. General

1. Contractor must make all arrangements for transportation, delivery, handling and rigging of equipment and materials required for prosecution and completion of the work.
2. Working space on the site is limited. Equipment shall not be delivered to the site until it can be moved directly to the area where it will be utilized.
3. If necessary to move stored materials and equipment during construction, the Contractor must move or cause to be moved materials and equipment without any additional compensation.
4. The Contractor must take all necessary provisions to prevent inadvertent deposition and spillage of excavated soils or other materials that are being transported from the project site. The Contractor must employ the use of the truck tracing pad, wheel washing stations or other equipment deemed necessary to prevent spillage and deposition from vehicles from other construction equipment.

B. Delivery

1. The Contractor must arrange deliveries of products in accordance with construction schedules and in ample time to facilitate inspection prior to installation.
2. Coordinate deliveries to avoid conflict with work and conditions at the site and to accommodate the following:
  - a. Work of other Contractors.
  - b. Limitations of storage space.
  - c. Availability of equipment and personnel for handling products.
3. Do not have products delivered to project site until related Working Drawings have been approved by the Engineer.

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

4. Do not have products delivered to site until required storage facilities have been provided.
5. Do not have products delivered to site until the manufacturer's recommended storage instructions have been submitted and approved.
6. Have products delivered to site in manufacturer's original, unopened, labeled containers. Keep Engineer informed of delivery of all equipment to be incorporated in the work.
7. Partial deliveries of component parts of equipment shall be clearly marked to identify the equipment, to permit easy accumulation of parts and to facilitate assembly.
8. Immediately upon delivery, inspect shipments to assure:
  - a. Product complies with requirements of Contract Documents and approved submittals.
  - b. Quantities are correct.
  - c. Containers and packages are intact, labels are legible.
  - d. Products are properly protected and undamaged.

C. Product Handling

1. The Contractor must provide equipment and personnel necessary to handle products by methods to prevent soiling or damage to products or packaging.
2. Provide additional protection during handling as necessary to prevent scraping, marring or otherwise damaging products or surrounding surfaces.
3. Handle products by methods to prevent bending or overstressing.
4. Lift heavy components only at designated lifting points.
5. Materials and equipment must at all times be handled in a safe manner and as recommended by manufacturer or supplier so that no damage will occur to them. Do not drop, roll or skid products off

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

delivery vehicles. Hand carry or use suitable materials handling equipment.

D. Removing and Hauling Equipment and Materials

1. The Contractor must inspect all items including all boxes, crates and packages containing equipment and materials for damage that may have occurred during shipment prior to its removal from the truck or other conveyance. Any damage must be reported immediately to the Engineer.
2. The Contractor must then carefully remove the equipment and materials from the truck or trucks on which it is shipped. The equipment and materials shall then be transported to the place of installation at the job site. The Contractor must be liable for loss or damage to the equipment and materials that may occur while being unloaded, transported, stored or installed.
3. All equipment that arrives at the job site during normal working hours shall be unloaded as soon as practicable.

7.12 PROTECTION OF MATERIALS AND EQUIPMENT AT THE SITE

The Contractor must make every effort to minimize extended storage periods of materials and equipment at the Site by judiciously scheduling deliveries to coincide with construction needs.

Storage of any mechanical or electrical equipment out of doors at any time is absolutely prohibited regardless of the protection furnished. Storage of mechanical and electrical equipment within structures at the Site will not be permitted unless the structures are enclosed.

All mechanical equipment shall be coated, wrapped and otherwise protected from snow, rain, drippings of any sort, dust, mud, condensed water vapor, etc. during shipment, storage, and installation and until placed in service.

Should storage of mechanical equipment become necessary before it can be stored at the Site, the Contractor must provide storage in a weatherproof warehouse.

Materials may be stored out of doors if supported above ground surface on wood runners and protected with approved, effective and durable covers.

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

All storage and protection of materials and equipment at the Site shall be subjected to the approval of the Engineer.

All costs for equipment protection including warehousing or other work to meet the scheduled completion date shall be deemed to be included under the Contract and no additional payment will be made.

7.13

FINAL CLEANING

A.

Final Cleaning Under This Contract

1. At the completion of the work, the Contractor for this Contract must remove all rubbish from and about the site of the work, and all temporary structures, construction signs, tools, scaffolding, materials, supplies and equipment which he or any of his subcontractors may have used in the performance of the work. The Contractor must broom clean paved surfaces and rake clean other surfaces of grounds.
2. The Contractor must thoroughly clean all materials, equipment and structures installed under this Contract; all marred surfaces shall be touched up to match adjacent surfaces.
3. The Contractor must clean all landscaped areas of all debris and any objectionable material, as determined by the Engineer, and shall remove all such debris off-site.
4. The Contractor must remove all temporary erosion control measures and replace with final features as shown on the plans and other Contract Documents contained herein, as directed by the Engineer.

B.

Cleaning Materials and Methods

The Contractor must:

1. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
2. Use each type of cleaning material on only those surfaces recommended by the cleaning material manufacturer.
3. Use only materials which will not create hazards to health or property.

DIVISION VII - DETAILED SPECIFICATIONS --  
CONTRACT HWKKP005

4. Only use cleaning methods approved by the Engineer.

C. Payment for Final Cleaning

No separate payment will be made for the aforementioned work, the cost thereof shall be included in the price bid for other items of this Contract.

7.14 OSHA REQUIREMENTS

The Contractor must comply with all applicable OSHA rules and regulations regarding hazardous materials. The Contractor's specific attention is called to OSHA Regulation 29 CFR, Part 1910.120.

7.15 NO SEPARATE PAYMENT

No separate payment shall be made for the work specified in the Specific Provisions. All costs shall be included in the various Contract items unless otherwise specified.

7.16 BID BREAKDOWN

The Contractor must submit a breakdown of the bid prices of this Contract within 15 days after the commencement date specified in the Notice to Proceed. The bid breakdown shall be by reference to every detailed specification section listed for the Contract Item, including physical quantities, material costs, unit costs, and installation costs, where applicable. In addition, separate amounts for the following shall be included in the bid breakdown:

Bond, Insurance and Mobilization  
Final Working Drawings, Record Drawings

7.17 DETAILED WORK DESCRIPTION

Storm Sewer Outfall and Splash Pad

This shall entail the construction of a new stormwater outfall with a splash pad at the end of Adam Street, north of John Street in Brooklyn, New York. The new outfall and splash pad would improve water quality, provide flow velocity attenuation and erosion control prior to the release of stormwater to the East River.

Specification Section

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

**Specific Provisions**

7.09 Licensed Surveyor  
**Structures and Misc. Equipment**

7.101 Work Included  
7.102 Dewatering  
7.107-B Rip Rap Stone/Angular Natural Field Stone  
7.109-B Separation Geotextile Fabric

**Earthwork and Grading**

7.300 Work Included  
7.307 Grading

**Landscaping and Restoration**

7.400 Work Included  
7.404-B Erosion and Sediment Control Licensed/Certified  
Professional  
7.418 Clean Sand For Restored Area

**Erosion and Sedimentation Control Measures**

7.500 Soil Erosion and Sedimentation Control Measures  
7.502 Construction Limit Fence  
7.510 Portable Sediment Tanks  
7.516 Turbidity Curtain

\* \* \* \* \*

DIVISION VII - DETAILED SPECIFICATIONS -  
CONTRACT HWKKP005

STRUCTURES AND EQUIPMENT

7.101 WORK INCLUDED

Under structures and equipment work, Contractor must furnish all labor, materials and equipment and shall do all work as specified herein and as shown on the Contract Drawings, including all incidental and appurtenant work required for a complete job.

The work shall include items of work specified under the following sections:

<u>Section No.</u>	<u>Title</u>
7.102	Dewatering
7.107-B	Rip Rap Stone/Angular Natural Field Stone
7.109-B	Separation Geotextile Fabric

\* \* \* \* \*



DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.102 DEWATERING

A. Description of Work

The Contractor must furnish, install, operate and maintain dewatering equipment as required, for construction work as specified herein. The dewatering equipment shall include, but not be limited to, the following equipment items:

1. Pumps
2. Piping
3. Accessories
4. Wells.

B. General Requirements

1. General Specifications - Work performed under this Section shall be in conformance with the Standard Sewer Specifications.
2. Examination of the Sites - The Contractor shall take all steps that he considers necessary to familiarize himself with the surface and subsurface conditions at the site, and shall obtain the data that is required to analyze the water and soil conditions at the site.
3. Shop Drawings - The Contractor must submit to the Engineer for approval shop drawings and any other material required to substantiate conformance with the requirements set forth in the specifications. Shop drawings shall include a detailed plan of operations.

C. Dewatering

1. General Information - The Contractor must perform dewatering activities to insure that all construction is performed under dry conditions. If a well point system is proposed, the Contractor must utilize a licensed well driller. The Contractor must always drill down to sand or gravel layer when available and when it is below the lowest excavated invert.

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

The Contractor must operate the dewatering pumps continuously, a day before and during construction until all associated work within the influence zone of the well point have been completed.

2. Care and Disposal of Water - Care of water shall be in accordance with Section 15 - 15.25 of the Environmental Conservation Law.

Water from open cut and/or sheeted excavations, manholes, structures, trenches, or from whatever source, shall be disposed of strictly in accordance with methods approved by the Engineer.

The Contractor must submit proposed dewatering methods to the New York State Department of Environmental Conservation for the required permits. If a well point dewatering system is proposed, the Contractor must utilize a licensed well driller. Contractor must contact NYSDEC a minimum of two (2) weeks in advance of dewatering system startup.

When required by the Engineer, such water shall be passed through a settling basin and tank of acceptable size and shape and equipped with an overflow. Each settling basin shall be cleaned as required and as ordered by the Engineer.

Sufficient water to flush all sewers and drains shall be provided by the Contractor when necessary. If any sewer, drain, catch basin, inlet or gutter, that receives dirty water attributable to the Site, should become filled or partially filled with sediment or debris, the Contractor must promptly and satisfactorily remove such deposits.

D. Design Criteria

1. Provide dewatering system which will effectively reduce hydrostatic pressure and lower groundwater levels below excavation levels as necessary for safe and proper prosecution of the work and which will result in obtaining stable, substantially dry subgrade for prosecution of subsequent operations.
2. Design dewatering methods so that the effluent discharge from the sediment control measures (sump pit, sediment tank) does not impact surface water using the following protocol which was developed to monitor dewatering effluent discharge:
  - a. Monitoring of Dewatering Operations

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

Prior to the start of dewatering operations, a visual inspection of the installation of the sediment control measure(s) such as a dewatering sump pit and/or a portable sediment tank shall be made by the Engineer. Upon commencement of dewatering effluent discharge from the sediment control measures, at least three turbidity measurements of the effluent shall be conducted over a 15 minute-period using the following methodology. If the arithmetic mean of these three turbidity measurements is greater than the ambient turbidity level, all dewatering operations shall be discontinued until the Engineer is consulted regarding additional control measures.

b. Determination of Ambient Turbidity

Ambient turbidity levels of surface waters shall be determined using a Hanna Instruments HI 93703 Portable Microprocessor Turbidity Meter available from Hanna Instruments, Inc., Woonsocket, RI or Orbeco Hellige Portable Turbidity or LaMottee Portable Turbidimeter or equivalent approved by the Engineer. Ambient turbidity measurements shall be collected under dry weather conditions. Dry weather conditions are defined as no precipitation in the preceding 48 hours. A minimum of three turbidity measurements shall be collected using as follows:

- Water samples shall be collected a minimum of 20 feet upstream of the work area prior to commencement of any construction activity.
- Water samples shall be collected without disturbing stream bank or stream bed sediments.
- The turbidity measurements shall be conducted according to the instructions provided in the unit's Operational Guide which are summarized below.
- After the meter has been turned on, fill a clean cuvette up to one quarter inch from its rim with thoroughly agitated sample.
- Allow sufficient time for bubbles to escape before securing the cap.

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

- Wipe the outside of the cuvette thoroughly with a lint-free tissue.
- Place the cuvette into the cell of the meter.
- Press the Read key and the LCD will display a blinking "SIP" (Sampling in Process). The turbidity value will appear after approximately 25 second.

The arithmetic means of the three dry weather upstream turbidity measurements shall be the ambient turbidity level. Turbidity shall be measured in Nephelometric Turbidity Units (NTUs).

E. Submittals

Submit the following for approval:

1. Working Drawings
  - a. Type of dewatering system proposed, showing arrangement, location and depths of proposed system, complete description of equipment and materials to be used, procedure to be followed, standby equipment, standby power supply and proposed location(s) of points of discharge of water.
  - b. Obtain approval from the Engineer and appropriate regulatory agencies prior to installation of system.

F. Job Conditions

1. Subsurface Conditions
  - a. Subsurface investigations and groundwater level determinations shall be conducted by the Contractor prior to implementation as specified herein.
2. Responsibilities
  - a. Select and install dewatering system to accomplish groundwater control as specified.
  - b. Monitor quality of discharge from dewatering system to determine if soil particles are being removed by system.

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

- c. Measure to ascertain if movement is caused in adjacent areas by dewatering operations; take approved measures to minimize such movement.
- d. Take measures to prevent damage to property.
- e. Repair as approved damage, disruption or interference resulting directly or indirectly from dewatering operations.
- f. Remove sediments from all intercepted groundwater or surface water as specified herein and approved by the Engineer and the jurisdictional agency concerned. Under no circumstances shall the Contractor directly discharge, without treatment, into the drainage channel or creek.

G. Sump Pit

The Contractor, at the direction of the Engineer shall provide a stone filled pit with perforated standpipe/nozzle wrapped with filter fabric in which intercepted groundwater is pumped to an approved location.

The size and shape of the sump pit will vary due to site conditions. The size of pump should be determined from manufacturer's specifications.

- 1. The standpipe shall be a perforated 12"-24" diameter corrugated metal or PVC pipe.
- 2. A base of 2" aggregate shall be placed in the pit to a depth of 12". After installing the standpipe, the pit surrounding the standpipe shall then be backfilled with 2" clean aggregate.
- 3. The standpipe shall extend 12"-18" above the lip of the pit.
- 4. The standpipe shall be wrapped with filter cloth before installation. If desired, 1/2" x 1/2" hardware cloth may be placed around the standpipe, prior to attaching the filter fabric. This will increase the rate of water seepage into the pipe.

H. Surface Drainage

- 1. Intercept and divert surface drainage away from the splash pad or other excavations, wells by use of dikes, ditches, swales, open stone lined channel, temporary diversion pipes which could be either on

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

the surface or buried, sumps or other means. To properly install buried diversion pipe the contractor may be required to excavate.

2. Design surface drainage systems to prevent erosion on or off the site or unwanted water flow.
3. Remove surface drainage system when no longer required.
4. Remove debris and restore site(s) to original conditions.

I. Drainage Of Excavated Areas

1. Provide and maintain ditches of adequate size to collect surface and subsurface water and seepage which may enter excavations and divert water into sump so that it can be drained or pumped into drainage channels as approved by the Engineer and the jurisdictional agency concerned.
2. Install settling basins or other approved apparatus as necessary to reduce amount of fine particles carried by water diverted away from excavation.
3. When no longer necessary, backfill and seal drainage ditches, sumps and settling basins with approved material.

J. Execution

1. Install dewatering system as specified and with the approval of the Engineer.
2. Demonstrate by approved methods that no soil particles are present in water after 12 hours of initial pumping or draining and additionally as directed.
3. Dispose of precipitation and subsurface water away and clear of the work area. Keep excavation dry.
4. Maintain continuous and complete effectiveness of the installation.
5. Maintain water level at such elevation that no damage to structure or plant material can occur because of excessive hydrostatic pressure. In any event, maintain water level two feet minimum below bottom of subgrade until sufficient concentrate work or

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

backfilling or both has been completed to adequately offset uplift pressures.

K. Dewatering System Removal

1. Remove and dispose of all stone, filter fabric and piping that comprise curtain drains and/or sump pits used in dewatering in accordance with Federal, State and local regulations at a permitted site.
2. Backfill remaining space as necessary to restore surface and subsurface to its original or proposed condition in accordance with the Engineer's approval.

L. No Separate Payment

Dewatering work shall be performed by the Contractor only as directed by the Engineer. The cost for all labor, materials and equipment required for the Dewatering shall be deemed included in the bid price for other Contract Items. No separate payment shall be made for Dewatering.

\* \* \* \* \*

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.103 CONCRETE

NO TEXT ON THIS PAGE



**DIVISION VII - DETAILED SPECIFICATIONS -**  
**CONTRACT HWKKP005**

7.104

**STEEL REINFORCEMENT**

**NO TEXT ON THIS PAGE**

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.105

WELDING

NO TEXT ON THIS PAGE

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

**7.106      OUTLET STILLING BASIN**

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS --  
CONTRACT HWKKP005

7.107-B RIP-RAP STONE /ANGULAR NATURAL FIELD STONE

A. Description of Work

Under this item, the Contractor must perform all work necessary to install rip-rap stone where directed by the Engineer, to install splash pad, and to protect the soil surface from erosive forces and/or improve the stability of soil slopes as well as water feature bottoms that are subject to seepage or have poor soil structure.

In general, rip-rap stone shall be utilized for both temporary and permanent constructed features such as erosion control features, channel side slopes and bottoms, grade sills, slope drains, grade stabilization structures, storm drains, and cut and fill slopes subject to seepage, erosion or weathering, particularly where conditions prohibit the establishment of vegetation.

Angular natural field stone shall be utilized to stabilize, reinforce or restore naturally occurring features as well as features that are intended to appear natural, such as stream side slopes, banks and bottoms, wetlands, shorelines subject to erosion, culvert inlets and outlets, outlet stilling basins and natural upland side slopes.

Rip-rap stone may be substituted with angular natural field stone as directed by the Engineer. The Contractor may use field stones excavated in the project site, contingent upon the approval of the Engineer.

B. Materials Used

Rip-Rap Stones/Angular Natural Field Stones

Stones shall be a well-graded mixture with 50% by weight larger than the specified design size. The diameter of the largest stone size in such a mixture shall be 1.5 times the d50 size with smaller sizes grading down to 1 inch. The stone size installed shall be as directed by the Engineer and as shown on the Contract Drawings.

The minimum layer thickness shall be 1.5 times the maximum stone diameter, but in no case less than 6 inches or as specified on the Contract Drawings.

Stones for rip-rap shall be hard, durable quarry materials. Stones used for natural field stones shall be hard, durable field materials and shall be dark in coloration. They shall be angular and not subject to breaking down when exposed to water or weathering. The specific gravity shall be at least 2.5.

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

Stones shall be free of decomposed stone, clay rock dust and other objectionable material. Existing stone walls and broken concrete or recycled stone shall not be used as stones. Broken concrete is not acceptable.

C. Construction Methods

Subgrade Preparation

Prepare the subgrade for stones to the required lines and grades shown on the plans. Compact any fill required in the subgrade to a density approximating that of the undisturbed material or overfill depressions with stones. Remove brush, trees, stumps and other objectionable material. Cut the subgrade sufficiently deep so that the finished grade of the stones will be at the elevation of the surrounding area. Channels shall be excavated sufficiently to allow placement of the stones in a manner such that the finished inside dimensions and grade of the stones meet design specifications.

Rip-Rap/Angular Natural Field Stone Placement

Placement of the stones shall follow immediately after placement of the separation geotextile. Place stones so that it forms a dense, well-graded mass of stone with a minimum of voids. The desired distribution of stones throughout the mass shall be obtained by selective loading at the quarry and controlled dumping during final placement. Place stones to its full thickness in one operation. Do not place stones by dumping through chutes or other methods that cause segregation of stone sizes. Be careful not to dislodge the underlying base or filer when placing the stones.

The toe of the stones shall be keyed into a stable foundation at its base as shown on the Contract Drawings. The toe shall be excavated to a depth of 2.0 feet. The design thickness of the stones shall extend a minimum of 3 feet horizontally from the slope. The finished slope shall be free of pockets of some stone or clusters of large stones. Hand placing will be required to achieve proper distribution of stone sizes to produce a relatively smooth, uniform surface. The finished grade of the stones shall blend with the surrounding area.

D. Measurement and Payment

The quantity to be measured for payment under this Section shall be the total number of cubic yards of approved stones, measured in stockpiles, containers and/or vehicles and placed as directed by the Engineer.

DIVISION VII - DETAILED SPECIFICATIONS -  
CONTRACT HWKKP005

The contract price per cubic yard of approved stone material placed shall be as indicated on the BID SCHEDULE OF PRICES Item No. BMP-7.107-B. The bid price shall constitute full compensation for all labor, materials, equipment, insurance, and work incidental thereto, necessary to furnish, place and incorporate and all other work incidental thereto, in accordance with the plans and specifications to the satisfaction of the Engineer.

\* \* \* \* \*

DIVISION VII - DETAILED SPECIFICATIONS -  
CONTRACT HWKKP005

7.108-A ALUMINUM GRATING

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.109-B SEPARATION GEOTEXTILE FABRIC

A. Description of Work

Under this item, the Contractor must furnish all equipment and perform all work necessary to place separation geotextile fabric as indicated in the Contract Drawings and specifications and as directed by the Engineer.

Separation geotextile shall be utilized for prevention of subgrade soil movement into the rip-rap stone layer.

B. Construction Methods

The separation geotextile fabric shall conform to NYSDOT Standard Specifications, Subsection 737-01, Table 737-01B Separation Geotextile Requirements.

Separation geotextile fabric shall be placed between the rip-rap stone layer and the subgrade. Placement of the fabric shall follow immediately after the subgrade has been cut to a sufficient depth for the rip-rap stone layer to meet dimensions and grading specified in the Contract Drawings. Rip-rap stone placement shall follow after the separation geotextile fabric has been placed.

C. Measurement and Payment

The quantity to be measured for payment under this Section shall be the number of square feet of surface area on which separation geotextile fabric has been installed in accordance with the plans and specifications and directions of the Engineer.

The contract price per square feet of separation geotextile fabric shall be as indicated on the BID SCHEDULE OF PRICES Item No. BMP-7.109 Geotextile Fabric. The bid price shall include the costs for all labor, material, equipment, insurance, and incidental work in accordance with the plans and specifications to the satisfaction of the Engineer.

\* \* \* \* \*



DIVISION VII - DETAILED SPECIFICATIONS -  
CONTRACT HWKKP005

EARTHWORK AND GRADING

7.300 Work Included

Under earthwork and grading, the Contractor must provide all labor, material, tools and equipment necessary to complete the execution of the work in complete accordance with the Specifications and all Contract Drawings. The work shall include items of work specified under the following sections.

<u>Section Number</u>	<u>Title</u>
7.307-A	Grading

\* \* \* \* \*

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

7.301

**DEBRIS REMOVAL AND DISPOSAL**

NO TEXT ON THIS PAGE

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

**7.302**     **CLEARING, GRUBBING AND REMOVALS**

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.303

TEMPORARY WOODEN TREE GUARDS

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.304

EXCAVATION

NO TEXT ON THIS PAGE

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

7.305

**CRUSHED STONE**

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.306

TREE REMOVAL AND DISPOSAL

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.307-A GRADING

A. Description of Work

The Contractor must furnish all labor, materials, equipment and services necessary to perform all grading as indicated on the Contract Drawings and as specified herein.

B. General Requirements

1. General Specifications - Except as modified and supplemented hereinafter in the Detailed Specifications, work performed under this Section shall conform to the NYCDEP Standard Sewer and Water Main Specifications.
2. Shop Drawings - The Contractor must submit to the Engineer for approval shop drawings and other documentation required to show conformance with the requirements set forth on the Contract Drawings and these Specifications. Shop drawings shall include, but not be limited to, the requirements for shop drawings as specified in the NYCDEP Standard Sewer and Water Main Specifications, 2014.

C. Grading – The Contractor must perform filling, compacting, and grading of the indicated areas of site, including minor cutting and filling high and low areas, and leveling such areas to elevations and within limits shown on the Contract Drawings. All work shall be performed in accordance with the applicable requirements of the NYCDEP Standard Sewer and Water Main Specifications, 2014.

Any grading below the mean higher high water (MHHW) line should be done in the dry during periods of low tide.

D. Compaction

1. Wetland Areas – Compaction shall not be done in wetland and landscaped areas.
2. Other Areas – Each layer of fill or backfill shall be compacted by a minimum of four complete passes with an approved tamping roller, pneumatic-tired roller, three-wheel power roller, or other approved compaction requirement. Compaction shall not be less than 95 percent of the maximum density modified proctor as determined by ASTM D1557.



DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

3. Field Control – Sufficient in place density tests shall be performed by the Contractor in order to satisfy the Engineer that the specified density is being obtained. These tests shall be made at no cost to the City and shall be made using the calibrated sand cone method (ASTM D1556) or other method as determined by the Engineer.

E. Finished Excavation, Fills, and Embankments – All areas covered by the project, including excavated and filled sections and adjacent transition areas, shall be uniformly graded. The finished surface shall be reasonably smooth, compacted, and free from irregular surface changes. The degree of finish shall be that ordinarily obtainable from blade-grader operations. Surfaces shall be finished not more than 0.15 foot above or below the established grade or approved cross section.

F. Protection – Newly graded areas shall be protected from traffic and erosion, and any settlement or washing away that may occur from any cause, prior to acceptance, shall be repaired and grades re-established to the required elevations and slopes, at no additional expense to the City.

The Contractor must provide temporary ground cover sufficient to restrain erosion on all disturbed areas upon which further active construction is not taking place.

G. Measurement and Payment

The quantity to be measured for payment under the pay item Grading shall be the total number of square feet of work area graded. The contract price per square foot for grading shall be as indicated on the BID SCHEDULE OF PRICES Item No. BMP-7.307-A. The bid price shall constitute full compensation for labor, materials, equipment and work incidental thereto, necessary to complete the work in accordance with the plans and specifications to the satisfaction of the Engineer.

\* \* \* \* \*

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

LANDSCAPING AND RESTORATION WORK.

7.400 Work Included

Under landscaping and restoration work, the Contractor must provide labor, materials, tools and equipment necessary to complete the execution of the work in complete accordance with the Specifications and all Contract Drawings. The work shall include items of work specified under the following sections.

<u>Section Number</u>	<u>Title</u>
7.404-B	Erosion and Sediment Control Licensed/Certified Professional
7.418	Clean Sand For Restored Area

\* \* \* \* \*

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.401 LANDSCAPING FOR TERRESTRIAL ZONE AND WETLAND ZONE

NO TEXT ON THIS PAGE

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

7.402

SOD

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.403 TOPSOIL FOR RESTORED AREA

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS -  
CONTRACT HWKKP005

7.404-A RESTORATION SPECIALIST (CONSTRUCTION MONITOR)

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.404-B EROSION AND SEDIMENT CONTROL LICENSED/CERTIFIED  
PROFESSIONAL

A. Description of Work

The Contractor is advised to retain the services of an independent Licensed/Certified professional with practical experience in the principles and practices of erosion and sediment control and Stormwater Management to prepare and certify a site specific Stormwater Pollution Prevention Plan (SWPPP) in compliance with the New York State Department of Environmental Conservation (NYSDEC) Pollutants Discharge Elimination System (SPDES) General Permit for Stormwater water Runoff from Construction Activities, GP-0-15-002, issued pursuant to Article 17, Titles 7, 8, and Article 70 of the Environmental Conservation Law (ECL). The Certified Professional shall be approved by NYCDDC and be present on-site prior to the start of any work.

Within thirty (30) days after the contract is registered, the Contractor must submit a complete SWPPP and Notice of Intent (NOI) to NYCDDC's Infrastructure – Engineering Support Unit for review and comments. The Contractor through his Licensed/Certified Professional shall make all necessary revisions required and resubmit the SWPPP and the NOI for acceptance and signature. Work shall not begin until a permit identification number is issued by the NYSDEC, and an initial inspection is conducted by the Licensed/Certified Professional certifying that the appropriate control measures specified in the SWPPP have been adequately implemented to the satisfaction of the Resident Engineer and the Project Manager of the Engineering Support Unit.

B. Qualifications

The Licensed/Certified Professional employed to perform the required work must have previous experience in work of this nature and in completing the necessary submittals required under this Contract. The Certified Professional shall be a Professional Engineer or a Landscape Architect licensed to practice in New York State, or a Soil and Water Conservation Society Certified Professional in Erosion and Sediment Control (CPESC). Prior to the start of work, the Contractor is required to submit the names and resumes of at least three (3) prospective candidates to the NYCDDC for approval. The NYCDDC shall make a selection or alternatively ask for more choices, if they deem the candidates to be unqualified.

C. Site Monitoring, Inspection and Reports

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

The Certified Professional shall monitor disturbed areas and the Contractor's in-place erosion and sediment control devices, including Turbidity Curtain, Construction Limit fence, Portable Sediment Tanks, and site dewatering measures, and shall notify the Contractor when maintenance or repair of these devices is necessary.

Following the start of construction activities, site inspections shall be conducted by a Certified Professional at least once a week and within 24 hours of rainfall events of 0.5 inches or greater. For construction sites where soils disturbance is greater than five (5) acres at one time, the Certified Professional shall conduct at least two (2) site inspections every seven (7) calendar days and within twenty-four (24) hours of the end of each rainfall event of 0.5 inches or greater. The two inspections shall be separated by a minimum of two (2) full calendar days. Subsequent to each inspection, a Certified Professional shall prepare an inspection report and submit the original to the Resident Engineer and one copy to the Infrastructure-Engineering Support Unit. At a minimum, the inspection report shall include, but not limited to, the following information:

1. Date and Time of inspection;
2. Name and Title of person performing the inspection;
3. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;
4. A description of the condition runoff at all points of discharged from the construction site. This shall include identification of any discharges of sediment from the construction site. Include discharges from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;
5. A description of the condition of all natural surface waterbodies located within or immediately adjacent to the properties boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any discharges of sediment to the surface waterbody;
6. Record of any evidence of soil erosion on the site, potential for pollutants entering the drainage systems, problems at discharge points (such as turbidity in receiving water) and signs of soil and mud transport from the site to the public road at the limits of the project;
7. Identification of all erosion and sediment control practices that need repair or maintenance;
8. Identification of all erosion and sediment practices that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;
9. Description and sketch of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the



**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

- inspection, and areas that have been stabilized (temporary and/or final) since the last inspection;
10. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;
  11. Corrective actions that must be taken to install, repair, replace or maintain erosion and sediment control practices; and to correct deficiencies identified with the construction of post-construction stormwater management practices;
  12. Identification and status of all corrective actions that were required by previous inspection;
  13. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The Qualified Inspector shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The qualified inspector shall also take digital photographs with date stamp, that clearly show the condition of the practice(s) after the corrective actions has been completed. The qualified inspector shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.
  14. Within one business day of the completion of an inspection, the Qualified Inspector shall notify the Contractor and the Resident Engineer of any corrective actions that need to be taken. The Contractor must begin implementing the corrective actions within one business day of this notification; and
  15. All the inspection reports shall be signed by the Licensed Professional.

The Contractor must retain a signed copy of the General Permit GP-0-15-002, NOI, SWPPP, signed MS4 SWPPP Acceptance form, NOI Acknowledgment Letter and all original inspection reports required by this general permit at the construction site in a prominent place for public viewing from the date of initiation of construction activities to the date of final stabilization and the Notice of Termination (NOT) has been submitted to the NYSDEC. These documents must be made available to the permitting authority upon request. Prior to starting construction, the Contractor must certify in the site logbook that the SWPPP was prepared in accordance with the requirements of the permit and it meets all federal, state and local erosion and sediment control requirements.

In addition, the Contractor and Subcontractors shall identify at least one Trained Contractor who is an employee of the company that will be

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

responsible for a day to day implementation of the SWPPP. The name and telephone number of this person should be listed in the SWPPP. The Trained Contractor must be a Professional Engineer, Registered Landscape Architect, or have received a DEC-endorsed four (4) hours of Erosion and Sediment Control training. After receiving the initial training, the Trained Contractor must attend a four (4) hours training every three (3) years. The Contractor must ensure that at least one Trained Contractor is on site on a daily basis when soil disturbance activities are being performed.

Performing implementation of a SWPPP on a permitted construction project without a Trained Contractor on site daily is a violation of Part III.A.6 of the SPDES General Permit GP-0-15-002. Stormwater controls must be maintained in good operating condition until all disturbed soils are permanently stabilized. Control devices in need of repair should be repaired promptly after identification.

Prior to filing of the Notice of Termination (NOT), or at the end of the permit term, the Contractor must have the Licensed Professional perform a final site inspection. The Licensed Professional shall certify that the site has undergone final stabilization using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as construction limit fence, turbidity curtain) not needed for long term erosion control have been removed. Subsequently, the Contractor must submit a complete NOT to the Engineering Support Unit to terminate the permit coverage.

Additionally, the Licensed Professional must identify all permanent Stormwater management structures that have been constructed, and provide the owner(s) of such structures with a manual describing the operation and maintenance practices that will be necessary in order for the structures to function as designed after the site has been stabilized.

The Licensed Professional must also certify that the permanent structures have been constructed as described in the SWPPP.

D. Contractor's Liability.

The Contractor must be liable for any discharge that either causes or contributes to a violation of water quality standards as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York. Should any storm water runoff from the site violate the water quality standards, the Contractor will be directed to take immediate steps, at his own expense, to rectify the situation and prevent any further sediment from entering the storm sewer system.

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

In the event that pollutants are discharged to the storm water system due to the Contractor's negligence, the Resident Engineer will direct the Contractor to cease any or all construction activities contributing to the release of these pollutants. The Contractor must be held responsible, at his own cost, for any and all necessary actions to remedy the damage.

Furthermore, failure of the Contractor and Sub-contractor(s) to strictly adhere to any permit requirements shall constitute a permit violation that could result in substantial criminal, civil, and administrative penalties.

It is the Contractor's responsibility to pay all the SPDES permit fees which shall consist of the yearly regulatory fee, the initial authorization fee per acre of land disturbed and per acre of future impervious area. The Contractor must be liable for all penalties incurred due to his failure to pay these fees on time.

E. Measurement and Payment

The quantity to be measured for payment under this section shall be the total number of days necessary to prepare the required reports to secure the permits; conduct the inspection and supervision of all erosion and sediment control works within this Contract, site monitoring, photo documentation, and preparation of monitoring reports in accordance with the plans, specifications and direction of the resident engineer, performed prior to the date of substantial completion.

The Contractor shall receive a unit price bid for supplying all labor, materials and equipment required by the Certified Professional.

The contract price per unit for the Licensed/Certified Professional shall be as indicated on the Bid Schedule of Price for Item No. BMP-7.404-B. The unit price bid shall include, but not be limited to, the cost of furnishing all the labor, materials, fees, permits and testing required to prepare the SWPPP, provide and construct all erosion and sediment control devices in accordance with the approved SWPPP; inspect and monitor the work; comply with NYSDEC permitting requirements and all necessary incidentals to complete the work all in accordance with the specifications and the directions of the Engineer.

\* \* \* \* \*

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

7.405

**VECTOR, PEST AND WILDLIFE CONTROL**

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.406

WOOD CHIPS

NO TEXT ON THIS PAGE

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

**7.407-A EROSION CONTROL MAT - STRAW**

**NO TEXT ON THIS PAGE**

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.408

HERBICIDE APPLICATION

NO TEXT ON THIS PAGE

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

**7.409 MYCORRHIZAL INOCULANTS**

**NO TEXT ON THIS PAGE**



**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

7.410

**PLANT PROTECTION FENCE**

NO TEXT ON THIS PAGE

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

**7.411      WATERING AND WEEDING DURING GUARANTEE PERIOD**

**NO TEXT ON THIS PAGE**

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.412 SLOPE STABILIZATION

NO TEXT ON THIS PAGE

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

7.413

**TEMPORARY GOOSE EXCLUSION FENCE**

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.414 BMP AS-BUILT PLANS

NO TEXT ON THIS PAGE

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

7.415

**VINE AND INVASIVE PLANT REMOVAL**

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.416

GALVINIZED CHICKEN WIRE

NO TEXT ON THIS PAGE

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

7.417

**DEBRIS EXCLUSION FENCE**

NO TEXT ON THIS PAGE



DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.418 CLEAN SAND FOR RESTORED AREA

A. Description of Work

Under this item, the Contractor must provide clean sand for fill in accordance with the plans and directed by the Engineer.

The Contractor must be liable for any damage to property caused by fill operations and all areas of construction disturbed shall be restored to their original condition to the satisfaction of the Engineer.

The Contractor must supply information detailing source location of clean sand from off-site and provide a sample of sand to be used for inspection by the Engineer and Restoration Specialist prior to delivery of sand stockpile to site.

B. Material

Material shall consist of sand, free of organic material, loam, debris, frozen soil or other deleterious material which may be compressible. The sand shall be of uniform quality, friable, free from hard clods, stiff clay, hard pan, partially disintegrated stone, stones, lime, cement, ashes, slag, concrete, tar residues, tarred paper, gasoline, motor oil, or other petroleum hydrocarbons, boards, brush, weeds, stalks, roots, sods, chips, sticks or any other undesirable material. Invasive, nonnative seed shall not be allowed in the clean sand material.

Clean sand should conform to the following gradation requirements:

U.S. Standard Sieve Size	Percent Passing by Weight
No. 8	100
No. 10	15-100
No. 40	0-70
No. 60	0-12

Uniformly graded sands, defined as having a uniformity coefficient ( $C_u = D_{60}/D_{10}$ ) less than 6, are unacceptable.

Tests shall be required and shall serve as a representative analysis for every 200 cubic yards of material utilized.

Clean sand shall comply with the following requirements: No sand shall be delivered in a frozen or muddy condition.

1. Invasive, Nonnative Plant Species: Clean sand shall be free of

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

invasive nonnative plant propagules.

C. Measurement and Payment

The quantity of clean sand to be paid for under this item shall be the number of cubic yards of clean sand furnished from off-contract site sources (i.e. suppliers approved by the engineer), mixed, placed and incorporated in the completed work in accordance with the plans and specifications to the satisfaction of the Engineer, measured in trucks used for delivery, at the site of the work. The quantity of clean sand to be paid for under this item shall be measured in cubic yards in trucks used for delivery. No clean sand shall be furnished until ordered by the Engineer. Delivery ticket with name and address of vendor, date and estimated volume must be supplied to the Engineer prior to truck measurement.

The contract price per unit for Clean Sand shall be as indicated on the BID SCHEDULE OF PRICES Item No. BMP-7.418. The bid price shall be a unit price per cubic yard of Clean Sand, and shall include the cost of all labor, materials and equipment necessary to prepare topsoil areas, furnish, mix, place and incorporate topsoil and compost, and all other work incidental thereto, in accordance with the plans and specifications to the satisfaction of the Engineer.

\* \* \* \* \*

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.500

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

Under soil erosion and sedimentation control work, the Contractor must provide all labor, materials, tools and equipment necessary to complete the execution of the work in complete accordance with the Specifications and all Contract Drawings. All Soil Erosion and Sedimentation Control work shall be done in conformance with and subject to the renewed State Pollutant Discharge Elimination System (SPDES) General Permits for Discharges Stormwater from Construction Activity, GP-0-15-002, the latest edition of the New York State Standards and Specifications for Erosion and Sediment Control, 2016, published by the Empire State Chapter of the Soil and Water Conservation Society, and the New York State Department of Transportation Standard Specification Part 107-12 -Soil, Erosion and Air Pollution Statement, including, but not limited to, the following methods of erosion and sedimentation control.

1. Slopes left exposed will, within 30 working days of completion of any phase of grading, be planted or otherwise provided with ground cover device, or structures sufficient to restrain erosion.
2. A ground cover sufficient to restrain erosion must be planted or otherwise provided within 15 working days on that portion of the tract (disturbed area) upon which further active construction is not being undertaken.

The Contractor must submit for approval by the Engineer, and NYSDEC, a written Erosion and Sedimentation Control Plan, prepared by a Certified Professional in Erosion and Sediment Control (CPESC), who is a Professional Engineer (P.E.) or under the supervision of a P.E. The Erosion and Sediment Control Plan must be signed and sealed by that CPESC and/or the supervising P.E. The Plan shall comply with all conditions of the applicable freshwater wetland permit issued by NYSDEC.

The Erosion and Sedimentation Control Plan shall conform to the guidelines as set forth in the latest edition of the New York State Standards and Specifications for Erosion and Sediment Control, 2016, published by the Empire State Chapter of the Soil and Water Conservation Society and he/she shall implement the followings:

- No stockpiling of excavated material would be allowed in a manner or location that would permit erosion and its subsequent sedimentation in wetlands or other natural areas.
- No storage of soil shall be permitted within the Contract limits. Soil is deemed to be for this requirement any sediment including material

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

such as topsoil fill, sand, any excavated material, boulders, stones, cold patch, etc.

- Storm sewers will be installed in a sequence and manner that reduces the time during which the tops of excavated areas would be exposed and vulnerable to erosion.
- At the end of each day's work, the street where sewers are being installed will be cleaned and swept to reduce the amount of soil that could potentially impact downstream areas as sediment. The Contractor must be required to have a street sweeper on the site.
- Use truck tracking pads at the construction access locations to remove sediment from the tires of the trucks and other construction equipment prior to driving on the adjacent streets.
- Utilize sediment basins, sediment traps and/or sediment filters in the erosion control plan to capture sediment from run-off and from water produced by dewatering operations.
- Use portable sediment tanks to remove sediment from water generated by dewatering operations. All water from dewatering shall be treated before discharge into any surface water bodies, unless the turbidity of the effluent is less than the ambient level of the receiving water body as measured by the turbidity meter in standard units (i.e. NTU's).
- The Contractor must supply all portable equipment.
- Use construction limiting fence as shown on Contract Drawings, unless otherwise directed by the Engineer.
- Schedule work in wet areas, such as the mitigation site, during relatively dry summer months.
- Employ water diversions to direct the stream away from the area being worked on, so as to create drier conditions for in-stream work.
- Use temporary pumping sump to control water level at site.
- Prior to the start of construction activities, such as sewer installation, inspect all erosion control measures and continually monitor them, especially after each storm event.
- If the Contractor uses dewatering methods which produce effluent

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

discharges, the Contractor must monitor each discharge effluent and receiving water body. Discharges shall not cause substantial visible contrast to the natural condition in any receiving water body. A meter which records turbidity in standard units (i.e. NTUs) shall be utilized to establish ambient conditions in each water prior to discharge. If any monitored turbidity level exceeds the ambient level of the receiving water body, the Contractor must insure (e.g., by reducing the flow rate or otherwise adjusting the dewatering system) that no substantial visible contrast to the natural condition in the receiving water body occurs. The action(s) taken, or the decision not to take any action, shall be recorded in the monitor's log.

The Contractor shall not receive any payment for the preparation of the Erosion and Sedimentation Control Plan. Installation of the Erosion and Sedimentation features and maintenance of them will result in payment for their respective items as described in Section 7.501 through 7.516. The work shall take place at the mitigation site only and is not payment for street work or the installation of sewers; with the exception of the Erosion and Sediment Control Licensed Professional (Section 7.404-B). The Erosion and Sediment Control Licensed Professional shall oversee construction and the installation of the sewers for the entire project.

The work shall include items of work specified under the following sections:

<u>Section Number</u>	<u>Title</u>
7.502	Construction Limit Fence
7.510	Portable Sediment Tank
7.516	Turbidity Curtain

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

7.501

**MAINTENANCE OF EROSION CONTROL MEASURES**

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.502 CONSTRUCTION LIMIT FENCE

A. Description of Work

The Contractor must furnish all materials, labor, and equipment necessary to install the construction limit fence specified herein and as shown on the Contract Drawings, including all incidental and appurtenant work required for a complete job. The construction limit fence is used to mark the limit of the construction activity and to protect the adjacent areas.

Upon furnishing and installing the above sedimentation and erosion control device but prior to commencing any other work on-site, the Contractor must notify the Engineer and arrange for an on-site inspection.

The construction limit fence shall be maintained in good condition and repaired as necessary by the Contractor during the construction and post-construction/site stabilization phases as directed by the Engineer.

B. Materials and Methods

Construction Limit Fence: The construction limit fence shall be high visibility orange construction fence with a minimum height of four (4) feet. The fence shall be constructed of polyethylene fabric fastened to vertical line posts.

Fabric shall be a high density polyethylene grid tightly secured to wood posts. The fabric shall be securely fastened to vertical line posts by means of ties and spaced not more than 12 inches apart on rails and not more than 14 inches apart on line posts.

The construction limit fence shall be located where indicated on the Contract Drawings. The fence shall be adjusted to avoid interference with trees and to maintain access to houses.

Line posts shall be conventional metal “T” or “U” post and shall be spaced not more than 6 feet on centers. Posts shall be securely set in the ground. Line posts shall extend at least 2 feet below finished grade. Post locations shall be adjusted to avoid tree roots as appropriate.

C. Maintenance

The construction limit fences shall be inspected periodically (at least once per week), or as directed by the Engineer. Any required repairs shall be made immediately.

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

D. Measurement and Payment

The quantity to be measured for payment under this Section shall be the total number of linear feet of construction limit fence furnished, installed and maintained in accordance with the Plans and Specifications and the directions of the Engineer.

The contract price per linear foot for Construction Limit Fence shall be as indicated on the BID SCHEDULE OF PRICES, Item No. BMP-7.502. The unit price per linear foot shall include all labor, materials, equipment and work incidental expenses necessary or required to complete the work in accordance with the plans and specifications and to the satisfaction of the Engineer.

\* \* \* \* \*



**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

**7.503A STAKED STRAW BALES**

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.504 SILT FENCE

NO TEXT ON THIS PAGE

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

7.505

**SAND BAGS**

NO TEXT ON THIS PAGE

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKPP005**

7.506

**SEDIMENT TRAP WITH FILTER**

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.507

SEDIMENT FILTER

NO TEXT ON THIS PAGE

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

7.508

**SEDIMENT BASIN**

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.509A STABILIZED CONSTRUCTION ENTRANCE

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.510 PORTABLE SEDIMENT TANK

A. Description of Work

The Contractor must furnish all materials, labor and equipment necessary to install the portable sediment tank specified herein and as shown on the Contract Drawings. A sediment tank is a compartmented tank container through which sediment laden water is pumped to trap and retain the sediment.

The purpose of the portable sediment tank is to trap and retain sediment prior to discharging the water to wetlands, adjoining properties and rights-of-way below the sediment tank site. The sediment tank shall be located for ease of cleanout and disposal of the trapped sediment and to minimize the interference with construction activities and pedestrian traffic. The temporary relocation of the tank(s) during clean-out shall be included in the cost of this item. Relocating the tank(s) from one work area to another before, during and after construction shall be included in the cost of this item.

B. Design Criteria

The following formula should be used in determining the storage volume of the sediment tank: pump discharge (gpm) x 16 = cubic foot storage.

Certified pump curves are to be provided to ensure that the pump provided can meet the hydraulic requirements.

C. Tank Specifications

The portable sediment tank shall be an above ground horizontal single-wall UL-142 manufactured by Highland Tank or weir box manufactured by Rain for Rent or equivalent as approved by the Engineer.

The Contractor must submit proposed sediment tanks for approval.

D. Maintenance

Portable sediment tanks shall be installed and maintained in accordance with Section 5A.47 of the New York Standards and Specifications for Erosion and Sediment Controls to the satisfaction of the Engineer.

The Contractor must be responsible for cleaning out the sediment tank when silt reaches a depth of 6 inches. All sediment collected in the tank shall be



DIVISION VII - DETAILED SPECIFICATIONS -  
CONTRACT HWKKP005

disposed of in an approved location in which further sediment transport will not occur or as approved by the Inspector.

E. Measurement and Payment

The quantity to be paid for under this item shall be the number of portable sediment tanks placed in accordance with the plans and specifications to the satisfaction of the Engineer, measured in number of above items at the site of the work.

The Contract price per unit for portable sediment tanks shall be as indicated on the BID SCHEDULE OF PRICES, Item No. BMP-7.510. The bid price shall be a unit price per portable sediment tank and shall include the cost of all labor, materials and equipment necessary to furnish, place and incorporate and all other work incidental thereto, in accordance with the plans and specifications to the satisfaction of the Engineer.

\* \* \* \* \*

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

**7.511 STORM DRAIN - INLET PROTECTION MEASURES**

**NO TEXT ON THIS PAGE**

DIVISION VII - DETAILED SPECIFICATIONS -  
CONTRACT HWKKP005

7.512

DIRTBAG

NO TEXT ON THIS PAGE

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

7.513      **SURFACE WATER COLLECTOR**

NO TEXT ON THIS PAGE

**DIVISION VII - DETAILED SPECIFICATIONS –**  
**CONTRACT HWKKP005**

7.514

**TEMPORARY WATER BARRIER**

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.515

JERSEY BARRIER

NO TEXT ON THIS PAGE

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

7.516 TURBIDITY CURTAIN

A. Description of Work

1. The Contractor must furnish, deliver and install a turbidity curtain in the water body adjacent to the work area to trap sediment and prevent migration of silt from the work site into the water body. The turbidity curtain is an impenetrable barrier supported at the top through a flotation system and weighted at the bottom to achieve closure.
2. The turbidity curtain shall be used when construction activity occurs along the water body shoreline. The turbidity curtain shall be in place prior to any work starting in the work area before any land disturbance activities are initiated. The turbidity curtain shall be removed within a week of completing the work.
3. The Turbidity Curtain shall be located beyond the lateral limits of the work area and firmly anchored in place. The alignment shall be set as close to the work area as possible but not so close as to be disturbed by construction equipment. The height of the curtain shall be 20% greater than the depth of the water at Mean Higher High Water, to account for water level fluctuations and tidal range.
4. End anchors shall be provided, with intermediate anchor points (for stakes or anchors) such that unanchored spans do not exceed 100 feet, sufficient to maintain the turbidity curtain in place.

B. Materials

1. Turbidity Curtain shall be per NYSDOT Sheet 209-06.
2. Turbidity Curtain shall be made from monofilament woven polypropylene with the following properties, or approved equal:

Composition:	5.8 oz/sq. yd. (ASTM D-4632)
Grab Strength	120 lbs (ASTM D-4533)
Trap Tear Strength	600 psi (ASTM D-3786)
Burst Strength	150 psi (ASTM D-3787)
Elongation	70%, 500 hrs (ASTM D-4632)
UV Resistance	40 (ASTM D-4335)

3. Turbidity Curtain floats shall be 6 inch diameter expanded polystyrene logs providing a minimum of 9 lbs/ft buoyancy.

DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

4. Curtain shall have 5/16 inch galvanized steel tension cable and 5/16 inch galvanized ballast chain, or approved equal.
5. Seams shall be double sewn with grommets.
6. Barrier connection shall be using marine grade quick connects.

C. Method

1. The area of proposed installation of the curtain shall be inspected for obstacles and impediments that could damage the curtain or impair its effectiveness to retain sediment.
2. All materials shall be removed at the end of construction so they do not enter the water body.
3. Shallow installations can be made by securing the curtain by staking rather than using a flotation system. Supplemental anchors of the turbidity curtain toe shall be used, as needed, depending on water surface disturbances such as boats and wave action by winds.

D. Maintenance

1. The turbidity curtain shall be inspected daily and repaired or replaced immediately.
2. When necessary, or as directed by the Engineer, sediment removal shall be done by hand prior to removal of the barrier.
3. All removed silt shall be stabilized away from the water body.
4. The barrier shall be removed by carefully pulling it toward the construction site to minimize the release of attached sediment. Any floating construction or natural debris shall be immediately removed to prevent damage to the curtain.
5. If the curtain is oriented in a manner that faces the prevailing winds, frequent checks of the anchorage shall be made.

E. Measurement and Payment

The quantity to be measured for payment under this Section shall be the total number of linear feet, provided and placed, and removed upon the



DIVISION VII - DETAILED SPECIFICATIONS –  
CONTRACT HWKKP005

completion of work, as indicated on the Contract Drawings and as directed by the Engineer.

The contract price per linear foot of turbidity curtain shall be as indicated on the BID SCHEDULE OF PRICES Item No. BMP-7.516. The bid price shall constitute full compensation for all labor, materials, equipment and work incidental thereto, necessary to complete the work in accordance with the plans and specifications to the satisfaction of the Engineer.

\* \* \* \* \*

**EL - Pages**

**SPECIFICATIONS FOR THE SPECIALTY  
ELECTRICAL WORKS**

---

**NOTICE**

THE PAGES CONTAINED IN THIS SECTION ARE ISSUED FOR THE PURPOSE OF AMENDING THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND HEREBY MADE PART OF SAID CONTRACT DOCUMENTS TO THE SAME EXTENT AS IF IT WAS ORIGINALLY INCLUDED HEREIN.

(NO TEXT ON THIS PAGE)

TABLE OF CONTENTS

<u>SECTION NO.</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
E 260519	LOW-VOLTAGES ELECTRICAL POWER CONDUCTORS AND CABLES .....	EL-1
E 260526	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS .....	EL-5
E 260533	RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS.....	EL-9
E 260943	SPECIALTY LIGHTING CONTROLS SYSTEM.....	EL-16
E 262416	PANELBOARDS.....	EL-21
E 262713	ELECTRICITY METERING.....	EL-28
E 262726	WIRING DEVICES.....	EL-31
E 262726 RPB	RETRACTABLE POWER BOLLARD.....	EL-37
E 262816	ENCLOSED SWITCHES.....	EL-41
E 265619	SPECIALTY LIGHTING FIXTURES.....	EI-46
E 265619 LED	LED STRIP LIGHTING SYSTEM.....	EL-50

**(NO TEXT ON THIS PAGE)**

**TABLE OF CONTENTS**

<b><u>SECTION NO.</u></b>	<b><u>DESCRIPTION</u></b>	<b><u>PAGE</u></b>
E 260519	LOW-VOLTAGES ELECTRICAL POWER CONDUCTORS AND CABLES	EL-1
E 260526	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS	EL-5
E 260533	RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS	EL-9
E 260943	SPECIALTY LIGHTING CONTROLS SYSTEM	EL-16
E 262416	PANELBOARDS	EL-21
E 262713	ELECTRICITY METERING	EL-28
E 262726	WIRING DEVICES	EL-31
E 262726 RPB	RETRACTABLE POWER BOLLARD	EL-37
E 262816	ENCLOSED SWITCHES	EL-41
E 265619	SPECIALTY LIGHTING FIXTURES	EL-46
E 265619 LED	LED STRIP LIGHTING SYSTEM	EL-50

**(NO TEXT ON THIS PAGE)**

SECTION E 260519  
LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1- GENERAL

1.1 SUMMARY

- A. This Section includes the following:
  - 1. Building wires and cables rated 600 V and less.
  - 2. Connectors, splices, and terminations rated 600 V and less.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Field quality-control test reports.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in the New York City Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with New York City Electrical Code.

PART 2- PRODUCTS

2.1 CONDUCTORS AND CABLES

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:
  - 1. Alcan Products Corporation; Alcan Cable Division.
  - 2. American Insulated Wire Corp.; a Leviton Company.
  - 3. General Cable Corporation.
  - 4. Senator Wire & Cable Company.
  - 5. Southwire Company.
  - 6. AFC Cable Systems, Inc.
  - 7. Or an approved equivalent.
- B. Copper Conductors: Comply with National Electrical Manufacturers Association (NEMA) A WC 70.
- C. Conductor Insulation: Comply with NEMA WC70 for Types XHHW.

Modified for HWKKP005 on January 3, 2018.



## 2.2 CONNECTORS AND SPLICES

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:
1. AFC Cable Systems, Inc.
  2. Hubbell Power Systems, Inc.
  3. 0-Z/Gedney; EGS Electrical Group LLC.
  4. 3M; Electrical Products Division.
  5. Tyco Electronics Corp.
  6. Or an approved equivalent.
- B. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

## PART 3- EXECUTION

### 3.1 CONDUCTOR MATERIAL APPLICATIONS

- A. Feeders: All feeders shall be copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.
- B. Branch Circuits: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

### 3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

- A. Service Entrance: Type XHHW, single conductors in raceway.
- B. Feeders: Type XHHW, single conductors in raceway.
- C. Branch Circuits: Type XHHW, single conductors in raceway.

### 3.3 INSTALLATION OF CONDUCTORS AND CABLES

- A. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- B. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips that will not damage cables or raceway.
- C. Install exposed conduits/cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.

### 3.4 CONNECTIONS

- A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
- B. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
- C. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches of slack.

### 3.5 FIELD QUALITY CONTROL

- A. Perform tests and inspections and prepare test reports.
- B. Tests and Inspections:
  - 1. After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors, and branch conductors for compliance with requirements.
  - 2. Perform each visual and mechanical inspection and electrical test stated in National Electrical Testing Association Acceptance Testing Specification. Certify compliance with test parameters.
  - 3. Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of each splice in cables and conductors No.4 AWG and larger. Remove box and equipment covers so splices are accessible to portable scanner.
    - a. Instrument: Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
    - b. Record of Infrared Scanning: Prepare a certified report that identifies splices checked and that describes scanning results. Include notation of deficiencies detected, remedial action taken and observations after remedial action.
- C. Test Reports: Prepare a written report to record the following:
  - 1. Test procedures used.
  - 2. Test results that comply with requirements.
  - 3. Test results that do not comply with requirements and corrective action taken to achieve compliance with requirements.
- D. Remove and replace malfunctioning units and retest as specified above.

Modified for HWKKP005 on January 3, 2018.

## PART 4- MEASUREMENT AND PAYMENT

## 4.1 MEASUREMENT

- A. The quantity of Conductors and Cables to be paid for under Items E 260519 AA, E 260519 B, E 260519 G, and E 260519 J shall be the actual number of linear feet of each size conductors and cables actually installed to complete the work, to the satisfaction of the Engineer. When multiple lengths of conductors are used as a cable, each length of conductor shall be measured separately.

## 4.2 PRICES TO COVER

- A. The unit price bid per linear foot of each size conductor or cable shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing conductor and cable, and all associated connectors and splices, 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
E 260519 AA	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS CABLES (NO. 4/0 AWG WIRE)	L.F.
E 260519 B	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS CABLES (NO. 2 AWG WIRE)	L.F.
E 260519 G	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS CABLES (NO. 10 AWG WIRE)	L.F.
E 260519 J	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS CABLES (350 MCM WIRE)	L.F.

Modified for HWKKP005 on January 3, 2018.

SECTION E 260526  
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1- GENERAL

1.1 SUMMARY

- A. This Section includes methods and materials for grounding systems and equipment.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Qualification Data: For testing agency and testing agencies' field supervisor.
- C. Field quality-control test reports.

1.3 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An independent agency, with the experience and capability to conduct the testing indicated, that is a member company of the International Electrical Testing Association or is a Nationally Recognized Testing Laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7, and that is acceptable to authorities having jurisdiction.
1. Testing Agency's Field Supervisor: Person currently certified by the International Electrical Testing Association to supervise on-site testing specified in Part 3.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in New York City Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- C. Comply with UL 467 for grounding and bonding materials and equipment.

PART 2- PRODUCTS

2.1 CONDUCTORS

- A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
- B. Bare Copper Conductors:
1. Solid Conductors: ASTM B 3.
2. Stranded Conductors: ASTM B 8.
3. Tinned Conductors: ASTM B 33.
4. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch in diameter.
5. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.

Modified for HWKKP005 on January 3, 2018.

6. Bonding Jumper: Copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.
7. Tinned Bonding Jumper: Tinned-copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.

## 2.2 CONNECTORS

- A. Listed and labeled by a nationally recognized testing laboratory acceptable to authorities having jurisdiction for applications in which used, and for specific types, sizes, and combinations of conductors and other items connected.
- B. Bolted Connectors for Conductors and Pipes: Copper or copper alloy, bolted pressure type, with at least two bolts.
  1. Pipe Connectors: Clamp type, sized for pipe.
- C. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

## 2.3 GROUNDING ELECTRODES

- A. Ground Rods: Copper-clad steel; 5/8"x 8'.

## PART 3- EXECUTION

### 3.1 APPLICATIONS

- A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger, unless otherwise indicated.
- B. Conductor Terminations and Connections:
  1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
  2. Underground Connections: Welded connectors except at test wells and as otherwise indicated.

### 3.2 GROUNDING UNDERGROUND DISTRIBUTION SYSTEM COMPONENTS

- A. Comply with Institute of Electrical and Electronics Engineers (IEEE) C2 grounding requirements.
- B. Grounding Manholes and Handholes: Install a driven ground rod through manhole or handhole floor, close to wall, and set rod depth so 4 inches will extend above finished floor. If necessary, install ground rod before manhole is placed and provide No. 1/0 AWG bare, tinned-copper conductor from ground rod into manhole through a waterproof sleeve in manhole wall. Protect ground rods passing through concrete floor with a double wrapping of pressure-sensitive insulating tape or heat-shrunk insulating sleeve from 2 inches above to 6 inches below concrete. Seal floor opening with waterproof, non-shrink grout.

Modified for HWKKP005 on January 3, 2018.

- C. **Grounding Connections to Manhole Components:** Bond exposed-metal parts such as inserts, cable racks, pulling irons, ladders, and cable shields within each manhole or handhole, to ground rod or grounding conductor. Make connections with No.4 AWG minimum, stranded, hard-drawn copper bonding conductor. Train conductors level or plumb around comers and fasten to manhole walls. Connect to cable armor and cable shields as recommended by manufacturer of splicing and termination kits.

### 3.3 EQUIPMENT GROUNDING

- A. Install insulated equipment grounding conductors with all feeders and branch circuits.
- B. **Metal and Wood Poles Supporting Outdoor Lighting Fixtures:** Install grounding electrode and a separate insulated equipment grounding conductor in addition to grounding conductor installed with branch-circuit conductors.

### 3.4 INSTALLATION

- A. **Grounding Conductors:** Route along shortest and straightest paths possible, unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- B. **Ground Rods:** Drive rods until tops are 2 inches below finished floor or final grade, unless otherwise indicated.
  - 1. Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating, if any.
  - 2. For grounding electrode system, install at least two rods spaced at least one-rod length from each other and located at least the same distance from other grounding electrodes, and connect to the service grounding electrode conductor.
- C. **Bonding Straps and Jumpers:** Install in locations accessible for inspection and maintenance, except where routed through short lengths of conduit.
  - 1. **Bonding to Structure:** Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.
  - 2. **Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports:** Install so vibration is not transmitted to rigidly mounted equipment.
  - 3. Use exothermic-welded connectors for outdoor locations, but if a disconnect-type connection is required, use a bolted clamp.

### 3.5 FIELD QUALITY CONTROL

- A. **Testing Agency:** Engage a qualified testing and inspecting agency to perform the following field tests and inspections and prepare test reports:
  - 1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.

Modified for HWKKP005 on January 3, 2018.

2. Test completed grounding system at each location where a maximum ground resistance level is specified, at service disconnect enclosure grounding terminal. Make tests at ground rods before any conductors are connected.
    - a. Measure ground resistance not less than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
    - b. Perform tests by fall-of-potential method according to IEEE 81.
- B. Report measured ground resistances that exceed the following values:
1. Power and Lighting Equipment or System with Capacity 500 kVA and less: 10 ohms.
  2. Substations and Pad-Mounted Equipment: 5 ohms.
  3. Manhole Grounds: 10 ohms.
- C. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Engineer promptly and include recommendations to reduce ground resistance.

#### PART 4- MEASUREMENT AND PAYMENT

##### 4.1 MEASUREMENT

- A. The quantity of Grounding and Bonding for Electrical Systems to be paid for under ITEM E 260526 shall be the actual number of linear feet of grounding conductors installed to complete the work, to the satisfaction of the Engineer.

##### 4.2 PRICE TO COVER

- A. The unit price bid per linear foot of conductor shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing grounding conductors, and all associated connectors, electrodes, ground rods, bonding straps, and Jumpers, 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
E 260526	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS	L.F.
E 260526 C	BARE #1/0 AWG COPPER GROUND WIRE	L.F.
E260526 B	BARE #2 AWG COPPER GROUND WIRE	L.F.
E 260526 E	BARE #8 AWG COPPER GROUND WIRE	L.F.

Modified for HWKKP005 on January 3, 2018.

SECTION E 260533  
RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

**PART 1- GENERAL****1.1 SUMMARY**

- A. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.

**1.2 DEFINITIONS**

- A. LFMC: Liquid tight flexible metal conduit.

**1.3 SUBMITTALS**

- A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.
- B. Shop Drawings: For the following raceway components. Include plans, elevations, sections, details, and attachments to other work.
1. Custom enclosures and cabinets.
  2. For handholes and boxes for underground wiring, including the following:
    - a. Duct entry provisions, including locations and duct sizes.
    - b. Frame and cover design.
    - c. Grounding details.
    - d. Dimensioned locations of cable rack inserts, and pulling-in and lifting irons.
    - e. Joint details.

**1.4 QUALITY ASSURANCE**

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in New York City Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with New York City Electrical Code.

**PART 2- PRODUCTS****2.1 METAL CONDUIT AND TUBING**

- A. PVC-Coated Rigid Steel Conduit:
  1. Rigid Steel Conduit: ANSI C80.1.
  2. PVC coating shall comply with NEMA RN 1 with minimum 0.040 inch thickness.
- B. LFMC: Flexible steel conduit with PVC jacket.
- C. Joint Compound for Rigid Metal Conduit: Listed for use in cable connector

Modified for HWKPP005 on January 3, 2018.



assemblies, and compounded for use to lubricate and protect threaded raceway joints from corrosion and enhance their conductivity.

D. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

1. PVC Coated Rigid Steel Conduit:
  - a. Thomas & Betts
  - b. Rob Roy
  - c. Perma-Cote
  - d. Kor-Kap
 Or an approved equivalent
2. LFMC:
  - a. AFC Cable Systems, Inc.
  - b. Alflex Inc.
  - c. Allied Tube & Conduit; a Tyco International Ltd. Co.
  - d. Electri-Flex Co.
  - e. Wheatland Tube Company.
 Or an approved equivalent

## 2.2 BOXES, ENCLOSURES, AND CABINETS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

1. Cooper Crouse-Hinds; Div. of Cooper Industries, Inc.
  2. EGS/Appleton Electric.
  3. Erickson Electrical Equipment Company.
  4. Hoffman.
  5. Hubbell Incorporated; Killark Electric Manufacturing Co. Division.
  6. 0-Z/Gedney; a unit of General Signal.
  7. RACO; a Hubbell Company.
  8. Robroy Industries, Inc.; Enclosure Division.
  9. Scott Fetzer Co.; Adalet Division.
  10. Spring City Electrical Manufacturing Company.
  11. Thomas & Betts Corporation.
  12. Walker Systems, Inc.; Wiremold Company (The).
  13. Woodhead, Daniel Company; Woodhead Industries, Inc. Subsidiary.
  14. Or an approved equivalent.
- B. Sheet Metal Outlet and Device Boxes: National Electrical Manufacturers Association: (NEMA) OS 1.
- C. Metal Floor Boxes: Cast or sheet metal, fully adjustable, rectangular.
- D. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.

Modified for HWKKP005 on January 3, 2018.

- E. Cast-Metal Access, Pull, and Junction Boxes: NEMA FB 1, cast aluminum with gasketed cover.
- F. Hinged-Cover Enclosures: NEMA 250, Type 4X, with continuous-hinge cover with flush vandal resistant latch, unless otherwise indicated.
  - 1. Metal Enclosures: Type A316L Stainless Steel.

### 2.3 HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING

- A. Description: Comply with Society of Cable Telecommunications Engineers (CTE) 77.
  - 1. Color of Frame and Cover: Gray in hardscaped areas and Green in landscaped areas.
  - 2. Configuration: Units shall be designed for flush burial and have open bottom, unless otherwise indicated.
  - 3. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure.
  - 4. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
  - 5. Cover Legend: Molded lettering, as indicated for each service.
  - 6. Conduit Entrance Provisions: Conduit-terminating fittings shall mate with entering ducts for secure, fixed installation in enclosure wall.
  - 7. Handholes 12 inches wide by 24 inches long and larger shall have inserts for cable racks and pulling-in irons installed before concrete is poured.
- B. Polymer-Concrete Handholes and Boxes with Polymer-Concrete Cover: Molded of sand and aggregate, bound together with polymer resin, and reinforced with steel or fiberglass or a combination of the two.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following:
    - a. Armorcast Products Company.
    - b. Carson Industries LLC.
    - c. CDR Systems Corporation.
    - d. NewBasis.
    - e. Or an approved equivalent.
- C. Electrical service property line splice box shall be provided per Con Ed Standard EO-6210-B Rev. 23.

## PART 3 –EXECUTION

### 3.1 RACEWAY APPLICATION

- A. Outdoors: Apply raceway products as specified below, unless otherwise indicated:
  - 1. Exposed Conduit: Rigid steel conduit.
  - 2. Concealed Conduit, Aboveground: Rigid steel conduit.
  - 3. Underground Conduit: Rigid steel conduit, direct buried.

Modified for HWKKP005 on January 3, 2018.

4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
  5. Boxes and Enclosures, Aboveground: NEMA 250, Type 4X.
- B. Minimum Raceway Size: 3/4-inch trade size.
- C. Raceway Fittings: Compatible with raceways and suitable for use and location.
1. Rigid Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.

### 3.2 INSTALLATION

- A. Comply with National Electrical Contractors Association 1 for installation requirements applicable to products specified in Part 2 except where requirements on Drawings or in this Article are stricter.
- B. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
- C. Complete raceway installation before starting conductor installation.
- D. Arrange stub-ups so curved portions of bends are not visible above the finished slab.
- E. Install no more than the equivalent of three 90-degree bends in any conduit run except for communications conduits, for which fewer bends are allowed.
- F. Conceal conduit, unless otherwise indicated.
- G. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.
- H. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors, including conductors smaller than No. 4 AWG.
- I. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull wire.
- J. Raceways for Optical Fiber and Communications Cable: Install raceways, metallic and nonmetallic, rigid and flexible, as follows:
1. 3/4-Inch Trade Size and Smaller: Install raceways in maximum lengths of 50 feet.
  2. 1-Inch Trade Size and Larger: Install raceways in maximum lengths of 75 feet.
  3. Install with a maximum of two 90-degree bends or equivalent for each length of raceway unless Drawings show stricter requirements. Separate lengths with pull or junction boxes or terminations at distribution frames or cabinets where necessary to comply with these requirements.

Modified for HWKKP005 on January 3, 2018.

- K. Install raceway sealing fittings at suitable, approved, and accessible locations and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points:
  - 1. Where required by New York City Electrical Code.
- L. Flexible Conduit Connections: Use maximum of 72 inches of flexible conduit for equipment subject to vibration, noise transmission, or movement; and for transformers and motors.
  - 1. Use LFMC in damp or wet locations subject to severe physical damage.
  - 2. Use LFMC in damp or wet locations not subject to severe physical damage.
- M. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall.
- N. Set metal floor boxes level and flush with finished floor surface.

### 3.3 INSTALLATION OF UNDERGROUND CONDUIT

#### A. Direct-Buried Conduit:

- 1. Excavate trench bottom to provide firm and uniform support for conduit. Prepare trench bottom for pipe less than 6 inches in nominal diameter.
- 2. Install backfill.
- 3. After installing conduit, backfill and compact. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process. Firmly hand tamps backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction.
- 4. Install manufactured rigid steel conduit elbows for stub-ups at poles and equipment and at building entrances through the floor.
  - a. Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with 3 inches of concrete.
  - b. For stub-ups at equipment mounted on outdoor concrete bases, extend steel conduit horizontally a minimum of 60 inches from edge of equipment pad or foundation. Install insulated grounding bushings on terminations at equipment.
- 5. Warning Planks: Bury warning planks approximately 12 inches above direct-buried conduits, placing them 24 inches O.C. Align planks along the width and along the centerline of conduit.

### 3.4 INSTALLATION OF UNDERGROUND HANDHOLES AND BOXES

- A. Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting conduits to minimize bends and deflections required for proper entrances.

Modified for HWKPP005 on January 3, 2018.

- B. Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1/2-inch sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.
- C. Elevation: In paved areas, set so cover surface will be flush with finished grade. Set covers of other enclosures 1 inch above finished grade.
- D. Install removable hardware, including pulling eyes, cable stanchions, cable arms, and insulators, as required for installation and support of cables and conductors and as indicated. Select arm lengths to be long enough to provide spare space for future cables, but short enough to preserve adequate working clearances in the enclosure.
- E. Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

### 3.5 PROTECTION

- A. Provide final protection and maintain conditions that ensure coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.
  - 1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
  - 2. Repair damage to paint finishes with matching touchup coating recommended by manufacturer.
  - 3. Repair damage to PVC coating as recommended by manufacturer.

## PART 4- MEASUREMENT AND PAYMENT

### 4.1 MEASUREMENT

- A. The quantity of Metal Conduit and Tubing to be paid for under Items E 260533 AA, E 260533 AC, E 260533 AE, and E 260533AF shall be the actual number of linear feet of Metal Conduit and Tubing installed to complete the work, to the satisfaction of the Engineer.
- B. The quantity of Boxes, Enclosures, and Cabinets to be paid for under Items E 260533 BA and E 260533 BB shall be the actual number of Boxes, Enclosures, and Cabinets installed to complete the work, to the satisfaction of the Engineer.
- C. The quantity of Handholes and Boxes for Exterior Underground Wiring to be paid for under Item E 260533 CA, and E 260533 CD shall be the actual number of Handholes or Boxes for Exterior Underground Wiring installed to complete the work, to the satisfaction of the Engineer.

### 4.2 PRICES TO COVER

- A. The unit price bid per linear foot of Metal Conduit and Tubing, under Item E 260533

Modified for HWKKP005 on January 3, 2018.

AA, E 260533 AC, E 260533 AE, and E 260533AF shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, excavation and backfill, furnishing and placing all Metal Conduit and Tubing, all associated connectors and splices, and joint compound, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

- B. The unit price bid per each Enclosure, under Items E 260533 BA and E 260533 BB shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and installing the Enclosure, steel anchor bolts (as specified by the manufacturer), and excavation and backfill unless otherwise indicated on the plans, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.
- C. The unit price bid per each Handholes and Boxes for Exterior Underground Wiring, under Item E 260533 CA, and E 260533 CD shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, excavation and backfill, furnishing and placing the Handholes and Boxes for Exterior Underground Wiring, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

Item No.	Item	Pay Unit
E 260533 AA	METAL CONDUIT AND TUBING (1" PVC COATED RIGID STEEL CONDUIT)	L.F.
E 260533 AC	METAL CONDUIT AND TUBING (2" PVC COATED RIGID STEEL CONDUIT)	L.F.
E 260533 AE	METAL CONDUIT AND TUBING (3" PVC COATED RIGID STEEL CONDUIT)	L.F.
E 260533 AF	METAL CONDUIT AND TUBING (4" PVC COATED RIGID STEEL CONDUIT)	L.F.
E 260533 BA	LOCKABLE STAINLESS STEEL ENCLOSURE FOR UTILITY SERVICE AND DISTRIBUTION PANEL	EACH
E 260533 BB	EVENT BOX OUTLETS ENCLOSURE	EACH
E 260533 CA	HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING	EACH
E 260533 CD	CON EDISON PROPERTY LINE SPLICE BOX	EACH

Modified for HWKPP005 on January 3, 2018.

SECTION E 260943  
SPECIALTY LIGHTING CONTROLS SYSTEM

## PART 1 - GENERAL

## 1.1. RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

## A. Section Includes:

1. DMX-capable outdoor-rated wired lighting control system. System shall provide seamless control and monitoring of all Specialty Lighting Fixtures. All products associated with the Specialty Lighting Controls System, including peripheral devices and software shall be provided by a single manufacture

## B. Related Requirements:

1. Section E 265619 "Specialty Lighting Fixtures". Color-changing RGBW LED type lighting fixtures

## 1.3 REFERENCES.

## A. Underwriters Laboratories:

1. UL 916 Energy Management Equipment

## B. Electronic Industries Association (EIA):

1. EIA 568-B Commercial Building Telecommunications Cabling Standard
2. EIA 568-A Commercial Building Telecommunications Standard
3. EIA 485-A Electrical Characteristics of Generators

## C. American National Standards Institute (ANSI):

1. DMX-A-512-A Asynchronous Serial Digital Data Transmission Standard for Controlling Lighting Equipment and Accessories

## D. Institute of Electrical and Electronics Engineers (IEEE):

1. IEEE 802.1X Standard for Port-based Network Access Control
2. IEEE 2000.1-1998 Standard for Information Technology

## E. National Fire Protection Association (NFPA):

1. NFPA National Electrical Code
2. NFPA 5000 Building Construction and Safety Code

- F. National Electrical Manufacturer's Association (NEMA):
  - 1. 250-2008, Enclosures for Electrical Equipment (1000 volts maximum)

#### 1.4. SUBMITTALS

- A. Product data including manufacturer's specifications, installation instructions, test procedures and operations and maintenance manuals for the lighting control system and components; complete details of the product and warranty.
- B. Shop drawings of connections showing the configuration of each system with all elements properly labeled, including one-line diagram with project-specific details, network wiring details, lighting control panel load schedules, input and output wiring details, system surge protection, programming worksheets for system configurations.
- C. Operations and maintenance manuals including troubleshooting instructions and emergency maintenance procedures; details of inspection intervals and extent of inspection for all components; relevant data sheets and electrical diagrams including location, make, type and dimensions; test certificates; any relevant reference documentation.
- D. Accurate as-built load schedules for each panel.

#### 1.5 QUALITY ASSURANCE: Contractor shall provide the following qualifications:

- A. Fabricator and Installer Qualifications: The Contractor or subcontractor manufacturing and installing the Work of this Section shall be regularly engaged and experienced in the design, manufacturing and installation of lighting controls systems of the type and quality specified. Prior to commencement of work and ordering any material, the Contractor must submit to the Engineer for approval, the proposed manufacturer and installer of lighting control systems including their respective work history and recent experience in the manufacture and installation lighting control systems similar to the specified requirements of this project.

#### 1.6. WARRANTY

- A. Manufacturer's standard form in which manufacturer agrees to repair or replace lighting controls equipment that fails in materials or workmanship within specified warranty period.
- B. Warranty period: Two years from date of Substantial Completion.

#### 1.7 FIELD CONDITIONS

- A. Take field measurements prior to preparation of shop drawings and fabrication to ensure proper location of all lighting controls system elements in relation to underground utilities and/or mounting locations as shown on the plans and detail drawings.
- B. Coordinate layout and installation of controls system with equipment served and adjacent surfaces, and maintain required clearances.



## 1.8. DELIVERY, STORAGE, AND HANDLING

- A. Store lighting controls system and components and materials in clean, dry location prior to installation. Cover with waterproof paper, tarpaulin or polyethylene sheeting in a manner that permits air circulation within covering.

## PART 2 – PRODUCTS

### 2.1 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with of the contract requirements, manufacturers offering Lighting Fixtures that may be incorporated in the work include the following:
  - 1. Acuity Lighting Controls, Atlanta, GA
  - 2. Philips Color Kinetics, Burlington, MA
  - 3. Electronic Theatre Controls, Middleton, WI

### 2.2 PERFORMANCE REQUIREMENTS

- A. Single, integrated system capable of controlling all color-changing (RGBW) specialty lighting fixtures via DMX-512-A protocol with functionality accessible via integral LCD alphanumeric display and keypad or via laptop; system to include all software required to configure both types of controls interface.
- B. Controls system shall include relays, panelboards, dimmers, breakers, inputs, outputs, gang boxes, wiring to specialty lighting fixtures, connections and outdoor-rated enclosures as required to comprise a complete and working system.
- C. Lighting controls interfaces shall be as shown on the plans and fully DMX-512-A compliant including Remote Device Management (RDM) functionality as/if available in the provided specialty lighting fixtures. Provide sufficient channels / DMX universes to control all specialty lighting fixtures.
- D. System shall include astronomical time clock and the ability to accommodate a minimum of twelve (12) shows/scenes with playback adjustment, power failure memory and integrated help instructions.
- E. All interface controllers shall be supplied with dedicated power supply and be capable of user configuration and password protection.
- F. Lighting controller shall include the following customizable effects: cross fade, fixed color, color chases and rainbows, random color jumps. Controller shall include all firmware and software required to run. System shall be provided fully programmed and ready for immediate operation.
- G. All lighting controls system components shall be capable of operating within 32 degrees-104 degrees Fahrenheit (0 to 40 degrees C) and 0 to 90% non-condensing humidity.

## PART 3 - EXECUTION

### 3.1 INSTALLATION REQUIREMENTS

- A. The Contractor shall be required to furnish, install, and protect the units, as shown on the plans and in accordance with approved shop drawings to be furnished by the Contractor prior to fabrication.
- B. Installation: Provide all incidental services which are necessary to complete the installation but are not specified herein or on the plans. Coordinate with the Engineer to supply the necessary as-installed information and desired schedules to the manufacturer in a timely manner.
- C. Protection: Protect the lighting controls system from damage during the remainder of the construction period.
- D. Testing, Commissioning and Training:
  - 1. Complete all phases of work so the system can be started, tested and adjusted to the satisfaction of the Engineer. Test the system to ensure proper functionality.
  - 2. Tests shall consist of energizing all specialty lighting fixtures and all functions of the lighting control system.
  - 3. If testing fails each remedy shall be performed at no additional cost to the City until the testing is successfully completed.
  - 4. Prior to final acceptance, provide operation training to the owner or its representatives.
  - 5. A technically qualified manufacturer's representative shall be on site for at least four (4) hours for training session for a minimum of 6 participants that addresses operation, trouble procedures and safety requirements and operation and programming of all functions.
  - 6. The training session will include all training materials in a binder and on a CD or flash drive for future reference for each participant.

### 3.2 MEASUREMENT

- A. The quantity of new specialty lighting controls system to be measured for payment shall consist of the entire system inclusive of panels, controllers, user interface units, network wiring panelboards and all components required to provide a complete, working system, actually installed to the satisfaction of the Engineer.

### 3.3 PRICES TO COVER

- A. The lump sum price bid shall cover the cost of all labor, material, plant, equipment, insurance, and incidentals necessary to furnish and install the specialty lighting controls system including, but not limited to shop drawings, testing all components, training, and training manuals to complete the work, all in accordance with the plans, the specifications, and the directions of the Engineer.
- B. Progress payments will be made based on the work completed as approved and accepted by

the Engineer as follows:

1. Completion of installation: 60%
2. Completion of testing: 20%
3. Completion of training and submission of documentation including warranties, manuals and as-built plans: 20%

*Payment will be made under:*

Item No.	Description	Pay Unit
E 260943 A	SPECIALTY LIGHTING CONTROLS SYSTEM	LUMP SUM

SECTION E 262416  
PANELBOARDS

PART I-GENERAL

1.1 SUBMITTALS

- A. Product Data: For each type of panelboard, switching and overcurrent protective device, transient voltage suppression device, accessory, and component indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.
- B. Shop Drawings: For each panelboard and related equipment.
  - 1. Include dimensioned plans, elevations, sections, and details. Show tabulations of installed devices, equipment features, and ratings.
  - 2. Detail enclosure types and details for types other than National Electrical Manufacturers Association (NEMA) 250, Type 1.
  - 3. Detail bus configuration, current, and voltage ratings.
  - 4. Short-circuit current rating of panelboards and overcurrent protective devices.
  - 5. Include evidence of Nationally Recognized Testing Laboratory listing for series rating of installed devices.
  - 6. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.
  - 7. Include wiring diagrams for power, signal, and control wiring.
- C. Field Quality-Control Reports:
  - 1. Test procedures used.
  - 2. Test results that comply with requirements.
  - 3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.
- D. Panelboard Schedules: For installation in panelboards. Submit final versions after load balancing.
- E. Operation and Maintenance Data: For panelboards and components to include in operation and maintenance manuals. In addition to items specified include the following:
  - 1. Manufacturer's written instructions for testing and adjusting overcurrent protective devices.
  - 2. Time-current curves, including selectable ranges for each type of overcurrent protective device that allows adjustments.

1.2 QUALITY ASSURANCE

- A. Source Limitations: Obtain panelboards, overcurrent protective devices, components, and accessories from single source from single manufacturer.
- B. Product Selection for Restricted Space: Drawings indicate maximum dimensions for

Modified for HWKKP005 on January 3, 2018.

panelboards including clearances between panelboards and adjacent surfaces and other items. Comply with indicated maximum dimensions.

- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in New York City Electrical Code, by a qualified testing agency, and marked for intended location and application.
- D. Comply with NEMA PB 1.
- E. Comply with New York City Electrical Code.

### 1.3 DELIVERY, STORAGE, AND HANDLING

- A. Remove loose packing and flammable materials from inside panelboards; install temporary electric heating (250 W per panelboard) to prevent condensation.
- B. Handle and prepare panelboards for installation according to NEMA PB 1.

### 1.4 PROJECT CONDITIONS

- A. Environmental Limitations:
  - 1. Do not deliver or install panelboards until spaces are enclosed and weathertight, wet work in spaces is complete and dry, work above panelboards is complete.
  - 2. Rate equipment for continuous operation under the following conditions unless otherwise indicated:
    - a. Ambient Temperature: Not exceeding 23° F to plus 104 ° F.
    - b. Altitude: Not exceeding 6600 feet.
- B. Service Conditions: NEMA PB 1, usual service conditions, as follows:
  - 1. Ambient temperatures within limits specified.
  - 2. Altitude not exceeding 6600 feet.

### 1.5 COORDINATION

- A. Coordinate layout and installation of panelboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, encumbrances to workspace clearance requirements, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

### 1.6 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace transient voltage suppression devices that fail in materials or workmanship within specified warranty period.
  - 1. Warranty Period: Five years from date of Substantial Completion.

Modified for HWKKP005 on January 3, 2018.

## PART 2 -PRODUCTS

### 2.1 GENERAL REQUIREMENTS FOR PANELBOARDS

- A. Enclosures: Surface-mounted cabinets.
  - 1. Rated for environmental conditions at installed location.
    - a. Inside Electric Service Cabinet: NEMA 250, Type 3R.
  - 2. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
  - 3. Gutter Extension and Barrier: Same gage and finish as panelboard enclosure; integral with enclosure body. Arrange to isolate individual panel sections.
  - 4. Finishes:
    - a. Panels and Trim: Steel, factory finished immediately after cleaning and pretreating with manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat.
    - b. Back Boxes: Same finish as panels and trim.
  - 5. Directory Card: Inside panelboard door, mounted in transparent card holder.
- B. Phase, Neutral, and Ground Buses:
  - 1. Material: Hard-drawn copper, 98 percent conductivity.
  - 2. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.
- C. Conductor Connectors: Suitable for use with conductor material and sizes.
  - 1. Material: Tin-plated aluminum.
  - 2. Main and Neutral Lugs: Mechanical type.
  - 3. Ground Lugs and Bus-Configured Terminators: Mechanical type.
- D. Service Equipment Label: NRTL labeled for use as service equipment for panelboards or load centers with one or more main service disconnecting and overcurrent protective devices.
- E. Future Devices: Mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices.
- F. Panelboard Short-Circuit Current Rating: Fully rated to interrupt symmetrical short-circuit current available at terminals.

### 2.2 LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include the following:
  - 1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
  - 2. General Electric Company; GE Consumer & Industrial- Electrical Distribution.
  - 3. Siemens Energy & Automation, Inc.
  - 4. Square D; a brand of Schneider Electric.
  - 5. Or an approved equivalent.

Modified for HWKPP005 on January 3, 2018.

- B. Panelboards: NEMA PB 1, lighting and appliance branch-circuit type.
- C. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.
- D. Contactors in Main Bus: NEMA ICS 2, Class A, mechanically held, general-purpose controller, with same short-circuit interrupting rating as panelboard.
  - 1. External Control-Power Source: 120-V branch circuit.
- E. Doors: Concealed hinges; secured with flush latch with tumbler lock; keyed alike.

### 2.3 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include the following:
  - 1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
  - 2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
  - 3. Siemens Energy & Automation, Inc.
  - 4. Square D; a brand of Schneider Electric.
  - 5. Or an approved equivalent.
- B. Molded-Case Circuit Breaker (MCCB): Comply with UL 489, with series-connected rating interrupting capacity to meet available fault currents.
  - 1. Thermal-Magnetic Circuit Breakers: Inverse time-current element for low-level overloads, and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250A and larger.
  - 2. Current-Limiting Circuit Breakers: Frame sizes 400 A and smaller; let-through ratings less than NEMA FU 1, RK-5.
  - 3. GFCI Circuit Breakers: Single- and two-pole configurations with Class A ground-fault protection (6-mA trip).
  - 4. Ground-Fault Equipment Protection (GFEP) Circuit Breakers: Class B ground fault protection (30-mA trip).
  - 5. Molded-Case Circuit-Breaker (MCCB) Features and Accessories:
    - a. Standard frame sizes, trip ratings, and number of poles
    - b. Lugs: Mechanical style, suitable for number, size, trip ratings, and conductor materials.
    - c. Ground-Fault Protection: Integrally mounted relay and trip unit with adjustable pickup and time-delay settings, push-to-test feature, and ground-fault indicator.
    - d. Multipole units enclosed in a single housing or factory assembled to operate as a single unit.
    - e. Handle Padlocking Device: Fixed attachment for locking circuit-breaker handle in on or off position.
    - f. Handle Clamp: Loose attachment, for holding circuit-breaker handle in on-position.

### 2.4 ACCESSORY COMPONENTS AND FEATURES

Modified for HWKKP005 on January 3, 2018.

- A. Accessory Set: Include tools and miscellaneous items required for overcurrent protective device test, inspection, maintenance, and operation.

## PART 3- EXECUTION

### 3.1 EXAMINATION

- A. Receive, inspect, handle, and store panelboards according to NEMA PB 1.1.
- B. Examine panelboards before installation. Reject panelboards that are damaged or rusted or have been subjected to water saturation.
- C. Examine elements and surfaces to receive panelboards for compliance with installation tolerances and other conditions affecting performance of the Work.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Install panelboards and accessories according to NEMA PB 1.1.
- B. Mount top of trim 90 inches above finished floor unless otherwise indicated.
- C. Mount panelboard cabinet plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish and mating with back box.
- D. Install overcurrent protective devices and controllers not already factory installed.
- E. Install filler plates in unused spaces.
- F. Arrange conductors in gutters into groups and bundle and wrap with wire ties after completing load balancing.
- G. Comply with National Electrical Contractors Association 1.

### 3.3 IDENTIFICATION

- A. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs.
- B. Create a directory to indicate installed circuit loads after balancing panelboard loads; incorporate Owner's final room designations. Obtain approval before installing. Use a computer or typewriter to create directory; handwritten directories are not acceptable.
- C. Panelboard Nameplates: Label each panelboard with a nameplate.
- D. Device Nameplates: Label each branch circuit device in distribution panelboards with a nameplate.

Modified for HWKKP005 on January 3, 2018.



### 3.4 FIELD QUALITY CONTROL

- A. **Manufacturer's Field Service:** Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.
- B. **Acceptance Testing Preparation:**
  - 1. Test insulation resistance for each panelboard bus, component, connecting supply, feeder, and control circuit.
  - 2. Test continuity of each circuit.
- C. **Tests and Inspections:**
  - 1. Perform each visual and mechanical inspection and electrical test stated in National Educational Telecommunications Association Acceptance Testing Specification. Certify compliance with test parameters.
  - 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
  - 3. Perform the following infrared scan tests and inspections and prepare reports:
    - a. **Initial Infrared Scanning:** After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of each panelboard. Remove front panels so joints and connections are accessible to portable scanner.
    - b. **Instruments and Equipment:** Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
- D. Panelboards will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports, including a certified report that identifies panelboards included and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

### 3.5 ADJUSTING

- A. Adjust moving parts and operable component to function smoothly, and lubricate as recommended by manufacturer.

### 3.6 PROTECTION

- A. **Temporary Heating:** Apply temporary heat to maintain temperature according to manufacturer's written instructions.

## PART 4- MEASUREMENT AND PAYMENT

### 4.1 MEASUREMENT

- A. The quantity of Panelboards of each type to be paid for under Item E 262416 A shall be the actual number of panelboards of each type installed to complete the work, to the satisfaction of the Engineer.

Modified for HWKKP005 on January 3, 2018.

## 4.2 PRICE TO COVER

- A. The unit price bid per panelboard of each type shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the panelboard, and providing and installing the associated protective devices, circuit breakers, adjusting and load balancing, and testing and inspecting, 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
E 262416 A	PANELBOARDS, 225A, 24 POLE WITH (24) IP-20A CB	EACH

SECTION E 262713  
ELECTRICITY METERING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes equipment for electricity metering by utility company.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For electricity-metering equipment.
1. Dimensioned plans and sections or elevation layouts.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in New York City Electrical Code, by a qualified testing agency, and marked for intended location and application.

1.4 COORDINATION

- A. Electrical Service Connections: Coordinate with utility companies and components they furnish as follows:
1. Comply with requirements of utilities providing electrical power services.
  2. Coordinate installation and connection of utilities and services, including provision for electricity-metering components.

PART 2 -PRODUCTS

2.1 EQUIPMENT FOR ELECTRICITY METERING BY UTILITY COMPANY

- A. Meters will be furnished by utility company.
- B. Meter Sockets: Comply with requirements of electrical-power utility company.
1. Comply with requirements of utility company for meter center.
  2. Housing: National Electrical Manufacturers Association (NEMA) 250, Type 1 enclosure.
  3. Minimum Short-Circuit Rating: 65,000 A symmetrical at rated voltage.
  4. Main Disconnect Device: Circuit breaker,- series-combination rated for use with downstream feeder and branch circuit breakers.
  5. Meter Socket: Rating coordinated with indicated tenant feeder circuit rating.

PART 3- EXECUTION

3.1 INSTALLATION

Modified for HWKKP005 on January 3, 2018.

- A. Comply with equipment installation requirements in National Electrical Contractors Association 1.
- B. Install meters furnished by utility company. Install raceways and equipment according to utility company's written requirements. Provide empty conduits for metering leads and extend grounding connections as required by utility company.

### 3.2 IDENTIFICATION

- A. Comply with requirements for identification.
- B. Series Combination Warning Label: Self-adhesive type, with text as required by New York City Electrical Code.
  - 1. Equipment Identification Labels: Adhesive film labels with clear protective overlay. For residential meters, provide an additional card holder suitable for typewritten card with occupant's name.

### 3.3 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
  - 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- B. Tests and Inspections:
  - 1. Connect a load of known kilowatt rating, 1.5 kW minimum, to a circuit supplied by metered feeder.
  - 2. Turn off circuits supplied by metered feeder and secure them in off condition.
  - 3. Run test load continuously for eight hours minimum, or longer, to obtain a measurable meter indication. Use test-load placement and setting that ensures continuous; safe operation.
  - 4. Check and record meter reading at end of test period and compare with actual electricity used, based on test-load rating, duration of test, and sample measurements of supply voltage at test-load connection. Record test results.
- C. Electricity metering will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.

## PART 4- MEASUREMENT AND PAYMENT

- A. The quantity to be measured for payment shall be the number of EACH type of Electricity Meter actually installed to complete the work, to the satisfaction of the Engineer.

Modified for HWKKP005 on January 3, 2018.

- B. Meters will be furnished by utility company.
- C. The price bid shall be a unit price for EACH type of Electricity Meter installation and shall include the cost of all labor, materials, equipment, insurance, and any incidental expenses necessary, including, but not limited to, installation of meter, meter equipment and socket, labels, testing and inspections, and coordination with the utility providing the meter, in accordance with the plans, specifications, and directions of the Engineer, the Contractor shall receive the unit price bid.

*Payment will be made under:*

Item No.	Item	Pay Unit
E 262713 B	ELECTRICITY METERING, 200 A UTILITY METER	EACH

SECTION E 262726  
WIRING DEVICES

PART 1- GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general conditions of the Contract apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
1. Receptacles, receptacles with integral GFCI, and associated device plates.
  2. Lockable Cover Boxes
  3. Electric Heaters

1.3 DEFINITIONS

- A. GFCI: Ground-fault circuit interrupter.
- B. Pigtail: Short lead used to connect a device to a branch-circuit conductor.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: List of legends and description of materials and process used for pre-marking wall plates.
- C. Field quality control test reports.
- D. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing label warnings and instruction manuals that include labeling conditions.

1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of wiring device and associated wall plate through one source from a single manufacturer. Insofar as they are available, obtain all wiring devices and associated wall plates from a single manufacturer and one source.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in the New York City Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- C. Comply with the New York City Electrical Code.

PART 2 -PRODUCTS

Modified for HWKKP005 on January 3, 2018.

## 2.1 MANUFACTURERS

### A. Manufacturers' Names:

1. Cooper Wiring Devices; a division of Cooper Industries, Inc.
2. Hubbell Incorporated; Wiring Device-Kellems.
3. Leviton Mfg. Company Inc.
4. Pass & Seymour/Legrand; Wiring Devices & Accessories.
5. Or an approved equivalent manufacturer.

## 2.2 GFCI RECEPTACLES

A. General Description: Straight blade, feed-through type. Comply with National Electrical Manufacturers Association (NEMA) WD 1, NEMA WD 6, UL 498, and UL 943, Class A, and include indicator light that is lighted when device is tripped.

### B. Duplex GFCI Convenience Receptacles, 125 V, 20 A:

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include the following:
  - a. Cooper; GF20.
  - b. Pass & Seymour; 2084.
  - c. Hubbell;
  - d. Leviton;
  - e. Or an approved equivalent.

## 2.3 LOCKABLE COVER BOXES

A. Vertical mounting type for installation on median street light poles, and all other outdoor locations unless otherwise noted.

1. Complete with gasket, mounting hardware, and GFCI receptacle insert.
2. Material: Die cast powder coated aluminum.
3. Lockable whether in use or not.
4. Locks for cover boxes shall be as recommendation by the box manufacturer. Locks for all boxes shall be keyed alike. The Contractor shall furnish one key for each lock.

B. Weatherproof Lockable Cover Boxes: Meets NEC 406.8(B)(1) for receptacles in wet locations, and NEMA 4X rating.

## 2.4 ELECTRICAL HEATER

A. Comply with UL requirements.

- B. Electric Heater suitable for RPZ enclosure freeze protection, 24 gauge galvanized steel enclosure, corrosive resistant grey polyester powder paint coating, integral thermostat with temperature range of 40° F to 70° F, 120V.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include the following:
    - a. Berko; WHT500.
    - b. Vulcan.
    - c. Indeeco.
    - d. Or an approved equivalent.

## 2.5 FINISHES

- A. Color: Wiring device catalog numbers in Section Text do not designate device color.
1. Wiring Devices Connected to Normal Power System: As selected by City's Architect, unless otherwise indicated or required by the New York City Electrical Code or device listing.

## PART 3 -EXECUTION

### 3.1 INSTALLATION

- A. Comply with National Electrical Contractors Association 1, including the mounting heights listed in that standard, unless otherwise noted.
- B. Coordination with Other Trades:
1. Take steps to insure that devices and their boxes are protected. Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of the boxes.
  2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.
  3. Install receptacle with weatherproof device boxes on the median street light poles. The installation detail is shown in the plans. The contractor should paint the device box the same color as the pole it's being attached to.
  4. Planter outlets installation should be mounted as shown on the plan.
  5. Install wiring devices after all preparation, including painting, is complete.
- C. Conductors:
1. Do not strip insulation from conductors until just before they are spliced or terminated on devices.
  2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.

Modified for HWKKP005 on January 3, 2018.



3. The length of free conductors at outlets for devices shall meet provisions of the New York City Electrical Code, Article 300, without pigtails.
  4. Existing Conductors:
    - a. Cut back and pigtail, or replace all damaged conductors.
    - b. Straighten conductors that remain and remove corrosion and foreign matter.
    - c. Pigtailing existing conductors is permitted provided the outlet box is large enough.
- D. Device Installation:
1. Replace all devices that have been in temporary use during construction or that show signs that they were installed before finishing operations were complete.
  2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
  3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
  4. Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length.
  5. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, 2/3 to 3/4 of the way around terminal screw.
  6. Use a torque screwdriver when a torque is recommended or required by the manufacturer.
  7. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.
  8. Tighten unused terminal screws on the device.
  9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in yokes, allowing metal-to-metal contact.
- E. Receptacle Orientation:
1. Install ground pin of vertically mounted receptacles down, and on horizontally mounted receptacles to the right.
- F. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.
- G. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multi-gang wall plates.
- H. Adjust locations of outlets and service poles as may be required.

- I. Lockable Cover Boxes: To be installed in median street light poles and all other outdoor locations as per the manufactures recommendations.

### 3.2 FIELD QUALITY CONTROL

- A. Perform tests and inspections and prepare test reports.
  - 1. Test Instruments: Use instruments that comply with UL 1436.
  - 2. Test Instrument for Convenience Receptacles: Digital wiring analyzer with digital readout or illuminated LED indicators of measurement.
- B. Tests for Convenience Receptacles:
  - 1. Line Voltage: Acceptable range is 105 to 132 V.
  - 2. Percent Voltage Drop under 15-A Load: A value of 5 percent or higher is not acceptable.
  - 3. Ground Impedance: Values of up to 10 ohms are acceptable.
  - 4. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
  - 5. Using the test plug, verify that the device and its outlet box are securely mounted.
  - 6. The tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault current path, defective devices, or similar problems. Correct circuit conditions, remove malfunctioning units and replace with new ones, and retest as specified above.

## PART.4- MEASUREMENT AND PAYMENT

### 4.1 MEASUREMENT

- A. The quantity of Receptacles to be paid for under Items E 263726 AB & E 262726 AC shall be the actual number of receptacles, installed to complete the work, to the satisfaction of the Engineer.
- B. The quantity of Electric Heaters to be paid for under ITEM E 262726 F shall be the actual number of Electric Heaters, installed to complete the work, to the satisfaction of the Engineer.
- C. The quantity of Event Box Receptacles to be paid for under Item E 262726 G shall be the actual number of Event Box Receptacles, installed to complete the work, to the satisfaction of the Engineer.

### 4.2 PRICES TO COVER

- A. The unit price bid per Receptacle, under Items E 262726 AB & E 262726 AC, shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the receptacle, associated hardware, back boxes, cover plates, cover boxes,

Modified for HWKKP005 on January 3, 2018.

testing, and coordination, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

- B. The unit price bid per Electric Heater, under Item E 262726 F, shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the Electric Heater, associated hardware, junction boxes, testing, and coordination, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.
- C. The unit price bid per Event Box receptacle, under Item E 262726 G, shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the event box receptacle assembly, associated hardware, junction boxes, testing, and coordination, 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
E 262726 AB	ELECTRICAL RECEPTICLE MOUNTED ON SUPPORTS	EACH
E 262726 AC	ELECTRICAL RECEPTICLE MOUNTED ON FENCE	EACH
E 262726 F	ELECTRIC HEATER	EACH
E 262726 G	EVENT BOX RECEPTACLES (20A)	EACH

SECTION 262726 RPB  
RETRACTABLE POWER BOLLARD

PART 1 - GENERAL

1.1 SUMMARY

The retractable power bollard shall provide four receptacles for the LED strip lighting system and four receptacles for use at Plaza events. All receptacles shall be rated at 20 amps. A ground receptacle shall also be provided for the grounding of each section of the bleacher. A  $\frac{3}{4}$ " diameter 10foot ground rod shall be provided in the nearest junction box. All receptacles shall be provided with a weatherproof cover when not in use.

1.2 DEFINITIONS

Retractable power bollards are bollards which, when not in use, retract to a closed position flush with the ground. When in the open position, the bollards will be outfitted with receptacles for the LED strip lighting system as well as for general use at plaza events.

1.3 SUBMITTALS

- A. Product Data: The bollard shall comply with the following:
1. Raised Height 19" Minimum
  2. Diameter Width 20" Minimum
  3. Construction Stainless Steel (Satin Finish)
  4. Drive Unit Manual lift assists, with key push down to close.
  5. Load Rating 16 tons
  6. Power Three Phase 120/208volt
  7. Operating Temperature -4 to 175 degrees Fahrenheit
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
1. Wiring Diagrams: For power and control wiring.
- C. Field quality-control reports.
1. Test procedures used.
  2. Test results that comply with requirements.
  3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.
- D. Manufacturer's field service report.
- E. Operation and Maintenance Data: For enclosed receptacles to include in emergency, operation, and maintenance manuals.
1. Manufacturer's written instructions for testing and adjusting receptacles.
  2. Time-current coordination curves (average melt) for each type and rating of overcurrent protective device; include selectable ranges for each type of overcurrent protective device. Submit on translucent log-log graph paper.

## 1.4 QUALITY ASSURANCE

- A. Comply with New York City Electrical Code.

## 1.5 PROJECT CONDITIONS

1. Ambient Temperature: Not less than minus 4° F and not exceeding 175° F.

## 1.6 COORDINATION

- A. Coordinate layout and installation of bollards and components with equipment served and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

## PART 2 -PRODUCTS

### 2.1 Bollards

- A. The bollard shall consist of a flanged cylinder providing a casing to the rising bollard, an electrical distribution unit and a self-assisting spring or arm. The cylinder, to be inserted into a foundation tube cemented into the ground and is firmly secured to the foundation with anchor flanges. Suitable openings in the lower and middle section of the bollard shall be provided both to drain possible water residue that may gather inside and for cable access into the bollard for electrical connections.

The bollard shall be embedded in concrete per the manufactures recommendations. A Minimum of 24" of gravel shall be provided for drainage. All conduits shall enter the unit at the lowest point possible in the foundation tube to avoid contact with the receptacle cylinder.

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated in to the work include the following:

1. EDS (Electrical-Data-Security) Ltd
2. Pop Up Power Supplies Ltd
3. CAME URBACO
4. Or an approved equivalent

## PART 3- EXECUTION

### 3.1 EXAMINATION

- A. Examine elements and surfaces to receive receptacles and wiring for compliance with installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Install individual receptacles at uniform height as per manufacturer's recommendations unless otherwise indicated.
- B. Comply with mounting and anchoring requirements.
- C. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from enclosures and components.
- D. Comply with National Electrical Contractors Association 1.

### 3.3 IDENTIFICATION

- A. Comply with the following requirements:
  - 1. Identify field installed conductors, interconnecting wiring, and components; provide warning signs.
  - 2. Label each enclosure with engraved metal or laminated-plastic nameplate.

### 3.4 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
  - 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing, including raising and lowering of bollard
- B. Acceptance Testing Preparation:
  - 1. Test insulation resistance for each receptacle, component, connecting supply, feeder, and control circuit.
  - 2. Test continuity of each circuit.
- C. Tests and Inspections:
  - 1. Perform each visual and mechanical inspection and electrical test stated in National Electrical Testing Association Acceptance Testing Specification. Certify compliance with test parameters.
  - 2. Perform manual and automatic (if installed) operation of the bollard as per manufacturer's recommendation. Certify compliance with test parameters.
  - 3. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
  - 4. Test and adjust controls, remote monitoring, and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Enclosed receptacles will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports, including a certified report that identifies receptacles

and that describes scanning results. Include notation of deficiencies detected, remedial action taken and observations after remedial action.

3.5 ADJUSTING

- A. Adjust moving parts and operable components to function smoothly, and lubricate as recommended by manufacturer.

PART 4- MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The quantity of Retractable Power Bollard is to be paid for under Item E 262726 RPB and shall be per each installation, to the satisfaction of the Engineer.

4.2 PRICES TO COVER

- A. The unit price bid per Retractable Power Bollard shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the bollard, and providing and installing the associated protective devices, fuses, hardware, adjusting, testing and inspecting, 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
E 262726 RPB	RETRACTABLE POWER BOLLARD	EACH

SECTION 262816  
ENCLOSED SWITCHES

**PART 1- GENERAL**

**1.1 SUMMARY**

**A. Section Includes:**

1. Fusible switches.

**1.2 DEFINITIONS**

- A. NC: Normally closed.
- B. NO: Normally open.
- C. SPDT: Single pole, double throw.

**1.3 SUBMITTALS**

- A. **Product Data:** For each type of enclosed switch, circuit breaker, accessory, and component indicated. Include dimensioned elevations, sections, weights, and manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes.
  1. Enclosure types and details for types other than National Electrical Manufacturers Association (NEMA) 250, Type 1.
  2. Current and voltage ratings.
  3. Short-circuit current ratings (interrupting and withstand, as appropriate).
  4. Include evidence of a Nationally Recognized Testing Laboratory listing for series rating of installed devices.
  5. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices, accessories, and auxiliary components.
- B. **Shop Drawings:** For enclosed switches and circuit breakers. Include plans, elevations, sections, details, and attachments to other work.
  1. **Wiring Diagrams:** For power, signal, and control wiring.
- C. **Field quality-control reports.**
  1. Test procedures used.
  2. Test results that comply with requirements.
  3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.

Modified for HWKKP005 on January 3, 2018.



- D. Manufacturer's field service report.
- E. Operation and Maintenance Data: For enclosed switches and circuit breakers to include in emergency, operation, and maintenance manuals.
  - 1. Manufacturer's written instructions for testing and adjusting enclosed switches and circuit breakers.
  - 2. Time-current coordination curves (average melt) for each type and rating of overcurrent protective device; include selectable ranges for each type of overcurrent protective device. Submit on translucent log-log graph paper.

#### 1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain enclosed switches and circuit breakers, overcurrent protective devices, components, and accessories, within same product category, from single source from single manufacturer.
- B. Product Selection for Restricted Space: Drawings indicate maximum dimensions for enclosed switches and circuit breakers, including clearances between enclosures, and adjacent surfaces and other items. Comply with indicated maximum dimensions.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in New York City Electrical Code, by a qualified testing agency, and marked for intended location and application.
- D. Comply with New York City Electrical Code.

#### 1.5 PROJECT CONDITIONS

- A. Environmental Limitations: Rate equipment for continuous operation under the following conditions unless otherwise indicated:
  - 1. Ambient Temperature: Not less than minus 22° F and not exceeding 104° F.
  - 2. Altitude: Not exceeding 6600 feet.

#### 1.6 COORDINATION

- A. Coordinate layout and installation of switches, circuit breakers, and components with equipment served and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

### PART 2 - PRODUCTS

#### 2.1 FUSIBLE SWITCHES

- A. Manufacturers: Subject to compliance with requirements, available manufacturers

Modified for HWKKP005 on January 3, 2018.

offering products that may be incorporated into the Work include the following:

1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
  2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
  3. Siemens Energy & Automation, Inc.
  4. Square D; a brand of Schneider Electric.
  5. Or an approved equivalent.
- B. Type HD, Heavy Duty, Single Throw, 600-V ac, 1200 A and Smaller: UL 98 and NEMA KS 1, horsepower rated, with clips or bolt pads to accommodate specified fuses, lockable handle with capability to accept three padlocks, and interlocked with cover in closed position.
- C. Accessories:
1. Equipment Ground Kit: Internally mounted and labeled for copper and aluminum ground conductors.
  2. Neutral Kit: Internally mounted; insulated, capable of being grounded and bonded; labeled for copper and aluminum neutral conductors.
  3. Class R Fuse Kit: Provides rejection of other fuse types when Class R fuses are specified.
  4. Lugs: Mechanical type, suitable for number, size, and conductor material.
  5. Service-Rated Switches: Labeled for use as service equipment.

## 2.2 ENCLOSURES

- A. Enclosed Switches and Circuit Breakers: National Electrical Manufacturers Association (NEMA) AB 1, NEMA KS 1, NEMA 250, and UL 50, to comply with environmental conditions at installed location.
1. Outdoor Locations: NEMA 250, Type 3R.

## PART 3- EXECUTION

### 3.1 EXAMINATION

- A. Examine elements and surfaces to receive enclosed switches and circuit breakers for compliance with installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Install individual wall-mounted switches and circuit breakers with tops at uniform height unless otherwise indicated.

Modified for HWKKP005 on January 3, 2018.

- B. Comply with mounting and anchoring requirements.
- C. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from enclosures and components.
- D. Install fuses in fusible devices.
- E. Comply with National Electrical Contractors Association 1.

### 3.3 IDENTIFICATION

#### A. Comply with the following requirements:

- 1. Identify field installed conductors, interconnecting wiring, and components; provide warning signs.
- 2. Label each enclosure with engraved metal or laminated-plastic nameplate.

### 3.4 FIELD QUALITY CONTROL

#### A. Perform tests and inspections.

- 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.

#### B. Acceptance Testing Preparation:

- 1. Test insulation resistance for each enclosed switch and circuit breaker, component, connecting supply, feeder, and control circuit.
- 2. Test continuity of each circuit.

#### C. Tests and Inspections:

- 1. Perform each visual and mechanical inspection and electrical test stated in National Electrical Testing Association Acceptance Testing Specification. Certify compliance with test parameters.
- 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
- 3. Test and adjust controls, remote monitoring, and safeties. Replace damaged and malfunctioning controls and equipment.

#### D. Enclosed switches and circuit breakers will be considered defective if they do not pass tests and inspections.

Modified for HWKKP005 on January 3, 2018.

- E. Prepare test and inspection reports, including a certified report that identifies enclosed switches and circuit breakers and that describes scanning results. Include notation of deficiencies detected, remedial action taken and observations after remedial action.

3.5 ADJUSTING

- A. Adjust moving parts and operable components to function smoothly, and lubricate as recommended by manufacturer.

PART 4- MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The quantity of Enclosed Switches of each type to be paid for under ITEM E 262816 A shall be the actual number of enclosed switches of each type installed to complete the work, to the satisfaction of the Engineer.

4.2 PRICES TO COVER

- A. The unit price bid per enclosed switch of each type shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the enclosed switch, and providing and installing the associated protective devices, fuses, hardware, adjusting, testing and inspecting, 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
E 262816 A	ENCLOSED SWITCH, FUSED, 200A	EACH

Modified for HWKKP005 on January 3, 2018.

SECTION E 265619  
SPECIALTY LIGHTING FIXTURES

## PART 1 – GEN/ERAL

## 1.1. RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

## 1.2. SUMMARY

- A. Section Includes:
1. Color-changing RGBW LED type lighting fixtures
- B. Related Requirements:
1. Section E 260943 "Specialty Lighting Control System" - DMX-capable outdoor-rated wired lighting control system for automatic control of lighting.

## 1.3. REFERENCES.

- A. Illuminating Engineering Society of North America (IESNA):
1. Lighting Handbook, 10th edition, 2011
  2. LM-79-08, Electrical and Photometric Measurements of Solid-State Lighting Products.
  3. LM-80-08, Measuring Lumen Maintenance of LED Light Sources.
  4. TM-21-11, Projecting Long Term Lumen Maintenance of LED Light Sources.
- B. Commission Internationale De L'Eclairage (CIE):
1. TC2-46, Standard on LED intensity measurements.
  2. TC2-50, Measurements of the optical properties of LED clusters and arrays.
  3. TC2-58, Measurements of LED radiance and luminance.
  4. TC2-63, Optical measurement of High-Power LEDs.
  5. TC2-64, High speed testing methods for LEDs.
- C. International Electrotechnical Commission (IEC):
1. 60065, Audio, Video and Similar Electronic Apparatus – Safety Requirements
  2. 60320, Appliance Couplers [...] Part 1 – General Requirements
  3. 60529, (Ingress Protection Code).
  4. 60598, Luminaires Part 1: General Requirements and Tests
  5. 61076, Connectors for Electronic Equipment, Part 2-103
- D. National Electrical Manufacturers Association (NEMA):
2. 250-2008, Enclosures for Electrical Equipment (1000 volts maximum).
- E. Underwriter's Laboratories (UL):
1. UL 498, Attachment plugs and receptacles
  2. UL 1598, Luminaires
  3. UL 1977, Component connectors for use in data, signal and power applications.

#### 1.4. SUBMITTALS

- A. Product Data for each type of fixture indicated, including but not limited to:
  - 1. Fixture type designation and all pertinent options and accessories
  - 2. Physical weights and dimensions
  - 3. Manufacturer's warranty
  - 4. Photometric performance data rendered by an independent National Institute of Standards and Technology (NIST) testing laboratory in accordance with IESNA and CIE testing methods for LED luminaires
  - 5. Wiring diagrams for power, control and signal wiring
  - 6. Operations and maintenance data and manuals
  - 7. Manufacturer's written instructions for testing and adjusting lighting system.
- B. Lighting Fixtures, Components and Accessories: Listed and labeled as defined in the New York City Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- C. Shop Drawings for all luminaire mounting assemblies as shown on the plans and details.
- D. Samples of each type of product indicated

#### 1.5 QUALITY ASSURANCE: Contractor shall provide the following qualifications:

- A. Fabricator and Installer Qualifications: The Contractor or subcontractor manufacturing and installing the Work of this Section shall be regularly engaged and experienced in the design, manufacturing and installation of specialty lighting fixtures of the type and quality specified. Prior to commencement of work and ordering any material, the Contractor must submit to the Engineer for approval, the proposed manufacturer and installer of specialty lighting fixtures including their respective work history and recent experience in the design, manufacture and installation specialty lighting fixtures similar to those specified for this project.

#### 1.6. WARRANTY

- A. Manufacturer's standard form in which manufacturer agrees to repair or replace lighting equipment that fails in materials or workmanship within specified warranty period.
- B. Warranty period: Five years from date of Substantial Completion.

#### 1.7 FIELD CONDITIONS

- A. Take field measurements prior to preparation of shop drawings and fabrication to ensure proper location of all lighting fixtures in relation to underground utilities and/or mounting locations as shown on the plans and detail drawings.
- B. Coordinate layout and installation of lighting fixtures with equipment served and adjacent surfaces; maintain required clearances.

## 1.8. DELIVERY, STORAGE, AND HANDLING

- A. Store all lighting fixtures and associated components and materials in clean, dry location until the time of installation. Cover with waterproof paper, tarpaulin or polyethylene sheeting in a manner that permits air circulation within covering.

## PART 2 – PRODUCTS

### 2.1 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with of the contract requirements, manufacturers offering Lighting Fixtures that may be incorporated in the work include the following:
  1. Acclaim Lighting, Los Angeles, CA (Fixture types A1, A2, A2a)
  2. Lumenpulse, Boston, MA (Fixture types A1, A2, A2a, A3, A4)
  3. Philips Color Kinetics, Burlington, MA (Fixture types A1, A2, A2a)
  4. Targetti, Costa Mesa, CA (Fixture types A3, A4)

### 2.2 PERFORMANCE REQUIREMENTS

- A. Provide all lighting fixtures of the forms and types indicated herein which comply with requirements of referenced standards and the following:
  1. All specialty lighting fixtures shall be designed and manufactured specifically for long term outdoor service, UL listed for wet locations, provided with voltage surge protection and capable of attaining a minimum ingress protection rating of 66 unless otherwise noted on the lighting fixture schedule.
  2. Fixtures shall be LED color changing Red-Blue-Green-White type where White equals 3000K correlated color temperature (CCT).
- B. All specialty lighting fixtures shall be provided with power supplies and controls capable of interfacing with DMX lighting control system unless otherwise noted on plans, or on the lighting fixture schedule. Power supplies shall be capable of 277-volt operation.
- C. All lighting fixtures shall be designed to achieve a minimum of 50,000 hours useful life at 70% lumen maintenance (L70).
- D. All mounting hardware to be stainless steel unless otherwise noted on the fixture schedule. Provide optical distribution as noted specifically for each type. Lighting fixture housings / enclosures shall be die-cast aluminum with a 4-mil polyester powder coat finish (types A1, A2, A2a) or other material suitable for direct burial and rated for drive-over applications (types A3, A4).

## PART 3 - EXECUTION

### 3.1 INSTALLATION REQUIREMENTS

- A. The Contractor shall be required to furnish, install, and protect the units, as shown on the plans and in accordance with approved shop drawings to be furnished by the Contractor prior to fabrication.
1. Spare Components: Supply the following spare components: One (1) LED module/array for every 10 of each type and rating installed; one (1) driver for every 10 of each type and rating installed.
  2. Adjustment and Cleaning: Clean lighting fixtures of dirt and debris upon completion of installation. Protect installed fixtures from damage during the remainder of the construction period.
  3. Adjust aim-able lighting fixtures in the presence of the Engineer and Lighting Designer. Aiming and adjusting shall be accomplished at night.

### 3.2 MEASUREMENT

- A. The quantity of Specialty Lighting Fixtures to be measured for payment shall be the number of each type, actually installed to the satisfaction of the Engineer.

### 3.3 PRICES TO COVER

- A. The unit price bid per fixture shall cover the cost of all labor, material, plant, equipment, insurance, and incidentals necessary to furnish, install, wire and test each fixture including, but not limited to all spare components and shop drawings 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.	Description	Pay Unit
E 265619 A1	SPECIALTY LIGHTING FIXTURES (TYPE 1)	EACH
E 265619 A2	SPECIALTY LIGHTING FIXTURES (TYPE 2)	EACH
E 265619 A2A	SPECIALTY LIGHTING FIXTURES (TYPE 2A)	EACH
E 265619 A3	SPECIALTY LIGHTING FIXTURES (TYPE 3)	EACH
E 265619 A4	SPECIALTY LIGHTING FIXTURES (TYPE 4)	EACH



SECTION 265619 LED  
LED STRIP LIGHTING SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

The LED Strip lighting system shall be a Light Emitting Diode (LED) strip light system. The strip lights are as shown on the Contract Drawings. The lights shall be waterproof White LED Strip Light, approved by Underwriters Laboratory (UL) operating on 24VDC.

1.2 DEFINITIONS

LED lighting is a two-lead semiconductor light source. When current is applied, the diode emits energy in the form of photons, and the color of that diode is determined by the semiconductor the diode is made of.

1.3 SUBMITTALS

- A. Product Data: For each type of lighting system indicated. Include dimensioned elevations, sections, weights, and manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes.
  - 1. Current and voltage ratings.
  - 2. Short-circuit current ratings (interrupting and withstand, as appropriate).
  - 3. Include evidence of NRTL listing for series rating of installed devices.
  - 4. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices, accessories, and auxiliary components.
- B. Shop Drawings: For lighting system. Include plans, elevations, sections, details, and attachments to other work.
  - 1. Wiring Diagrams: For power and control wiring.
- C. Field quality-control reports.
  - 1. Test procedures used.
  - 2. Test results that comply with requirements.
  - 3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.
- D. Manufacturer's field service report.
- E. Operation and Maintenance Data: For lighting system to include in emergency, operation, and maintenance manuals.
  - 1. Manufacturer's written instructions for testing and adjusting lighting system.
  - 2. Time-current coordination curves (average melt) for each type and rating of overcurrent protective device; include selectable ranges for each type of overcurrent protective device. Submit on translucent log-log graph paper.

## 1.4 QUALITY ASSURANCE

- A. Product Selection for Restricted Space: Drawings indicate maximum dimensions for enclosed switches and circuit breakers, including clearances between enclosures, and adjacent surfaces and other items. Comply with indicated maximum dimensions.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in New York City Electrical Code, by a qualified testing agency, and marked for intended location and application.
- C. Comply with New York City Electrical Code.

## 1.5 COORDINATION

- A. Coordinate layout and installation of lighting system and accompanying components with equipment served and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

## PART 2 -PRODUCTS

### 2.1 LIGHTING

- A. The LED strip lighting shall be white in color (6000-6500K Color Temperature) and ultra-bright, fully outdoor rated 24VDC waterproof LED Strip Light, with a 24V power rating. The light shall have a TPU coating (Thermoplastic Polyurethane) to provide a IP68 outdoor rating making it fully waterproof, submersible, and UV proof. The light shall be capable of being cut every 2 inches and can be connected in series up to 30ft with no noticeable voltage drop.
- B. The LED strip lighting fixture shall provide an average of 1.0 fc of light with a uniformity ratio of 2:1 average to minimum. The fixture shall provide sufficient LEDs to produce this result. The contractor shall submit lighting calculations to verify this result.
- C. The fixtures in each section shall be provided with 24VDC power supply to provide 600watts of constant voltage. A power supply will be installed in each section so that the sections may be disassembled without the need to disconnect any of the fixtures or wiring. The power supply shall be individually wired with a suitable weather proof cable and plug that is connected to the retractable bollard. The contractor shall install insulated "J" hooks on the structural member to support the wiring from the power supply to the bollard.
- D. The LED strip lighting system shall be fully outdoor proof LED strip each light shall be provided with male and female connectors on each end. Each strip shall be mounted to the underside of the section using suitable stainless steel clamps. If additional support is necessary the contract shall install the supports.

## PART 3- EXECUTION

### 3.1 EXAMINATION

- A. Examine elements and mounting surfaces for strip lighting for compliance with installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Install individual strip lighting modules as shown on plans unless otherwise indicated.
- B. Comply with mounting and anchoring requirements.

### 3.3 IDENTIFICATION

- A. Comply with the following requirements:
  - 1. Identify field installed conductors, interconnecting wiring, and components; provide warning signs.
  - 2. Label each enclosure with engraved metal or laminated-plastic nameplate.

### 3.4 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
  - 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- B. Acceptance Testing Preparation:
  - 1. Test continuity of each circuit.
- C. Tests and Inspections:
  - 1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
  - 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
  - 3. Test and adjust controls, remote monitoring, and safeties. Replace damaged and malfunctioning controls and equipment.
- D. LED Strip lighting will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports, including a certified report that describes scanning results. Include notation of deficiencies detected, remedial action taken and observations after remedial action.

### 3.5 ADJUSTING

- A. Adjust moving parts and operable components to function smoothly, and lubricate as recommended by manufacturer.

---

~~PART 4 MEASUREMENT AND PAYMENT~~

4.1 MEASUREMENT

- A. The quantity of LED Strip Lighting System to be paid for under ITEM E 265619 LED shall be the actual number of linear feet of LED Lighting Strip installed to complete the work, to the satisfaction of the Engineer.

4.2 PRICES TO COVER

- A. The unit bid price per linear foot of LED Strip Lighting System shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the lighting system, and providing and installing the associated protective devices, fuses, hardware, adjusting, testing and inspecting, 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
E 265619 LED	LED STRIP LIGHTING SYSTEM	L.F.

---

(NO TEXT ON THIS PAGE)

---

**JB-PAGES (3.0)**

**JOINT BID**

---

**NOTICE**

THE PAGES CONTAINED IN THIS JOINT BID SECTION (JB-PAGES 3.0) REPRESENT ADDITIONAL CONTRACT REQUIREMENTS APPLYING TO WORK PERFORMED WHERE PRIVATELY OWNED UTILITY FACILITIES EXIST.

THIS JOINT BID DOCUMENT IS ONLY APPLICABLE TO THE BOROUGHES OF THE BRONX, QUEENS, BROOKLYN, AND STATEN ISLAND.

**(NO TEXT THIS PAGE)**

## JOINT BID

DATED: February 07, 2018

---

The City is bidding jointly Project ID: HWKKP005. The City has combined its Public Work, Interference Work, and Utility Work into one bid contract package. All prospective bidders should be alerted to the fact that the City has prepared all specifications, drawings, and all other necessary contract documents for the Public Work, Interference Work, and Utility Work.

**SPECIFICATIONS FOR AND REQUIREMENTS OF A JOINT BID PROJECT:**

1. The Contractor shall be responsible for compliance with all the provisions of the following Articles, Appendixes, Specifications, Sketches and Scope of Work, which are hereby made a part of the original contract documents:

- A. The "JOINT BID WITH PRIVATE UTILITY COMPANIES SPECIAL PROVISIONS" (Pages JB-1 through JB-7); and

Following **Con Edison** specialty work items (contained on Pages JB-8 through JB-21):

JB 303T – Furnish, Deliver And Install Thermal Sand Backfill

JB 403T – Placing 1-Inch Steel Protection Plates For Utility Facilities

JB 802 – Special Modification Of Work For Installation Of New Curbs And Sidewalks

JB 803 – Line Cut By Pneumatic Tools In Lieu Of Saw Cut Associated With Roadway Removal Operations

JB 850 – Placing Rubber Sheets For Utility Facilities

Following **Verizon** specialty work items (contained on pages JB-22 through JB-47):

JB 350T/TWC – Overhead Accommodation Protection Of Overhead Facilities, Poles And Appurtenances

JB 402T - Horizontal And Vertical Adjustment Of Telecommunications Facilities

JB 403T – Furnish And Install Steel Protection Plates For Telecommunications Facilities

JB 405 – Excavation For Installation Of Utility Facilities

JB 603T – Furnish And Install Telecommunications Conduits

JB 798 – Modification Of Non Concrete Yoke Trolley Structures Removal When Crossing Utility Facilities

JB 799 – Modification Of Non Concrete Trolley Structures Removal Parallel To Utility Facilities

JB 800 – Modification Of Concrete Yoke Trolley Structures Removal When Crossing Utility Facilities

JB 801 – Modification Of Concrete Yoke Trolley Structures Removal Parallel To Utility Facilities



B. The Private Utilities reference document called "JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR LOWER MANHATTAN", dated August 1, 2005, which is applicable to Work in the Boroughs of The Bronx, Queens, Brooklyn, and Staten Island, and which 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;

C. Private Utilities Participating List (Page JB-48)

D. Private Utilities Scope of Work (ConEd Pages JB-50 through JB-92, Verizon Pages JB-93 through JB-113, Time Warner/ Charter Spectrum Pages JB-114 through JB-119, National Grid Pages JB-120 through JB-121,); and, Test Pits (ConEd Pages JB-123 through JB-129, Verizon Pages JB-130 through JB-145); and, Sketches (Time Warner/ Charter Spectrum Pages JB-147 through JB-159); and,

E. Private Utility drawings (38 Sheets) consisting of:

- Drawing JB1, General Notes & Conditions (All Utilities) (1 Sheet).
- Drawing JB2 to JB3, Capital Electric Plan (CONED) (2 Sheets).
- Drawing JB4 to JB5, Oil-O-Static Map & JB 803 Plan (CONED) (2 Sheets).
- Drawing JB6 to JB9, JB 700 Plan (CONED) (4 Sheets).
- Drawing JB10 to JB11, Mass Excavation Plan (CONED) (2 Sheets).
- Drawing JB12 to JB17, Conduit & Duct Occupancy Plate & Low Tension Mains And Service Plate (CONED) (6 Sheets).
- Drawing JB18 to JB21, Special Care Excavation Plan (Verizon) (4 Sheets).
- Drawing JB22 to JB38, Conduit Utility Plate (Verizon) (17 Sheets)

2. Refer to the Private Utility reference document called "JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR LOWER MANHATTAN", Specification for JB 450, pages 56, 57, and 58;

**Note:** Items under JB 450 are task driven operation items and are not based on crew size. These items are divided into three unique types, each of which provides a description of applicability and typical use. The "Method of Measurement", on page 57, states that "The actual crew performing the operation will not be considered by the facility operator, in consultation with the Resident Engineer, when determining the applicable Unit Item Type, which shall be only as per the task performed."

3. Refer to the Private Utility reference document called “JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR LOWER MANHATTAN”, Specification for JB 225, page 10, Article A. Description;

Delete the last four lines of text in their entirety, beginning with the words: “accordance with Specification under Addendum #1, . . .”;

Substitute the following revised text: “accordance with Specification Section 7.18 – Controlled Low Strength Material (CLSM), in the Standard Highway Specification. All backfill within the maximum excavation limits shown in Sketch No. JB 225 shall be of controlled low strength material (CLSM) in compliance with requirements of Section 7.18, and its cost shall be deemed included in this item.”

4. Refer to the Private Utility reference document called “JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR LOWER MANHATTAN”, Specification for JB 225, page 10, Article B. Materials;

Delete the first sentence in its entirety, beginning with the words: “Furnish Controlled Low Strength Material fill or backfill . . .”;

Substitute the following revised sentence: “Furnish Controlled Low Strength Material fill or backfill as required and specified in Section 7.18 – Controlled Low Strength Material (CLSM), of the Standard Highway Specification.”

5. Refer to the Private Utility reference document called “JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR LOWER MANHATTAN”, Specification for JB 226, page 12, Article A. Description;

Delete the last five lines of text in their entirety, beginning with the words: “accordance with Specification under Addendum #1, . . .”;

Substitute the following revised text: “accordance with Specification Section 7.18 – Controlled Low Strength Material (CLSM), in the Standard Highway Specification. All backfill within the maximum excavation limits shown in Sketch No. JB 225 shall be of controlled low strength material (CLSM) backfill in compliance with Section 7.18 in the Standard Highway Specifications, and its cost shall be deemed included in this item.”

6. Refer to the Private Utility reference document called “JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR LOWER MANHATTAN”, Specification for JB 226, page 12, Article B. Materials;

Delete the first sentence in its entirety, beginning with the words: “Furnish controlled low strength material fill or backfill . . .”;

Substitute the following revised sentence: “Furnish controlled low strength material fill or backfill as required and specified in Section 7.18 – Controlled Low Strength Material (CLSM), of the Standard Highway Specification.”

**PERFORMANCE OF A JOINT BID PROJECT:**

7. The bid items, specifications, and estimated quantities have been designed to fully compensate the Contractor for its costs to perform the Public Work, Interference Work, Shared Items, and Utility Work.
8. The Contractor agrees that its bid items and prices for the Public Work, Interference Work, and Utility Work shall include all incremental costs and/ or additional compensation for performing Public Work including: coordination of its work with the Utilities, loss of productivity and efficiency, idle time, delays (including any delays occasioned by negotiation of a contract change), change in operations, mobilization, remobilization, demobilization, added cost or expense, loss of profit, other damages or impact costs that may be suffered by the Contractor because of direct or indirect obstructions due to the presence of Utility Facilities, such as conduits, ducts or duct banks containing conductors for live and/or abandoned electric, telephone, cable TV, any type of communication cables, "Non Cost Sharing" gas mains and services, steam mains, and various non-hazardous encasement materials or utility structures located within the Public Work project area.
9. The Contractor agrees that it shall be paid based on the single Multiplier submitted and that such single Multiplier shall apply to the Public Work, Interference Work, Shared Items, and Utility Work. The Contractor further agrees that in the performance of the contract, the Multiplier shall be applied to every item in the Unit Price book (excluding fixed sum items, e.g.: Item Nos. 6.85 A, 6.52 FED, HW-904, JB-900, UTL-GCS-2WS etc.) that is or may be necessary to perform the Joint Bid Project, regardless of whether the work is performed for the City or a Utility.
10. The Contractor agrees that the Utilities are third party beneficiaries of the contract for a Joint Bid Project, and that the Utilities shall be entitled to rely upon and enforce any and all terms and conditions of the contract for a Joint Bid Project as it pertains to the Contractor and the performance of the Public Work, Interference Work, Shared Items and Utility Work.
11. If the Contractor claims or alleges that delays were caused by a utility for failure to supply and/or provide Specialty Contractors in a timely manner, than the Contractor may bring a claim against the Utility. Neither the Contractor nor the Utility shall bring a delay claim against the City either in a Court of Law or the City's contract dispute resolution board process; and to the extent the Contractor alleges a delay was caused by a Utility, the Contractor will be limited to bringing such legal action in a Court of Law and will not be able to seek arbitration over any delay claims or delay-related claims. If the Contractor and Utility initiate a legal action against each other, this legal action will be outside the jurisdiction of the City's contract dispute resolution board process and the City shall not be a party in the litigation process.

**DEFINITIONS:**

“Business Days” or “Days” shall mean Monday through Friday, excluding holidays.

“City Accommodations” shall mean any changes made to the Public Work at the request and expense of the Utility during Pre-engineering or at any other time and may include, but shall not be limited to, altering the location of City Facilities; changing the type of City Facilities constructed; extending the length or number of City Facilities constructed, including additional paving; and, changing or adding materials used for the Public Work project.

“City Facility(ies)” shall mean any facility owned by the City, including, but not limited to, roadways, streets, highways, parkways and other thoroughfares, bridges, sewers, culverts, catch basins, chutes and water mains.

“City’s RE” or “RE” shall mean the City’s resident engineer, who will have the overall responsibility for overseeing and managing all issues concerning safety, design, coordination, schedules and payments for the Joint Bid Project.

“Commissioner” shall mean the Commissioner of DDC.

“Contract” or “Contract Documents” shall mean each of the various parts of the Agreement, including these JB-Pages, and all addendums issued by the City.

“Contingent Items” shall mean the items identified in the Unit Price Book and/or specifications of this Contract and shall include all labor, material and equipment necessary to complete extra work and for which unit prices have been fixed in the City’s Contract.

“DDC” or “Department” shall mean the City’s Department of Design and Construction, or any other agency or department that is acting as the Department’s agent in the development or construction of Public Work projects for Joint Bid Projects.

“DEP” shall mean the City’s Department of Environmental Protection.

“DOT” shall mean the City’s Department of Transportation.

“Extra Work” shall have the meaning defined in these Contract Documents.

“Gas Agreement” shall mean a separate gas cost sharing allocation agreement, dated June 29, 1989, as amended, between the City and Con Ed and National Grid.

“Joint Bid Project(s)” or “joint bid project(s)” or “JBP” shall mean a construction project that the City and Utilities agree will be awarded pursuant to the PPB Rules and will include both City Facilities and Utility Facilities.

“Interference Work” shall mean such work as is required to be performed by the Contractor during the performance of Public Work, as defined herein, in order to maintain, protect, support, shift, alter, relocate, remove, and/or replace Utility Facilities at the Utilities’ expense.

“Lay Outs” shall mean the Utilities’ plans and schedules for any proposed Specialty Utility work.

“MPS” shall mean the maintenance and protection of the construction site of a Joint Bid Project.

"MPT" shall mean the maintenance and protection of the traffic on and near a Joint Bid Project.

"Other Public Agency" shall mean any government entity other than DOT or DEP. Other government entities include, but are not limited to, the Port Authority of New York and New Jersey and the Transit Authority.

"PPB Rules" shall mean the City's Procurement Policy Board rules, as amended.

"Pre-engineer" or "Pre-engineering" shall mean a process undertaken by the Utilities on all Joint Bid Projects whereby the Utilities will determine and mark-out current Utility Facilities, and design the location and/or re-location of Utility Facilities in a manner that is to the extent practicable, efficient and cost-effective for both the City and the Utilities to avoid or ameliorate disturbances to the City Facilities and the Utilities Facilities, and in which the City and Utility participate in prior to the award of a Joint Bid Project contract.

"Project Manager" shall mean the individual(s) designated by each Utility to the Joint Bid Project as a full-time person with the authority to represent the Utility, render binding decisions on behalf of the Utility, coordinate all Utility Work and facilitate all necessary decisions regarding Utility Facilities.

"Public Work" or "PW" shall mean the following:

- (a) Construction, reconstruction, installation, alteration, maintenance, repair, grading, re-grading, regulating and improvement of roadways, highways, streets, parkways and other thoroughfares, and bridges located within Manhattan; and including all City Accommodations.
- (b) Construction, reconstruction, installation, alteration, maintenance, repair, and improvement of sewers, culverts, catch basins, chutes and water mains; and including all City Accommodations.

"REI" shall mean the resident engineering and inspection services procured by the City for this Joint Bid Project.

"Shared Items" shall mean the bid items in the Contract Documents in which the total cost will be paid for by the City and the Utilities in accordance with their respective shares, as mutually agreed upon by the City and Utilities.

"Specific Public Work Items" or "Public Work Items" shall mean a detailed set of specifications prepared by the City based on the City's engineering, design and plans that will represent the Public Work portion of the Joint Bid Project.

"Specific Shared Items" or "Shared Items" shall mean a detailed set of specifications prepared by the City based on the City's engineering, design and plans that will represent the Shared Items portion of the Joint Bid Project.

"Specialty Contractors" shall mean any third party contractors hired by a Utility or Contractor to perform Specialty Utility Work.

"Specialty Utility Work" shall mean work performed by the Utility using its own forces or Specialty Contractors or work performed or managed by the Contractor, if certified by the Utility or if the subcontractor is certified by the Utility, as agreed to by the Utility, that is necessary for the

completion of the Joint Bid Project including, but not limited to, the installation and removal of insulation, "live" gas and steam work, pipe ripping, cable-related work and environmental clean-up work.

---

"Specific Utility Work Items" or "Utility Work Items" shall mean a detailed set of specifications prepared by the Utilities based on the Utility's Pre-engineering that will represent the Utility Work portion of the Joint Bid Project.

"Utility Capital Work" shall mean construction of new, relocation or replacement Utility Facilities, the cost of which is not normally expensed by the Utility in accordance with the New York State Public Service Commission's Uniform System of Accounts or generally accepted accounting principles, and which is not Interference Work, as defined herein.

"Utility Facility(ies)" shall mean the property owned by a Utility including, but not limited to, pipes, poles, conduits, wires, lines and other facilities, structures or property that may be below-ground, at ground-level or above-ground, which could disturb or interfere with the Public Work.

"Utility" or "Utilities" shall mean the entities referenced in the Private Utilities Participation List.

"Utility Work" shall mean all Interference Work and Utility Capital Work, and pertains to all Utility Facilities.

**(NO FURTHER TEXT THIS PAGE)**

## Con Edison specialty work items

**JB 303 T - FURNISH, DELIVER AND INSTALL THERMAL SAND BACKFILL****A. Description**

Under this section, the Contractor shall provide all labor, materials, equipment, insurance and incidentals necessary to furnish, deliver and install Thermal sand backfill for use around utility facilities at various locations within the contract limits as directed by the facility operator.

**B. Materials**

The Contractor shall supply thermal sand backfill. Thermal sand backfill shall have a pH value greater than 5.5, shall pass a 3/8 inch square screen mesh, and shall be free of cinders, ashes, vegetable matter, rubbish or any foreign matter. The sand must conform to the following sieve analysis.

<u>Sieve Size</u>	<u>Percent Passing</u>
3/8 inch	100
#4	70-90
#8	60-75
#30	35-50
#50	16-30
#200	3-8

Please see the attached specification (EO-1173-5) for complete specifications of thermal sand backfill.

**C. Method of Construction**

The Contractor shall furnish, deliver and install thermal sand for use as backfill material around utility facilities. The amount of thermal sand backfill material shall extend one foot under, around, and over the facilities or as directed by the facility operator.

**D. Method of Measurement**

The quantity to be measured for payment shall be the actual number of cubic yards (CY) of thermal sand backfill in place after compaction as ordered by the facility operator. The amount measured for payment is not to exceed the limits of one foot under, around, and over the facilities unless approved by the facility operator.

**E. Price to Cover**

The price shall cover the cost of all labor, materials, equipment, insurance and incidentals necessary to furnish, deliver and install thermal sand backfill for use around utility facilities. The price shall also include the incremental cost for all labor, material, equipment, insurance and incidentals necessary and required to place, compact, sample and test the backfill material.



**SPECIFICATION FOR CONTROLLED BACKFILL  
MATERIAL FOR H.P. CABLE PIPE INSTALLATIONS**

**SCOPE**

1. This specification applies to the purchase low thermal resistivity sand, **Thermal Sand**, for use as backfill material when so specified in pipe-type cable trenches to obtain the design load capabilities of these circuits.

**DISTRICTS APPLICABLE**

2. All Districts.

**REQUIREMENTS**

3. **Thermal Backfill**: The material shall be sand, shall have a pH value greater than 5.5, shall pass a 3/8 inch square screen mesh, and shall be free of cinders, ashes, vegetable matter, rubbish or other foreign matter which might damage the H.P. cable pipe coating. Figure 1 gives a suggested sieve analysis based on previous samples of Thermal Sand. This should be used as a guide in preparing a blend of sand and not construed as relieving the suppliers of meeting the test requirements of this specification.
4. The compacted density of the material shall be 115 pounds per cubic foot (dry weight minimum) as determined by tests set forth in paragraphs 8 and 10.
5. Thermal resistivity values of compacted samples shall be determined in accordance with Paragraphs 8, 9, and 10 and shall have the following values:

**TABLE I**

<b><u>Moisture Content (Per Cent)</u></b>	<b><u>Min. Compacted Wet Density (lbs/cu.ft)</u></b>	<b><u>Max. Thermal Resistivity °C-CM/Watt</u></b>
12	130	37
10	126.5	38
7	123	41
4	120	48
1	116	62
.5	115.5	72
Zero	115 (Dry)	100

A tolerance of +5% will be permitted on the maximum thermal resistivity values.

### SAMPLING AND TESTING

6. The vendor in the presence of an Authorized Con Edison Representative shall sample and test material stock piles which will be used to supply Thermal Sand to Consolidated Edison Company. A sample shall be taken from every 300 cubic yards or less stockpile at ten uniformly distributed points 6 to 12 inches below the surface of the stockpile. One half the sample shall be taken by the vendor for testing and the other half shall be taken by the Authorized Con Edison Representative. The sample shall be identified as to the date and stockpile number it was taken from. A composite sample shall be made of the individual sample as per paragraph 7 and tested for Thermal Resistivity, Compaction and Mechanical Analysis.
7. Composite samples shall be reduced by blending and quartering in the following manner: the composite sample shall be thoroughly mixed and then divided into four quarters; two opposite quarters shall be discarded and the other two retained; the remaining two quarters shall be thoroughly mixed in a single pile; this process of quartering and discarding shall be repeated three times; the remaining two opposite quarters shall be retained for testing.

### TEST PROCEDURES

8. The dry density test of a compacted sample used for Thermal Resistivity test in accordance with Paragraph 9 shall be made by filling a brass cylinder with an inside diameter of 2.315 in., a wall thickness of .280 in., and a height of 4.668 in. with the sand sample. Before filling, additional moisture should be added to each test sample in order to obtain a relation of moisture to dry density. After thorough mixing, the sample shall be compacted in the cell with a rammer having a slip-fit face diameter and a total weight of 13 pounds. The material shall be compacted in 1 inch layers, using 5 blows per layer, from a height of 2 inches above the surface of the material.
9. Thermal Resistivity measurements shall be made in accordance with procedures outlined in, "Tests for Thermal Diffusivity of Granular Materials", William L. Shannon and Winthrop A. Wells. Proceedings American Society for Testing Materials, Vol. 47, 1947, P. 1044.
10. For determination of the dry Density and the dry Thermal Resistivity, the test shall be made after the compacted sample is oven-dried to a dry state at a temperature of 110+ 5 degrees centigrade for a period of at least 12 hours, or to constant weight.
11. A Mechanical Analysis shall follow Specification ASTM C-136 in conjunction with ASTM C-17 and shall use U.S. screens 3/8 inch #4, 8, 16, 30, 50, 100, and 200.
12. Certified test results on each sample shall be forwarded to the Consolidated Edison Company T & D Engineer and compared with the independent testing of the Consolidated Edison Company. The Consolidated Edison Company shall on the basis of the stockpile sample test, approve each stockpile for use as a supply of Thermal Sand. The stockpiles shall be then designated as approved for Con Edison supply. In addition, for every 1,000 tons of material shipped, a sample shall be taken and tested for Thermal Resistivity, Moisture Content of the initial compacted wet sample; Density and Thermal Resistivity of the oven-dried sample. A certified test report for the sample shall be submitted to the Con Edison T & D Engineer.

Consolidated Edison Company of New York, Inc.  
4 Irving Place, New York, N.Y. 10003

**Purchase and Test  
Manual No. 6-Section 16**

**EO-1173-5  
2-24-82**

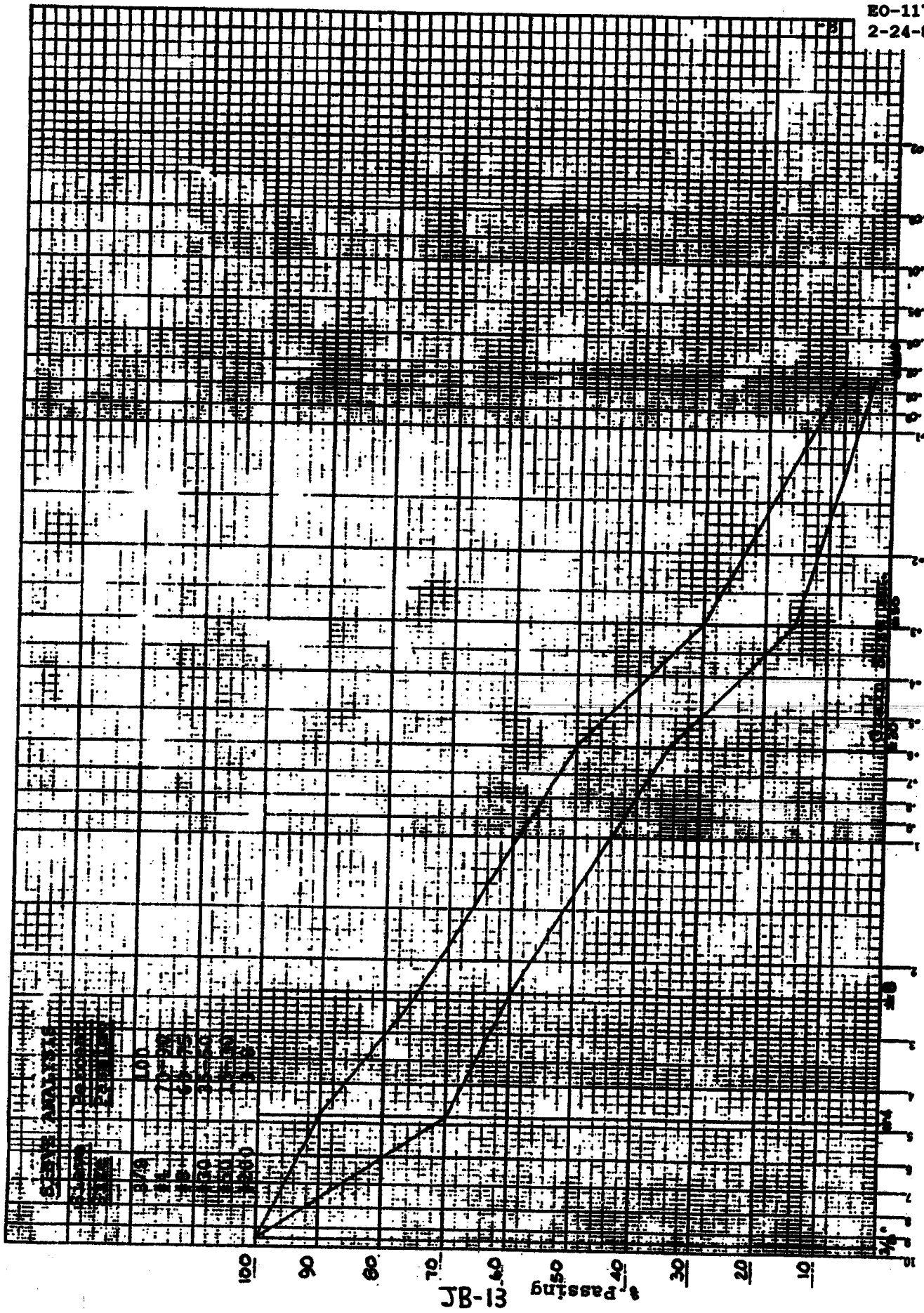
13. Periodically samples of the controlled backfill material will be taken by Con Edison upon delivery, for making thermal resistivity and density tests. The thermal resistivity values shall not exceed the limits listed in Paragraph 5.

**Anthony F. Taddeo**  
Transmission & Distribution  
Structures Engineer

**Gerard L. Blenkle**  
Transmission & Distribution  
Electrical Engineer

*Peter Iannone/sm*

<b>REVISION: 5</b> Added Sieve Analysis Graph. General Revision. Review by, 2/87	<b>FILE:</b> Purchase & Test Manual No. 6
---	---



K&E SEMI-LOGARITHMIC  
3 CYCLES X 70 DIVISIONS  
REUR.FIL. & BRICK CO. 48 5409  
NEW H.A.L.

FIGURE 1

**JB 403 T - PLACING 1-INCH STEEL PROTECTION PLATES FOR UTILITY FACILITIES****A. Description**

Under this Section, the Contractor shall place 1-Inch permanent Steel protection plates supplied by the facility operator(s) over utility facilities where directed by the facility operator(s).

**B. Materials**

Materials shall be supplied and delivered by the facility operator(s) to the job site or Construction Yard as directed by the Contractor.

**C. Method of Construction**

1-Inch Steel protection plates shall be placed in accordance with the attached Standard Sketch # CET 403 A.

**D. Method of Measurement**

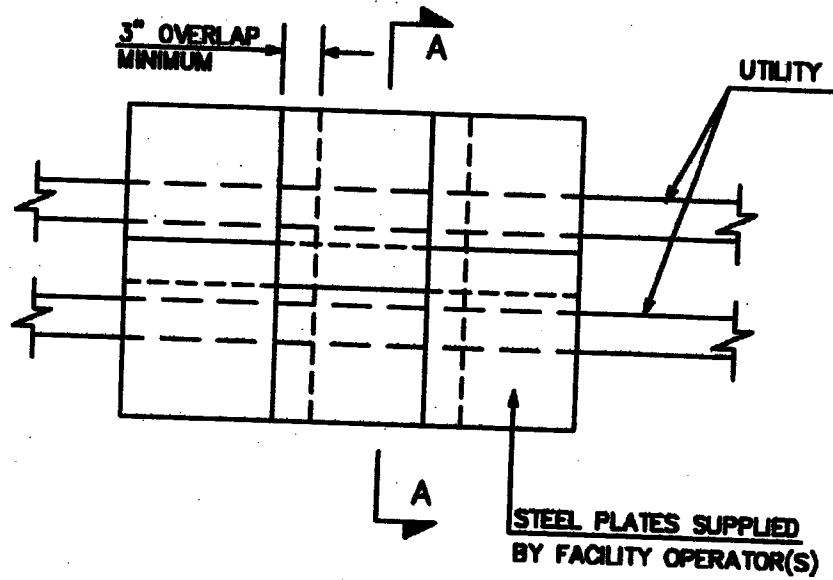
The quantity for payment shall be the area of 1-Inch permanent steel plating protection installed and measured in Square Feet (S.F.).

**E. Price to Cover**

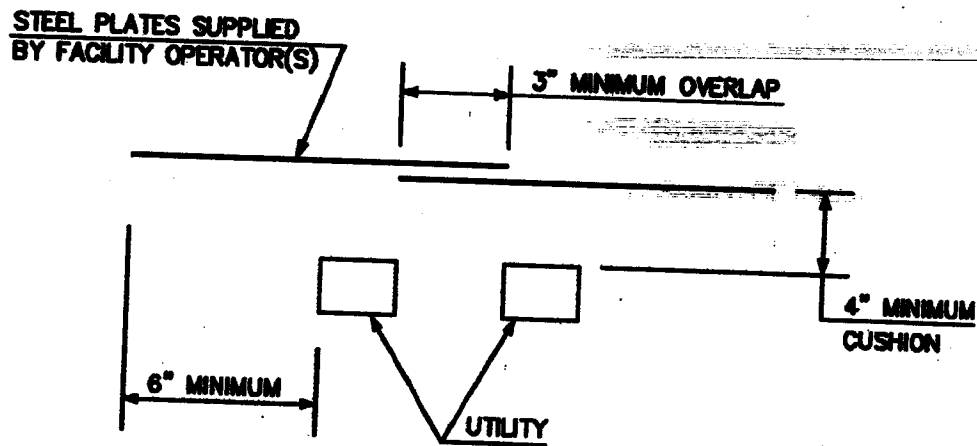
The price shall cover the cost of all labor, material, equipment, insurance, and incidentals necessary to complete the work.

**F. References**

1. Sketch CET 403A



**PLAN**  
NOT TO SCALE



**SECTION A-A**  
NOT TO SCALE

**TYPICAL PLATE SIZES:**  
 15" x 21" x 3/8"  
 16" x 24" x 3/8"  
 21" x 27" x 3/8"

REVISIONS

11-17-00

CET SKETCH	
PLACING STEEL PROTECTION PLATES FOR ELECTRIC AND TELEPHONE FACILITIES	
CONTRACT NO.	SKETCH NO.
	CET 403 A

## **JB 802 - SPECIAL MODIFICATION OF WORK FOR INSTALLATION OF NEW CURBS AND SIDEWALKS**

### **A. Description**

Under this Section, the Contractor shall be required to modify work methods of installing new curb and sidewalk in order to maintain, protect and accommodate the integrity of private Utility Facilities located within a zone of protection immediately beneath existing sidewalk and curb designated to be replaced under other Contract Items. The zone of protection shall define an area of curb and sidewalk where: work is within the vicinity of private Utility Facilities as shown on the Special Care Excavation Plan or where utilities are encountered during construction that are within 18 inches of either face of curb and/or 12 inches of the base material of proposed curb and/or sidewalk.

### **B. Materials - N/A**

### **C. Method of Operation/Construction**

Once clearances have been verified by available records to the satisfaction of the facility operator, the Contractor shall exercise extreme caution to install new curb and sidewalks within zoned areas of protection. Exercising extreme caution shall mean utilizing appropriate methods of operation/construction, special operations and sequencing, and by employing hand labor, using hand held tools only, under the personal direction of the appropriate facility operator. The work shall incorporate, but not be limited by, the following restrictions:

#### **1. Removal of Existing Curb and Sidewalk**

Removal of existing curb and sidewalk material shall be performed by saw cutting the curb and sidewalk, for a depth of not less than 2", to assist the Contractor in breaking up the concrete curb and sidewalk for removal by hand. Curb and sidewalk removal shall be done with hand labor, using hand held tools only while working from adjacent undisturbed sidewalk and/or pavement. Furthermore, it shall be understood to mean that digging and/or excavating directly with power-mechanized earth moving equipment will not be permitted. Power mechanized earth moving equipment may only be used as a depository of material removed from the excavation by hand as described above. All equipment, methods, and maintenance and protection provisions shall require full authorization by the facility operator.

#### **2. Preparation and Installation of New Curb and Temporary and New Sidewalk**

Backfilling, filling, grading of sub base, and installation of new curb and both temporary and new sidewalk, as required under other Contract Items, shall be performed utilizing materials, equipment and methods of construction that will insure the integrity of the private utility facilities and at the same time meet all requirements for this work as specified in other sections of this contract.

#### **3. Compaction**

The Contractor shall compact all sub-grade and new sub-base materials by utilizing native and/or blended fill material, equipment and methods of construction that will ensure integrity of private Utility Facilities and at the same time meet all requirements for compaction as specified in Section 4.11 of the Standard Highway Specifications.

#### **4. Powered Excavating Equipment Limitations**

The Contractor shall not employ powered or mechanical excavating equipment within the zone of protection. Powered or mechanical excavating equipment may only be used as a depository for material removed from the excavation by hand as described above.

The Contractor shall not be permitted to store, stand and/or travel equipment/vehicles on specified unpaved zoned protection areas.

#### **D. Method of Measurement**

##### **1. JB 802A**

The quantity of "Special Care Excavation and Restoration for Sidewalk Work" to be measured for payment shall be the number of square feet (S.F.) of new sidewalk actually installed under other contract items within the zone of protection areas requested by the facility operator. For payment purposes, the horizontal limits for a zone of protection area shall be defined as the area designated on the plans or an area equal to the length of the designated facility multiplied by its width plus 18 inches on each side. Where overlapping of zones occur due to multiple facilities, the area will be modified to one zone measured from the outside limits. Where the 18-inch area falls beyond the curb line the outside boundary shall be the curb line.

##### **2. JB 802B**

The quantity of "Special Care Excavation and Restoration for Curb Work" to be measured for payment shall be equal to the number of linear feet (L.F.) of new curb actually installed under other contract items within the zone of protection areas requested by the facility operator.



## **E. Price to Cover**

### **1. JB 802A**

The contract price per square foot for "Special Care Excavation and Restoration for Sidewalk Work" shall be the incremental cost difference of all labor, materials, equipment, insurance and incidentals required for excavation and disposal of pavement, base and all other material to new sub-grade within and adjacent to zone of protection areas; saw cutting, grading, preparation of sub-grades, backfilling and compaction within zone of protection areas; all in accordance with the plans, the specifications and the directions of the facility operator. The price shall further include the cost of maintaining, protecting and accommodating the integrity of private Utility Facilities during the performance of sidewalk reconstruction (under other Contract Items) within zone of protection areas designated on the plans or as directed by the facility operator.

### **2. JB 802B**

The contract price per linear foot for "Special Care Excavation and Restoration for Curb Work" shall be the incremental cost difference of all labor, materials, equipment, insurance and incidentals required to install new curbs and temporary restoration material under other Contract items, within and adjacent to zone of protection areas; all in accordance with the plans, the specifications and the directions of the facility operator. The price shall further include the cost of maintaining, protecting, and accommodating the integrity of private Utility Facilities during the performance of curb reconstruction (under other Contract Items) within zone of protection areas designated on the plans or as directed by the facility operator.

Payment for all work specified herein shall be made on a one-time basis only; no payment will be made for the same area of sidewalk or length of curb more than one time. When the installation of curb and sidewalk are performed as separate operations on the same location, payment shall be made separately for each operation. In addition, work under these items shall not be paid in combination with other utility items.

## **F. References**

### **1. Section 4.11 Standard Highway Specification**

**JB 803 - LINE CUT BY PNEUMATIC TOOLS IN LIEU OF SAW CUT ASSOCIATED WITH ROADWAY REMOVAL OPERATIONS**

**A. Description**

Under this section, the Contractor shall provide all incremental labor, equipment, insurance and incidentals required to maintain, protect, support and accommodate the integrity of utility facilities that include but are not limited to oil or static facilities, and any other facilities of various sizes and configurations paralleling or crossing proposed saw cut areas located within a zone of protection associated with roadway removal operations, as determined by the utility operator. Utility facilities which cross under and between the saw cut area are included within this item. The work shall be performed in accordance with the contract plans, the specifications, and as encountered during construction and determined by the facility operator(s).

**B. Materials - N/A**

**C. Method of Construction**

The Contractor shall maintain, protect, support and accommodate the integrity of all utility facilities of various sizes and configurations paralleling or crossing the saw cut area within a zone of protection as determined by the Facility Operator, during the roadway saw cut. The facility operator(s) shall identify the locations of all utilities within the contract area as required by New York State Industrial Code Rule 753. As provided by the Rule, the Contractor shall use pneumatic tools to line cut the pavement in lieu of saw cut by machine. It is the sole discretion of the facility operator(s) to determine relationships and/or dimensions, and advise the Contractor to proceed with pneumatic tools to line cut existing roadway structure.

**D. Method of Measurement**

The quantity to be measured for payment shall be the number of linear feet of line cut performed by pneumatic tools measured along the length of cut. The contract item specified under this section shall not be measured for payment in conjunction with other types of utility items. Modifications to work methods required in areas between zones of protection for multiple utilities or JB facilities shall not be measured for payment and are included in the price bid for this item.

JB 803.1 Line cut Asphalt Roadway (LF)

JB 803.2 Line cut any combination of Asphalt and Concrete Roadway (LF)

JB 803.3 Line cut any combination of Asphalt, Concrete, and Belgium Block (LF)

**E. Price to Cover**

The unit price per linear foot shall include the incremental cost for all labor, equipment, insurance and incidentals required to maintain, protect, support and accommodate the integrity of utility facilities paralleling or crossing the saw cut area associated with the removal of roadway designated for protection of utilities by the facility operator(s).

The unit price shall also include any additional cutting, removing and disposing of roadway materials; and any backfill that may be required to support, protect, maintain and accommodate the integrity of utility facilities. The price shall also include the incremental cost for providing all vehicular and pedestrian traffic maintenance necessary to perform the work.

The Contractor shall be responsible for any and all damages resulting from and/or due to saw cutting operations that are not performed in accordance with the specifications.

**F. References**

1. NYS Industrial Code Rule 753

**JB 850 - Placing Rubber Sheets for Utility Facilities A. Description**

Under this Section, the Contractor shall place permanent Rubber Sheets supplied by the facility operator(s) to protect utility facilities where directed by the facility operator(s) in consultation with the Resident Engineer.

**B. Materials**

Materials shall be supplied and delivered by the facility operator(s) at the job site or Construction Yard as directed by the Contractor.

**C. Method of Construction**

Rubber Sheets shall be placed in accordance with the attached facility operator(s) Specification for the Installation of High Pressure Pipe For 69, 138 and 345 kV Cable Systems, CE-TS-3352, under section 1.2.4.

**D. Method of Measurement**

The quantity for payment shall be the area of permanent rubber sheets installed and measured in Square Feet (S.F.). Each rubber sheet is typically 1/2" thick, 48" wide by 18' long.

**E. Price to Cover**

The unit price bid shall cover the cost of all labor, material, equipment, insurance, and incidentals necessary to complete the work.

**F. References**

1. Specification for the Installation of High Pressure Pipe For 69, 138 and 345 kV Cable Systems, CE-TS-3352.

## Verizon specialty work items

## **JB 350T/TWC – OVERHEAD ACCOMMODATION PROTECTION OF OVERHEAD FACILITIES, POLES AND APPURTENANCES**

### **A. Description**

The Contractor shall provide all supervision, labor, materials, tools, equipment and incidentals required to perform its work in the presence of overhead telephone facilities (JB 350T), cable television facilities (JB 350TWC), including fiber optic communications facilities, utility poles and equipment on the poles and related appurtenances. These utilities are subsequently referred to in this specification as "overhead facilities". Utility pole supports under JB 351 are not included in this specification.

### **B. Materials – N/A**

### **C. Method of Construction**

The Contractor shall inspect the site prior to bidding to evaluate the potential impact, if any, of overhead facilities upon performance of the work. The Contractor shall employ a method of operation, including use of appropriate equipment and tools that will enable him to maintain adequate clearances from the overhead facilities during all phases of construction. The Contractor is responsible for performing the work in accordance with all applicable Federal, New York State and Local regulations. The Contractor and/or his agents shall be solely responsible for damages to any overhead lines and appurtenances due to failure to comply with applicable rules, procedures, and practices.

### **D. Method of Measurement**

The quantity to be measured for payment shall be a lump sum measurement to complete the work in the presence of overhead facilities.

### **E. Price to Cover**

The price shall be a lump sum for all supervision, labor, materials, tools, equipment and incidentals required to perform the work in the presence of overhead utilities and to maintain adequate clearance from the overhead facilities during all phases of construction. The price includes, but is not limited, to modification of any methods of operation, use of appropriate equipment, extended performance, loss of productivity, protective measures, delays, change in sequencing and scheduling, and any other costs that may be incurred by the Contractor. Partial payments shall be made in proportion to the percentage (%) of contract completion as determined by the facility operator in consultation with the Resident Engineer.

The price shall cover the lowering and raising of pile driver boom under Verizon and Time Warner main line cables only. Verizon service wires will be disconnected and reconnected by Verizon for any pile driving operations only. The contractor shall work under the Verizon & Time Warner Cable service wires under all other work operations. The locations of the mainline cables are shown on the attached sketch.

The price shall include disconnecting and reconnecting, by the contractor, the impacted Time Warner service wires for the pile operation.

### **F. References**

N/A

## **JB 402T - HORIZONTAL AND VERTICAL ADJUSTMENT OF TELECOMMUNICATIONS FACILITIES**

### **A. Description**

Under this section, the Contractor shall provide all labor, materials, equipment, insurance and incidentals required to adjust and support and protect and maintain and accommodate the integrity of telecommunication facilities including but not limited to:

1. Conduit(s);
2. Cables and Air Pipe
3. Concrete Encased/Capped Conduit Banks

The work shall be performed in accordance with specifications and at the direction of the facility operator in consultation with the Resident Engineer.

### **B. Materials**

All materials used to adjust and support and protect and maintain and accommodate the integrity of utility facilities shall be similar to those indicated on the standard Sketches JB 100 A & 100 A-1 and shall be supplied by the Contractor and be approved by the facility operator in consultation with the Resident Engineer .

Materials used for replacing conduit(s) removed under this item shall be supplied by and installed by the Contractor and shall include but not be limited to the following:

1. Bends
2. Split and Solid Conduit(s) PVC and Steel
3. Couplings and Adapters PVC, Tile and Steel
4. Straps or plastic ties

PVC conduit and fittings shall be as supplied by American Pipe and Plastics, Type "C" or approved equal.

Steel Pipe and fittings shall conform to ASTM A53 Schedule 40

Tile to PVC adaptors shall be as supplied American U-Tel or approved equal.

### **C. Methods of Construction**

Lengths of "wing-back" shall be determined by the facility operator in consultation with the Resident Engineer. All work performed prior to that approval shall be at the contractors risk.

Methods of construction shall include but not be limited to the following:

- 1 **Removal and Support**
  - a. Break with hand held power tools, remove and dispose of plain or reinforced concrete encasement.

- b. Break with hand held power tools, remove and dispose of conduit(s) enclosures and conduit that contain conductor(s) and/or cable(s) except steel/iron conduits, inner ducts and 1 ¼" to 1 ½" PVC "quad ducts. Breaking – "ringing and ripping" - of steel/iron conduits belonging to ECS shall be performed by ECS forces only. Contractor shall make safe the work area to accommodate the ECS forces.
- c. Support and protect exposed conduits, cables, innerduct and airpipe as shown in Sketch JB 100A-1 and approved by the facility operator in consultation with the Resident Engineer.
- d. ECS tenants cables may require inspection, testing and encapsulation before they can be shifted. Contractor shall make safe the work area to accommodate these forces. Contractor shall be notified by the facility operator of the ECS tenant requirements before the conduits are broken-out.

**2. Adjust or Move Conductor(s) and/or cable(s) and support**

- a. Cable shall be relocated horizontally and/or vertically as directed by the facility operator in consultation with the Resident Engineer
- b. Support and protect conductors and/or cables as shown on Sketch # JB 100 A-1 and/or as directed by the facility operator.

**3. Replacement, Encasement, Protection and Support**

- a. Replace vacant and loaded conduit(s) with solid and/or split conduit(s) and adapters.
  - 1) Vacant Conduit - Repairs to conduits shall not be permitted. All damaged or impaired lengths of conduit(s) shall be removed and replaced with new conduit(s). The number of vacant conduits replaced shall be confirmed by the facility operator.
  - 2) Loaded Conduit - Replacement of conduits that are removed from around existing cable(s) or innerduct shall be accomplished with split plastic (PVC) or split steel conduits as directed by the facility operator. Where split and solid plastic or steel conduit is used, the conduit(s) shall be spaced 1½ inches from each other. All split PVC shall be secured with plastic straps spaced at a maximum distance of eighteen (18") inches. Plastic conduit shall be joined with plastic couplings.
  - 3) Adapting - Joining plastic conduit to existing conduits of other diameters or material shall be done using single or multiple adapters, (supplied by contractor).
- b. If due to subsurface conditions, the cover is less than 20" from finished grade, the duct shall be protected with steel plates furnished by the contractor and measured for payment under Item JB 403T.
- c. Support and protect cable(s) and/or conductor(s) and conduit(s).
- d. Verify vacant conduits and provide pull ropes.



- e. Encase all exposed conduit with concrete ( $f_c = 1200$  to  $1500$  psi maximum) with slump commensurate to completely fill voids around conduits. Concrete encasement shall extend to two (2") inches beyond the limits of the duct bank vertically and horizontally.

#### **D. Method of Measurement**

The quantity to be measured for breaking out conduits, removing concrete, moving, protecting and supporting conductors and replacing conduits with split and solid conduit, shall be paid for by the linear foot (L.F.) of each conduit replaced. A linear foot of conduit shall be defined as one (1) single conduit measured along its longitudinal axis that has been broken out or moved from its original location either horizontally and/or vertically and measured in its final location. Quad PVC ducts produced as one unit shall be consider one duct for each quad unit. All conduits removed and not restored shall be covered for payment under the appropriate bid items for Removal of Abandoned Masonry for Utility Facilities and/or Removal of Abandoned Utility Conduits.

Multiple tile duct bank with concrete protection cover is not considered concrete encasement.

Each type of utility adjustment shall be paid for separately, the types of utility adjustments are defined as follows:

JB-402T.1 Existing Concrete Encased Non-Steel/Iron Conduits Placed in Final Position without Concrete Encasement. (L.F.)

JB-402T.1A Existing Concrete Encased Non-Steel/Iron Conduits Placed in Final Position with Concrete Encasement. (L.F.)

JB-402T.2 Existing Non-Concrete Encased Non-Steel/Iron Conduits Placed in Final Position without Concrete Encasement. (L.F.)

JB-402T.2A Existing Non-Concrete Encased Non-Steel/Iron Conduits Placed in Final Position with Concrete Encasement. (L.F.)

JB-402T.R1A Existing Concrete Encased Steel/Iron Conduits Placed in Final Position with Concrete Encasement. (L.F.)

JB-402T.R2A Existing Non-Concrete Encased Steel/Iron Conduits Placed in Final Position with Concrete Encasement. (L.F.)

JB-402T.V1 Existing Vacant Concrete Encased Conduits Placed in Final Position without Concrete Encasement. (L.F.)

JB-402T.V1A Existing Vacant Concrete Encased Conduits Placed in Final Position with Concrete Encasement. (L.F.)

JB-402T.V2 Existing Vacant Non-Concrete Encased Conduits Placed in Final Position without Concrete Encasement. (L.F.)

**JB-402T.V2A Existing Vacant Non-Concrete Encased Conduits Placed in Final Position with Concrete Encasement. (L.F.)**

**JB-402T.J1 Existing Concrete Encased Conduits Placed in Final Position without Concrete Encasement. (L.F.) in Which Only Conduit Joints are Broken Out and Conduits Remain Intact.**

**JB-402T.J1A Existing Concrete Encased Conduits Placed in Final Position with Concrete Encasement. (L.F.) in Which Only Conduit Joints are Broken Out and Conduits Remain Intact.**

**JB-402T.J2 Existing Non-Concrete Encased Conduits Placed in Final Position without Concrete Encasement. (L.F.) in Which Only Conduit Joints are Broken Out and Conduits Remain Intact.**

**JB-402T.J2A Existing Non-Concrete Encased Conduits Placed in Final Position with Concrete Encasement. (L.F.) in Which Only Conduit Joints are Broken Out and Conduits Remain Intact.**

### **E. Price to Cover**

The unit price bid per linear foot (L.F.) of conduit shall cover the cost of all labor, material, equipment, insurance, and incidentals necessary to shift, adjust, support, protect, maintain and accommodate the integrity of utilities without disruption of service to the facility operator's customers and in accordance with contract documents. The price bid shall also include the cost of: breaking out, removal and disposal of plain or reinforced concrete encasements, replacement with field split, split and solid conduits, adapters, clamps, straps and couplings ; verify vacant conduits and provide pull ropes; furnish and install concrete encasement, supports, slings and beams for utility support; changes of sheeting method and/or configuration when required and where necessary to accommodate the utilities during all phases of contract work;; and removal of sheeting around the utilities, and all else necessary and required to complete the work.

The unit price shall include providing access to the facility operator tenants to verify and test cables before, during and after the pipe ripping operation completed by the facility operator or specialized contractor hired by the facility operator and after conduit removal by the Contractor The unit price shall include, but not limited to, opening and closing of fences; removal and replacement of temporary timber curb and opening and closing of traffic plates. Access to adjacent manholes impacted by the run is included in this item. JB 450 shall not be used in conjunction with JB-402T as these items cover access to the work site at all times.

### **F. References**

1. Sketches JB 100A and 100A-1
2. JB 403T
3. American Pipe and Plastics, P.O. Box 577, Binghamton, N.Y. 13902
4. American U-Tel, 9760 Smith Rd., Willoughby, Ohio 44094

**JB 403T - FURNISH AND INSTALL STEEL PROTECTION PLATES FOR TELECOMMUNICATIONS FACILITIES**

**A. Description**

Under this section, the Contractor shall furnish and install as required permanent steel protection plates over telecommunications facilities where directed by the facility operator(s).

**B. Materials**

Material shall be:

1/4" thick ASTM A-36 plates. Maximum size 24" by 48".

3/8" thick ASTM A-36 plates. Maximum size 12" by 18".

Thickness to be determined by the facility operator(s)

**C. Method of Construction**

Steel protection plates shall be placed in accordance with the attached facility operator(s) standard sketch JB 403T. All protective plates shall overlap a minimum of 3".

**D. Method of Measurement**

The quantity for payment shall be the area of permanent steel plating protection furnished and installed (excluding overlap) and measured in place in Square Feet (S.F.).

JB 403T.1 - Furnish and Install 1/4" thick steel plate (S.F.)

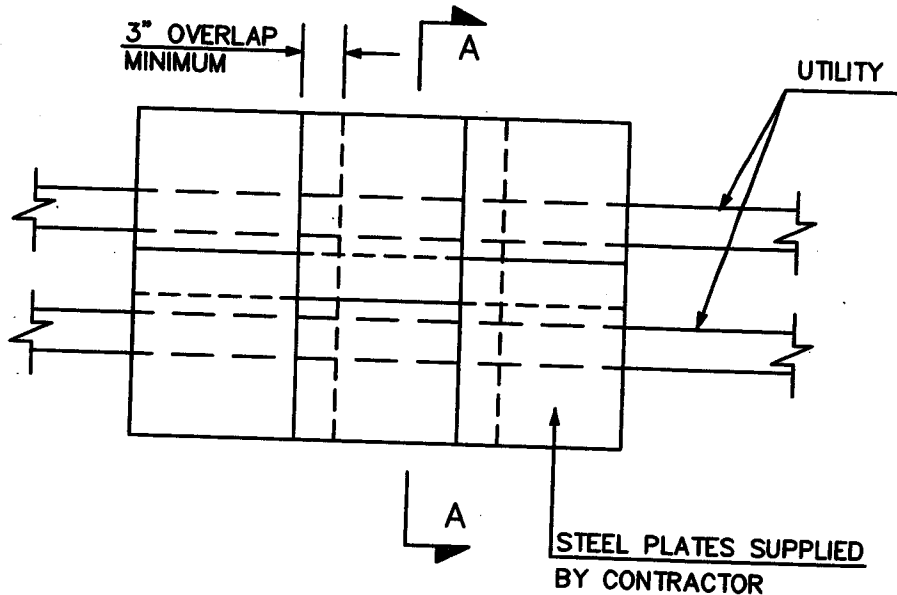
JB 403T.2 - Furnish and Install 3/8" thick steel plate (S.F.)

**E. Price to Cover**

The price shall cover the cost of all labor, material, equipment, insurance, and incidentals necessary to complete the work.

**F. References**

Sketch JB 403T

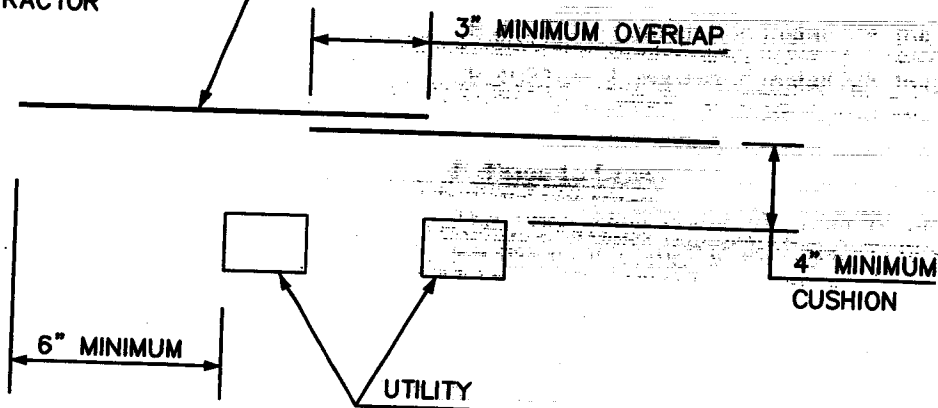


**PLAN**  
NOT TO SCALE

STEEL PLATES SUPPLIED  
BY CONTRACTOR

AREA FOR PAYMENT  
SHALL BE AS MEASURED  
IN PLACE (EXCLUDE OVERLAP)

STEEL PLATES SUPPLIED  
BY CONTRACTOR



**SECTION A-A**  
NOT TO SCALE

**TYPICAL PLATE SIZES:**

- 6" x 48" x 1/4"
- 12" x 48" x 1/4"
- 24" x 48" x 1/4"
- 12" x 24" x 3/8"

**REVISIONS**

09/13/2017

J.B. SKETCH

PLACING STEEL  
PROTECTION PLATES FOR  
COMMUNICATION FACILITIES

CONTRACT NO.

SKETCH NO.  
JB 403 T

## **JB 405 - EXCAVATION FOR INSTALLATION OF UTILITY FACILITIES**

### **A. Description**

Under this section, the Contractor shall provide all labor, materials, equipment, insurance and incidentals necessary to excavate, maintain trenches and backfill for the installation of new utility facilities including but not limited to:

1. Conduits
2. Non-cost sharing gas facilities
3. Steam mains
4. Steel pipe(s)

The trench to be excavated shall be determined by the size of the utility facility to be installed. The work shall be performed in accordance with applicable specifications, at the direction of the facility operator.

### **B. Materials**

All materials used to excavate and prepare trenches shall be supplied by the Contractor and be approved by the facility operator.

### **C. Methods of Construction**

1. **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. 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 a nominal cover as defined in the specifications for the facility being installed over the new utility facilities or as required based on field conditions, applicable specifications, or as directed by the facility operator. The width of the trench shall be as directed by the facility operator or as shown on Sketch JB 603T (ECS only). The bottom of the trench shall be graded smooth with a minimum cushion of 3 inches of backfill material or in conformance with applicable specification and be compacted, to minimize initial settlement and to avoid "point" support of new utility facilities. All stones projecting into the trench bottom shall be removed, and the voids backfilled before the new utility 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. Trenches shall be excavated to a depth and size necessary to facilitate the installation of the new utility 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. 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.

Care shall be taken that no existing utility facilities or other structures are broken or damaged. Contractor shall excavate all material encountered necessary to facilitate the installation of the new utility 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.

2. **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, 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. 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 to facilitate the installation of the new utility facility. 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. Upon completion of installation of the new utility 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.

3. **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.

#### **D. Method of Measurement**

The quantity to be measured for payment shall be the number of cubic yards (C.Y.) of trench actually excavated and backfilled as directed by the facility operator or as shown on Sketch JB 603T for JB 603T Items. The volume occupied by existing pipes or other structures will not be deducted from the total volume measured.

JB 405.1 - Trench Excavations for installation of Utility Facilities with total depths less than five feet (C.Y.)

JB 405.2 - Trench Excavations for Utility Facilities with total depths equal to or greater than five feet (C.Y.)

#### **E. Price to Cover**

The unit price bid for the various trench excavation items shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to completely expose, protect and maintain the integrity of the facilities without disruption of service to the customers and in accordance with the contract documents. The price shall also include, installation of traffic plates as well as opening and closing of plates as may be required in order to provide access to trench; installation, removal and maintenance of tight sheeting as required; cutting, breaking and removing various thickness of surface and base pavement; excavation by hand to expose

existing structures; furnishing, placing and compacting clean backfill following installation of utility facility in compliance with DOT requirements. 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 paid under city items. The price shall also include the cost of locating and protecting all utilities encountered as required.

Clean backfill material in accordance with specifications shall be used around gas facilities and critical facilities shall be paid for under item JB 303.

**F. References**

1. Item JB 303
  2. Sketch JB603T
  3. Con Edison Specifications, latest revisions
- CEHSP S13.00 – Excavation and Trenching

## **JB 603T - FURNISH AND INSTALL TELECOMMUNICATIONS CONDUITS**

### **A. Description**

Under this Section, the Contractor shall provide all labor, materials, equipment, insurance, and incidentals required to procure and install conduit for the purpose of installing the facility operator's utilities. Conduit runs shall be as shown on the contract drawings or as specified by the facility operator in consultation with the Resident Engineer.

### **B. Materials**

Conduit shall consist of:

PVC - 2" and 4" diameter or 1 1/4" Quad, Type "C" as supplied by American Pipe and Plastics or approved equal

Steel - 4" diameter, ASTM A53, Schedule 40 or approved equal

All conduit including sleeves, couplings, bends, pulling lines, etc. shall be supplied by the Contractor and approved by the facility operator in consultation with the resident Engineer.

The Contractor shall supply all material (Mortar, Brick, etc.) to make repairs to opening(s) as approved by the facility operator in consultation with the Resident Engineer.

### **C. Method of Construction**

The Contractor shall install the specified conduit(s) then rod, mandrel and wire (install pulling line) the new conduits. When conduit pipes are to be connected to existing underground ducts, manholes, or boxes, the Contractor, using hand-held tools only, shall cut existing conduit, to pick-up existing underground conduits with new conduits, make openings into manholes or boxes, install/connect the conduit, and make repairs to seal the openings in the structure.

Steel pipe shall be used for shallow cover and crossing or paralleling steam mains as directed by the facility operator in consultation with the Resident Engineer.

When the facility operator required a combination of conduit types and materials the facility operator will define the configuration of the conduit system and the location of each type within the conduit bank. All conduit shall be spaced 1 1/2" both vertically and horizontally from the adjacent conduit(s). All conduits shall be encased in lean concrete ( $f_c = 1200$  to 1500 psi maximum) which shall extend 2" beyond each face of the conduit formation, above and each side of the conduit formation.

If due to subsurface conditions, the cover is less than 20" from finished grade, the duct shall be protected with steel plates furnished by the facility operator(s) and measured for payment under Item JB 403.

The work shall be performed in accordance with the contract plans, specifications, and at the directions of the facility operator in consultation with the Resident Engineer.



#### **D. Methods of Measurement**

The quantity to be measured for payment shall be the number of linear feet (LF) of conduit trench for which conduit was furnished and installed:

1. 603T.1 - Install 1 ea. 2", 4" or 1 1/4" Quad" Conduit (PVC or Steel) in any combination
2. 603T.2 - Install 2 ea. 2", 4" or 1 1/4" Quad Conduits (PVC or Steel) in any combination
3. 603T.3 - Install 4 ea. 4" or 1 1/4" Quad Conduits (PVC or Steel) in any combination
4. 603T.4 - Install 6 ea. 4" or 1 1/4" Quad Conduits (PVC or Steel) in any combination
5. 603T.5 - Install 8 ea. 4" or 1 1/4" Quad Conduits (PVC or Steel) in any combination
6. 603T.6 - Install 12 ea. 4" or 1 1/4" Quad Conduits (PVC or Steel) in any combination
7. 603T.7 - Install 15 ea. 4" or 1 1/4" Quad Conduits (PVC or Steel) in any combination
8. 603T.8 - Install 24 ea. 4" or 1 1/4" Quad Conduits (PVC or Steel) in any combination
9. 603T.9 - Install 30 ea. 4" or 1 1/4" Quad Conduits (PVC or Steel) in any combination

A Quad, consisting of four 1 1/4" conduits shall be supplied as one unit. For purposes of measurement and payment each quad unit of four 1 1/4" ducts shall be counted as one duct.

For any equivalent combination not fitting the above categories payment shall be based on the next higher category.

#### **E. Price to Cover**

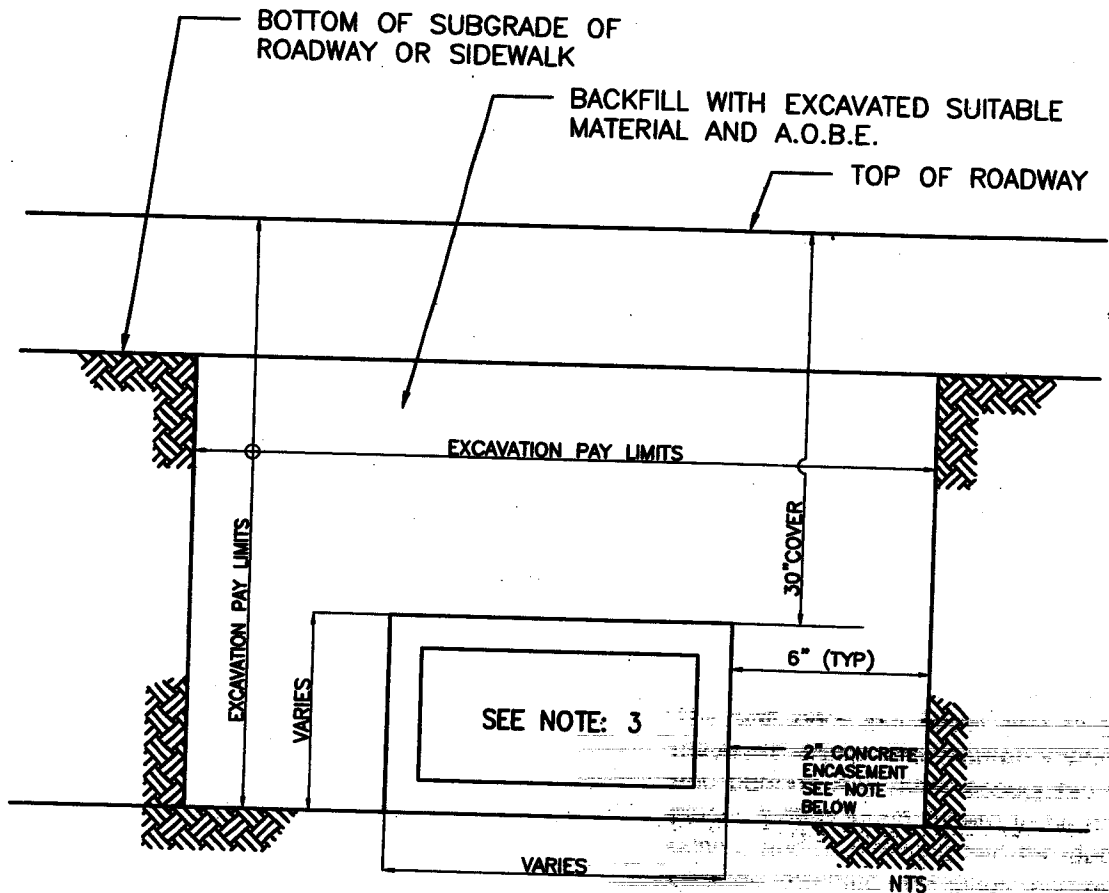
The unit price per linear foot of Conduit trench shall cover the cost of all labor, materials, equipment, insurance and incidentals necessary to furnish, install, rod, rope, and perform any other associated work required to install the conduit completely in place. Where conduits are to be connected to ducts, manholes or boxes, the cost of cutting and/or breaking into the ducts, manholes or boxes, installing and sealing the conduit, including duct plugs; and making repairs to the openings in the structure shall be considered as included in the unit price bid for the installation of the conduit. All acceptance testing, including passing a mandrill with a diameter of 1/8" less than the inside diameter of the duct through the entire length of the duct, as required by the facility operator shall be considered as included in the unit price.

Payment for trench excavation shall be paid under Item JB 405.

Steel protection plates shall be paid for under Item JB 403T

#### **F. References**

1. Sketch JB 603T
2. Item JB 405
3. American Pipe and Plastics, P.O. Box 577, Binghamton, N.Y. 13902



**TYPICAL CONDUIT EXCAVATION AND BACKFILL**

**NOTES:**

**QUEENS, BROOKLYN & STATEN ISLAND**

1- CONCRETE ENCASE REQUIRED IF TOP OF DUCTS IS 20" OR LESS FROM SURFACE AND ALL BENDS, SWEEPS AND CHANGE OF GRADE. FOR COVER LESS THAN 20", 3/8" STEEL (A36M) COVER PLATES IN ADDITION TO THE CONCRETE ENCASEMENT SHALL BE PROVIDED.

**MANHATTAN & BRONX,**

2- FOR COVER LESS THAN 20", 1/4" STEEL (A36M) COVER COVER PLATES IN ADDITION TO THE CONCRETE ENCASEMENT SHALL BE PROVIDED.

3- CONDUIT CONFIGURATION TO BE DETERMINED BY ECS/VERIZON REPRESENTATIVE.

J.B. SKETCH

TRENCH EXCAVATION  
FOR CONDUIT

09/13/2017

CONTRACT NO.

SKETCH NO.  
JB 603T

## **JB 798 - MODIFICATION OF NON CONCRETE YOKE TROLLEY STRUCTURES REMOVAL WHEN CROSSING UTILITY FACILITES**

### **A. Description**

This JB item shall only be applied to trolley structure systems that do not contain concrete yoke foundations. This JB item shall only be used for trolley systems that have rails and wood ties only.

Under this section, the Contractor shall provide all incremental labor, equipment, insurance and incidentals required to maintain and protect and accommodate the integrity of utility facilities that include but are not limited to:

1. Conduits;
2. Conductors;
3. Concrete encased Conduit banks;
4. Steel Pipes; Steam Facilities;
5. Oil-o-static Facilities;
6. Non-cost Sharing Gas Facilities;
7. Steam Facilities;

of various sizes and configurations crossing trolley structures at various angles located within a zone of protection, as indicated on Sketch JB 798, during the removal of trolley structures and subsequent backfilling operations. Utility facilities that run parallel to trolley structures are not included within this item and will be paid for under the appropriate JB item. The work shall be performed in accordance with the contract plans, the specifications, and as encountered during construction and directed by the facility operator.

### **B. Materials - N/A**

### **C. Method of Construction**

The Contractor shall maintain, protect, and accommodate the integrity of all utility facilities of various sizes and configurations crossing trolley structures within a zone of protection as indicated in Sketch JB 798, during removal of trolley structures and subsequent backfilling and compaction operations under other contract item(s). The facility operator shall identify the locations of all utilities within the contract area as required by New York State Industrial Code Rule 753. As provided by the Rule, the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) directly below the pavement base to expose the utility and ascertain the numerical relationships and/or dimensions of these utilities with respect to the proposed excavation. Contractor shall perform test pits at locations determined by the facility operator to expose utility as specified in JB 400. Upon exposing the affected utilities sufficiently, and at the sole discretion of the facility operator to determine relationships and/or dimensions, the Contractor shall be permitted to proceed with care to remove existing trolley structure within the zone of protection whose limit shall be defined as a distance of 24 inches from the outside face of each utility crossing.

#### **D. Method of Measurement**

The quantity to be measured for payment shall be the number of linear feet of modified trolley structure removal within the zone of protection as indicated on JB Sketch 798, measured along the centerline of trench. The trench is defined as one track set containing two rails. The zone of protection shall be defined, for the purpose of this agreement, as the boundary/area designated on the plans or a boundary/area 24 inches to either side of each of the designated facilities, based upon available records and/or information obtained from prior or new test pits, or any combination thereof. Where overlapping of the zones occurs due to multiple facilities, the boundary/area shall be modified to one zone measured from the outside limits. The contract item specified under this section shall not be measured for payment in conjunction with other types of utility items. Modifications to work methods required in areas between zones of protection for multiple utilities or JB facilities shall not be measured for payment and are included in the price bid for this item.

#### **E. Price to Cover**

The unit price per linear foot shall include the incremental cost for all labor, equipment, insurance and incidentals required to maintain and protect and accommodate the integrity of utility facilities during the removal of trolley structures (including rails, timber ties, trolley conduits and main conduit), and backfilling and compacting within a zoned area designated for protection of utilities by the facility operator.

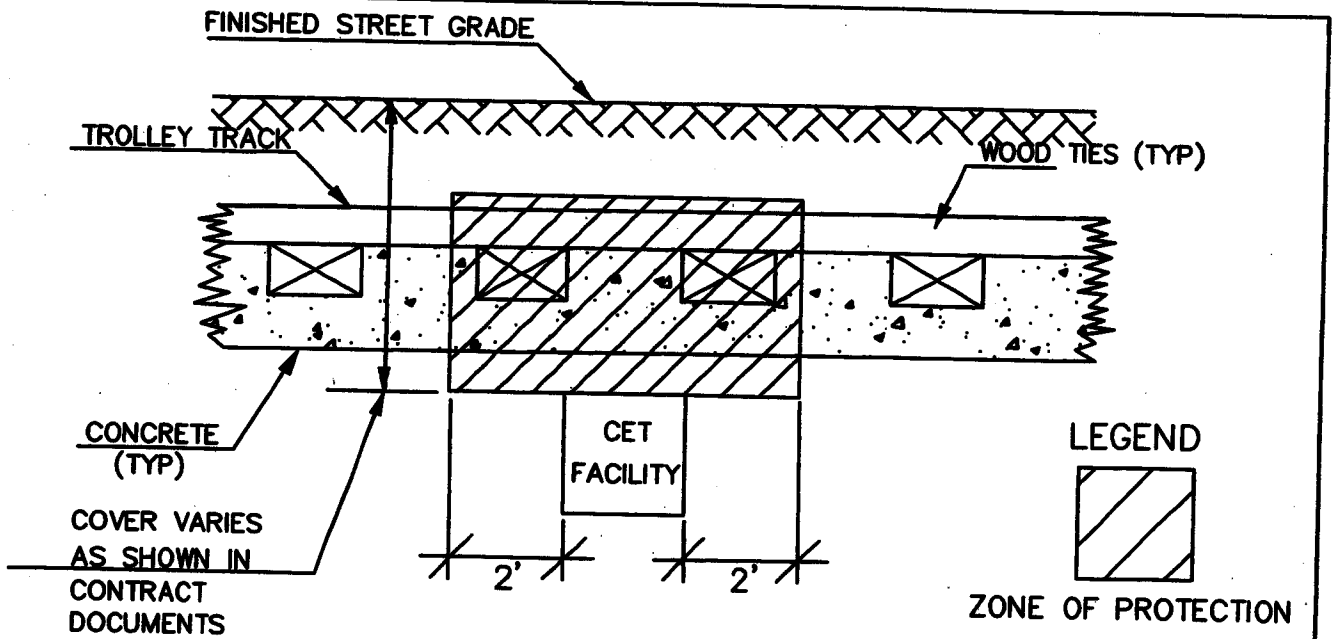
The price shall include any additional cutting, removing and disposing of roadway materials; hand or machine excavation; trucking and disposing of excavated materials, installation and removal of sheeting; and furnishing, installing and compacting backfill that may be required to support, protect, maintain and accommodate the integrity of utility facilities. The price shall also include means to ascertain the numerical relationship between utility and the trolley structure and the incremental cost for providing all vehicular and pedestrian traffic maintenance necessary to perform the work.

The Contractor shall be responsible for any and all ~~damages resulting from and/or~~ due to trolley demolition operations that are not performed in accordance with the specifications.

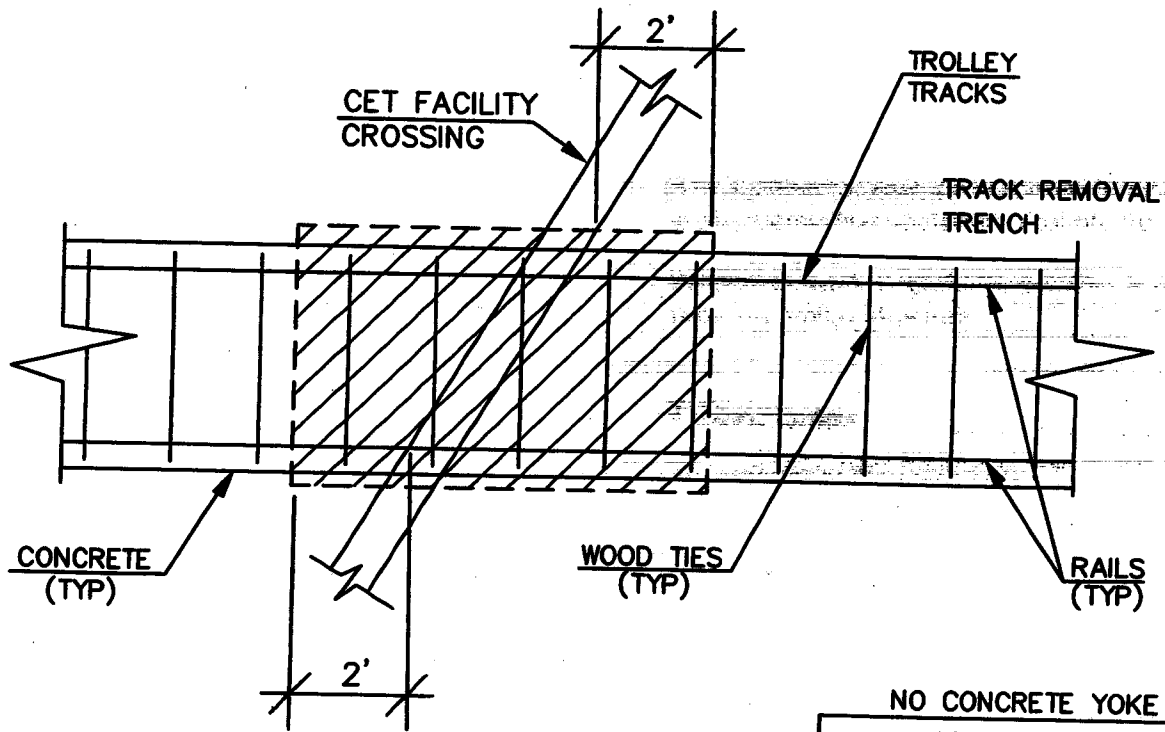
When this work is performed within a mass excavation area, a credit will be taken for the removed trolley structure.

#### **F. References**

1. NYS Industrial Code Rule 753
2. Sketch JB 798



SECTION OF CET FACILITIES CROSSING  
TROLLEY TRACKS



PLAN OF CET FACILITIES  
CROSSING TROLLEY TRACKS

NO CONCRETE YOKE	
J.B. SKETCH	
CET ACCOMODATION SECTIONS CROSSING TROLLEY RAILROAD STRUCTURES	
REVISIONS	CONTRACT NO.
09/13/2017	SKETCH NO. JB 798

## **JB 799 - MODIFICATION OF NON CONCRETE TROLLEY STRUCTURES REMOVAL PARALLEL TO UTILITY FACILITIES**

### **A. Description**

This JB item shall only be applied to trolley structure systems that do not contain concrete yoke foundations. This JB item shall only be used for trolley systems that have rails and wood ties only.

Under this section, the Contractor shall provide all incremental labor, equipment, insurance and incidentals required to maintain, protect, support and accommodate the integrity of utility facilities that include but are not limited to:

1. Conduits;
2. Conductors;
3. Concrete encased Conduit banks;
4. Steel Pipes; Steam Facilities;
5. Oil-o-static Facilities; and
6. Non-cost Sharing Gas Facilities;
7. Steam Facilities.

of various sizes and configurations paralleling or encroaching trolley structures located within a zone of protection, as indicated on the Plans or as directed by the field representative, during all trolley structure removal operations and subsequent backfilling operations. Utility facilities which cross over, under and between the trolley structures are not included within this item and will be paid for under the appropriate JB item. The work shall be performed in accordance with the contract plans, the specifications, and as encountered during construction and directed by the facility operator(s).

### **B. Materials - N/A**

### **C. Method of Construction**

The Contractor shall maintain, protect, support and accommodate the integrity of all utility facilities of various sizes and configurations paralleling or encroaching trolley structures within a zone of protection as indicated on the Plans or as directed by the field representative, during removal of trolley structures and subsequent backfilling and compaction operations under other contract item(s). The facility operator(s) shall identify the locations of all utilities within the contract area as required by New York State Industrial Code Rule 753. As provided by the Rule, the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) directly below the pavement base to expose the utility and ascertain the numerical relationships and/or dimensions of these utilities with respect to the proposed excavation. Contractor shall perform test pits at locations determined by the facility operator to expose utility as specified in JB 400. Upon exposing the affected utilities sufficiently, and at the sole discretion of the facility operator(s) to determine relationships and/or dimensions, the Contractor shall be permitted to proceed with care to remove existing trolley structure within the zone of protection whose limit shall be defined as a distance of 24 inches from the outside face of each utility to the edge of the trolley structure.

#### **D. Method of Measurement**

The quantity to be measured for payment shall be the number of linear feet of modified trolley structure removal within the zone of protection as indicated on the plans, measured along the centerline of trench. The trench is defined as one track set containing two rails. The contract item specified under this section shall not be measured for payment in conjunction with other types of utility items. Modifications to work methods required in areas between zones of protection for multiple utilities or JB facilities shall not be measured for payment and are included in the price bid for this item.

#### **E. Price to Cover**

The unit price per linear foot shall include the incremental cost for all labor, equipment, insurance and incidentals required to maintain, protect, support and accommodate the integrity of utility facilities paralleling or encroaching trolley structures during the removal of trolley structures (including rails, timber ties, trolley conduits, and main conduits), and backfilling and compacting within a zoned area designated for protection of utilities by the facility operator(s).

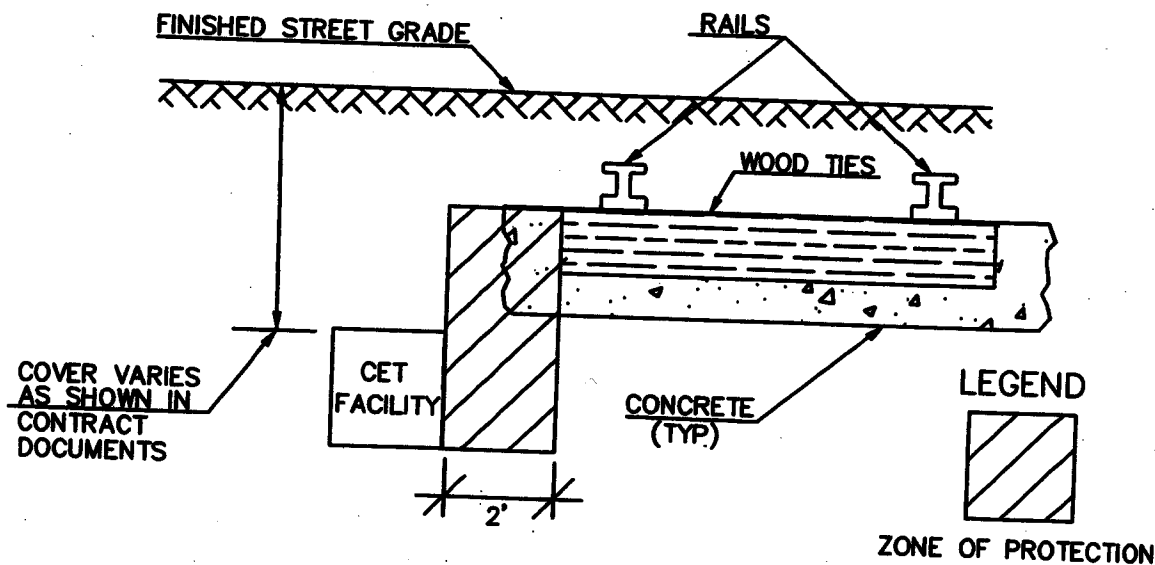
The unit price shall also include any additional cutting, removing and disposing of roadway materials; hand or machine excavation; trucking and disposing of excavated materials, installation and removal of sheeting; and furnishing, installing and compacting backfill that may be required to support, protect, maintain and accommodate the integrity of utility facilities. The price shall also include means to ascertain the numerical relationship between utility and the trolley structure, and the incremental cost for providing all vehicular and pedestrian traffic maintenance necessary to perform the work.

The Contractor shall be responsible for any and all damages resulting from and/or due to trolley demolition operations that are not performed in accordance with the specifications.

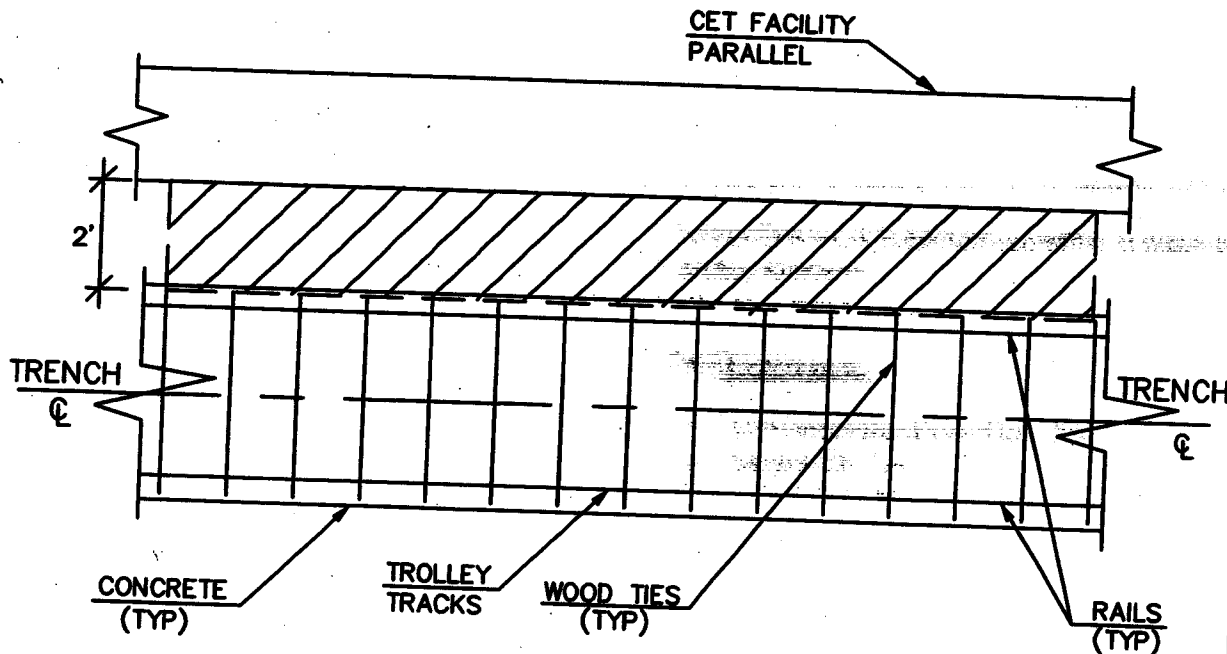
When this work is performed within a mass excavation area, a credit will be taken for the removed trolley structure.

#### **F. References**

1. NYS Industrial Code Rule 753
2. Sketch JB 799



**SECTION OF CET FACILITIES PARALLELING TROLLEY TRACKS**



**PLAN OF CET FACILITIES PARALLELING TROLLEY TRACKS**

NO CONCRETE YOKE  
J.B. SKETCH

CET ACCOMODATION  
FACILITIES PARALLEL  
TROLLEY RAILROAD  
STRUCTURES

REVISIONS
09/13/2017

CONTRACT NO.	SKETCH NO. JB 799
--------------	----------------------



## **JB 800 - MODIFICATION OF CONCRETE YOKE TROLLEY STRUCTURES REMOVAL WHEN CROSSING UTILITY FACILITIES**

### **A. Description**

This JB item shall only be applied to trolley structure systems that contain concrete yoke foundations. This JB item shall not be used for trolley systems that have rails and wood ties only.

Under this section, the Contractor shall provide all incremental labor, equipment, insurance and incidentals required to maintain and protect and accommodate the integrity of utility facilities that include but are not limited to:

1. Conduits
2. Conductors
3. Concrete encased conduit banks
4. Steel pipes
5. Oil-o-static facilities
6. Non-cost Sharing Gas Facilities and
7. Steam Facilities

of various sizes and configurations crossing trolley structures at various angles located within a zone of protection, as indicated on Sketch JB 800, during the removal of trolley structures and subsequent backfilling operations. Utility facilities that run parallel to trolley structures are not included within this item and will be paid for under the appropriate JB item. The work shall be performed in accordance with the contract plans, the specifications, and as encountered during construction and directed by the facility operator.

### **B. Materials – N/A**

### **C. Method of Construction**

The Contractor shall maintain, protect, and accommodate the integrity of all utility facilities of various sizes and configurations crossing trolley structures within a zone of protection as indicated in Sketch JB 800, during removal of trolley structures and subsequent backfilling and compaction operations under other contract item(s). The facility operator shall identify the locations of all utilities within the contract area as required by New York State Industrial Code Rule 753. As provided by the Rule, the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) directly below the pavement base to expose the utility and ascertain the numerical relationships and/or dimensions of these utilities with respect to the proposed excavation. Contractor shall perform test pits to expose the utilities as specified under JB 400. Upon exposing the affected utilities sufficiently, and at the sole discretion of the facility operator to determine relationships and/or dimensions, the Contractor shall be permitted to proceed with hand held power tools to remove existing trolley structure within the zone of protection whose limit shall be defined as a perimeter located 24 inches from the outside face of each utility crossing.

#### **D. Method of Measurement**

The quantity to be measured for payment shall be the number of linear feet of modified trolley structure removal within the zone of protection as indicated on JB Sketch 800, measured along the centerline of trench. The trench is defined as one track set containing two rails. The zone of protection shall be defined, for the purpose of this agreement, as the boundary/area designated on the plans or a boundary/area 3 feet to either side of each of the designated facilities, based upon available records and/or information obtained from prior or new test pits, or any combination thereof. Where overlapping of the zones occurs due to multiple facilities, the boundary/area shall be modified to one zone measured from the outside limits. The contract item specified under this section shall not be measured for payment in conjunction with other types of utility items. Modifications to work methods required in areas between zones of protection for multiple utilities or JB facilities shall not be measured for payment and are included in the price bid for this item.

#### **E. Price to Cover**

The unit price per linear foot shall include the incremental cost for all labor, equipment, insurance and incidentals required to maintain and protect and accommodate the integrity of utility facilities during the removal of trolley structures (including rails, timber ties, yokes, trolley conduits, main conduit, rail and yoke foundations), and backfilling and compacting within a zoned area designated for protection of utilities by the facility operator.

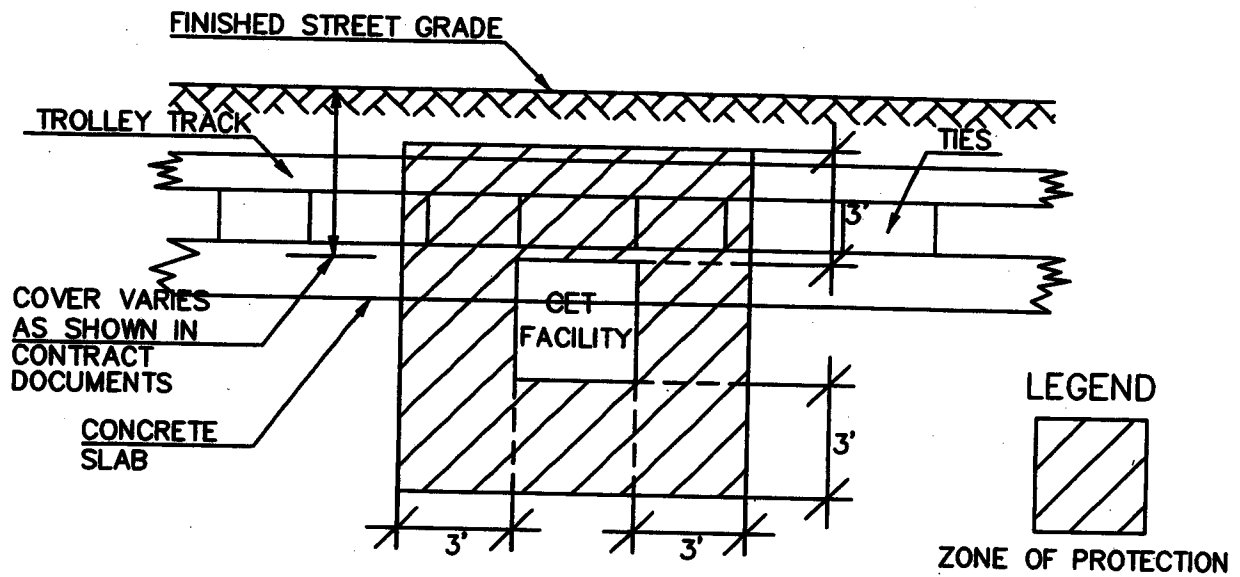
The unit price shall also include any additional cutting, removing and disposing of roadway materials; hand or machine excavation; trucking and disposing of excavated materials, installation and removal of sheeting; and furnishing, installing and compacting backfill that may be required to support, protect, maintain and accommodate the integrity of utility facilities. The unit price shall also include the incremental cost for providing all vehicular and pedestrian traffic maintenance necessary to perform the work.

The Contractor shall be responsible for any and all damages resulting from and/or due to trolley demolition operations that are not performed in accordance with the specifications.

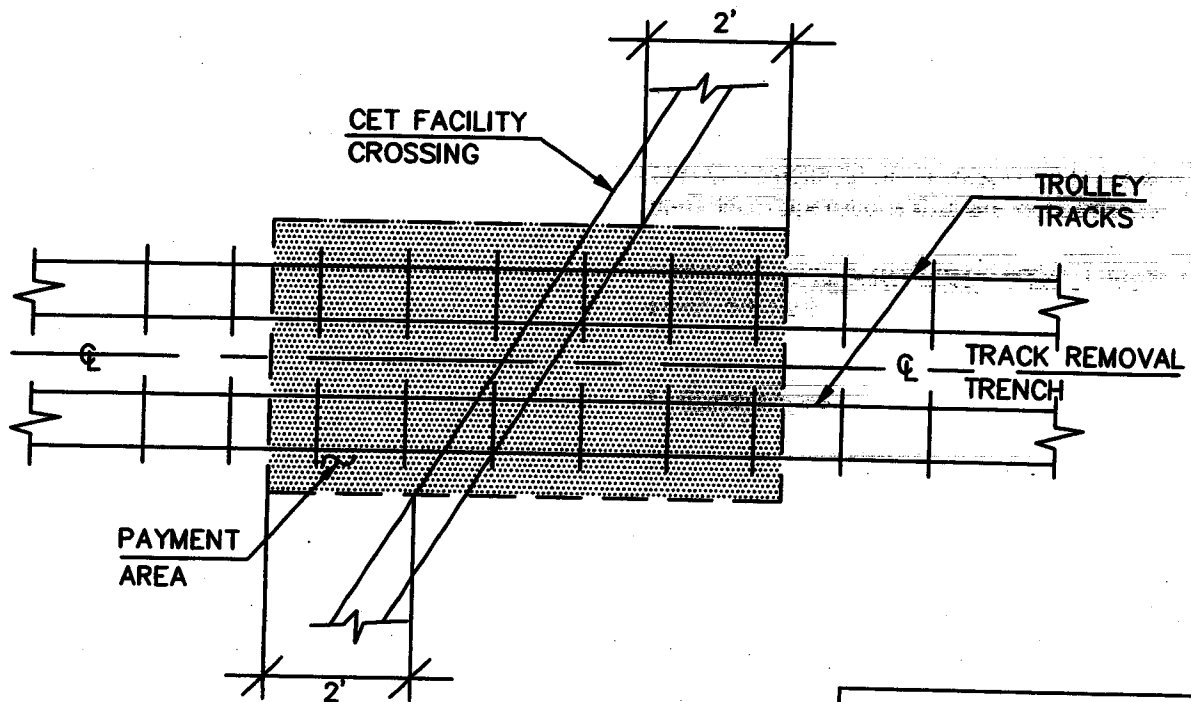
When this work is performed within a mass excavation area, a credit will be taken for the removed trolley structure.

#### **F. References**

1. NYS Industrial Code Rule 753
2. Sketch JB 800



SECTION OF CET FACILITIES CROSSING TROLLEY TRACKS



PLAN OF CET FACILITIES CROSSING TROLLEY TRACKS

CET SKETCH	
CET ACCOMODATION SECTIONS AT TROLLEY RAILROAD STRUCTURES	
REVISIONS	CONTRACT NO.
09/13/2017	SKETCH NO. JB 800

## **JB 801 - MODIFICATION OF CONCRETE YOKE TROLLEY STRUCTURES REMOVAL PARALLEL TO UTILITY FACILITIES**

### **A. Description**

This JB item shall only be applied to trolley structure systems that contain concrete yoke foundations. This JB item shall not be used for trolley systems that have rails and wood ties only.

Under this section, the Contractor shall provide all incremental labor, equipment, insurance and incidentals required to maintain, protect, support and accommodate the integrity of utility facilities that include but are not limited to:

1. Conduits
2. Conductors
3. Concrete encased conduit banks
4. Steel pipes
5. Oil-o-static facilities
6. Non-cost sharing gas facilities and
7. Steam facilities

of various sizes and configurations paralleling or encroaching trolley structures located within a zone of protection, as indicated in sketch JB 801 or as directed by the field representative, during all trolley structure removal operations and subsequent backfilling operations. Utility facilities which cross over, under and between the trolley structures are not included within this item and will be paid for under the appropriate JB item. The work shall be performed in accordance with the contract plans, the specifications, and as encountered during construction and directed by the facility operator(s).

### **B. Materials – N/A**

### **C. Method of Construction**

The Contractor shall maintain, protect, support and accommodate the integrity of all utility facilities of various sizes and configurations paralleling or encroaching trolley structures within a zone of protection as indicated in sketch 801 or as directed by the field representative, during removal of trolley structures and subsequent backfilling and compaction operations under other contract item(s). The facility operator(s) shall identify the locations of all utilities within the contract area as required by New York State Industrial Code Rule 753. As provided by the Rule, the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) directly below the pavement base to expose the utility and ascertain the numerical relationships and/or dimensions of these utilities with respect to the proposed excavation. Contractor shall perform test pits to expose the utilities as specified under JB 400. Upon exposing the affected utilities sufficiently, and at the sole discretion of the facility operator(s) to determine relationships and/or dimensions, the Contractor shall be permitted to proceed with hand held power tools to remove existing trolley structure within the zone of protection whose limit shall be defined as a perimeter located 24 inches from the outside face of each utility.

#### **D. Method of Measurement**

The quantity to be measured for payment shall be the number of linear feet of modified trolley structure removal within the zone of protection as indicated on the plans, measured along the centerline of trench. The trench is defined as one track set containing two rails. The contract item specified under this section shall not be measured for payment in conjunction with other types of utility items. Modifications to work methods required in areas between zones of protection for multiple utilities or JB facilities shall not be measured for payment and are included in the price bid for this item.

#### **E. Price to Cover**

The unit price per linear foot shall include the incremental cost for all labor, equipment, insurance and incidentals required to maintain, protect, support and accommodate the integrity of utility facilities paralleling or encroaching trolley structures during the removal of trolley structures (including rails, timber ties, yokes, trolley conduits, main conduit, rail and yoke foundations), and backfilling and compacting within a zoned area designated for protection of utilities by the facility operator(s).

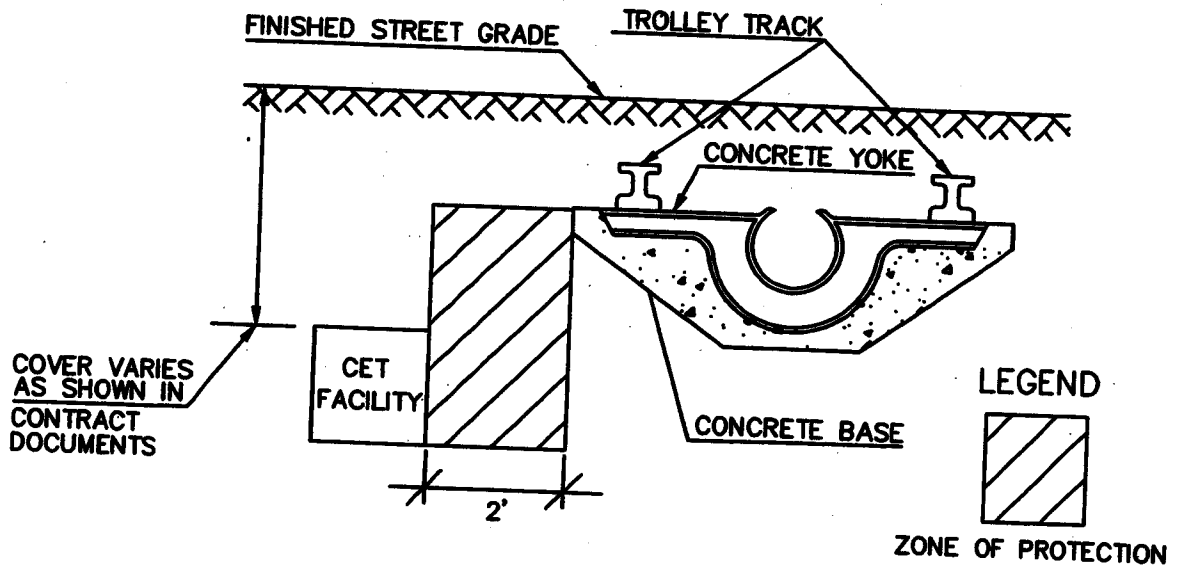
The unit price shall also include any additional cutting, removing and disposing of roadway materials; hand or machine excavation; trucking and disposing of excavated materials, installation and removal of sheeting; and furnishing, installing and compacting backfill that may be required to support, protect, maintain and accommodate the integrity of utility facilities. The unit price shall also include the incremental cost for providing all vehicular and pedestrian traffic maintenance necessary to perform the work.

The Contractor shall be responsible for any and all damages resulting from and/or due to trolley demolition operations that are not performed in accordance with the specifications.

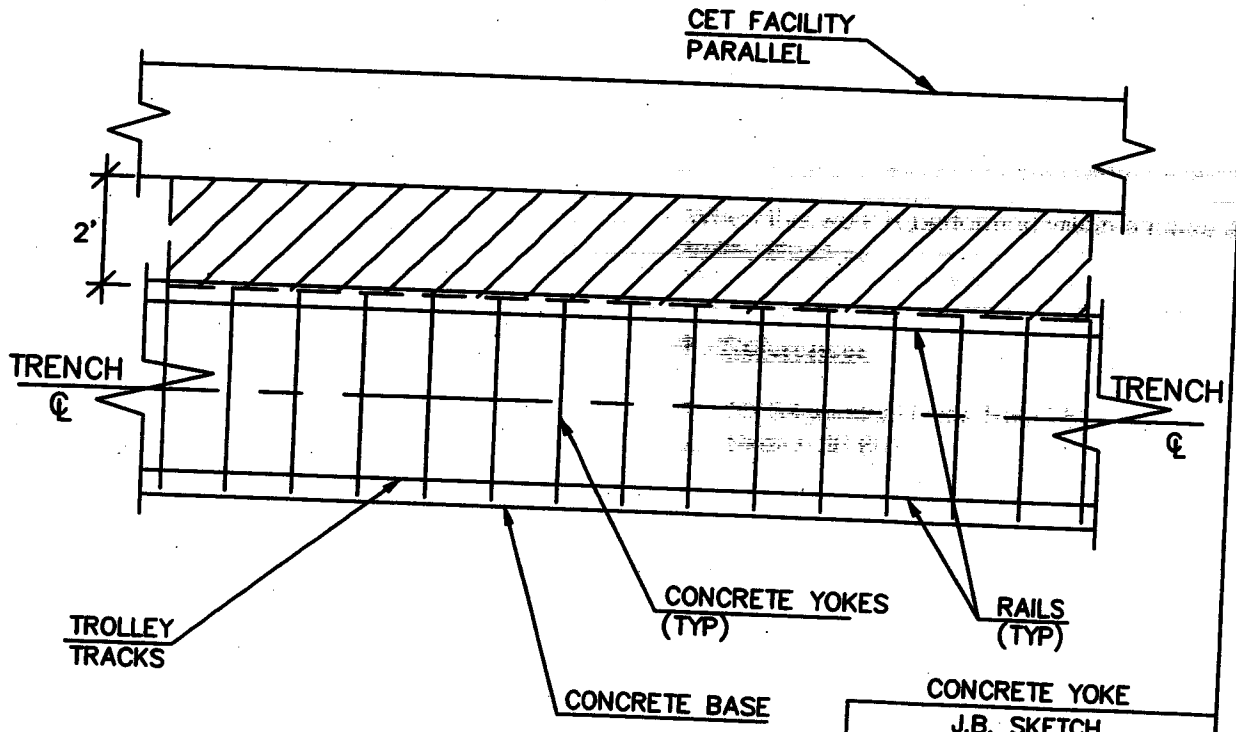
When this work is performed within a mass excavation area, a credit will be taken for the removed trolley structure.

#### **F. References**

1. NYS Industrial Code Rule 753
2. Sketch JB 801



SECTION OF CET FACILITIES PARALLELING TROLLEY TRACKS



PLAN OF CET FACILITIES PARALLELING TROLLEY TRACKS

REVISIONS
09/13/2017

CONCRETE YOKE	
J.B. SKETCH	
CET ACCOMODATION FACILITIES PARALLEL TROLLEY RAILROAD STRUCTURES	
CONTRACT NO.	SKETCH NO. JB 801

JB-47

**LISTING OF COMPANIES NAMED FOR THIS CONTRACT**

**HWKKP005**

**RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

<b><u>COMPANY NAME</u></b>	<b><u>CONTACT NAME</u></b>	<b><u>CONTACT TELEPHONE</u></b>
CONSOLIDATED EDISON	O'NEIL A WRIGHT	(212) 460-3870
TIME WARNER / <i>CHARTER SPECTRUM</i>	JOHN PIAZZA	(718) 977-8173
NATIONAL GRID	NEVILLE JACOBS	(718) 963-5612
VERIZON	AUBREY MAKHANLAL	(718) 977-8165

**PRIVATE UTILITY  
SCOPE OF WORK**

**(NO TEXT IN THIS SECTION)**



**JOINT BID WORKSHEET****CONTRACT NO.- HWKKP005****FOR INFORMATION ONLY****ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE****FOR CONSOLIDATED EDISON CO.****NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION**

<b>JOINT BID ITEM NUMBER</b>	<b>DESCRIPTION</b>	<b>Unit of Measure</b>	<b>Estimated Quantity</b>	<b>Unit Price</b>	<b>Total</b>
JB 100.1	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .1)	EA	8	\$ 360.00	\$ 2,880.00
JB 100.2	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .2)	EA	12	\$ 674.00	\$ 8,088.00
JB 100.3	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .3)	EA	16	\$ 1,000.00	\$ 16,000.00
JB 100.4	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .4)	EA	2	\$ 1,300.00	\$ 2,600.00
JB 101.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .1)	EA	16	\$ 3,062.00	\$ 48,992.00
JB 101.2	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .2)	EA	3	\$ 3,800.00	\$ 11,400.00
JB 101.3	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .3)	EA	10	\$ 5,000.00	\$ 50,000.00
JB 102.2	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .2)	EA	1	\$ 3,850.00	\$ 3,850.00
JB 103.2	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .2)	EA	1	\$ 4,280.00	\$ 4,280.00
JB 104.2	UTILITIES CROSSING TRENCH FOR SEWERS OVER 48" TO 54" DIAMETER (TYPE .2)	EA	1	\$ 4,680.00	\$ 4,680.00
JB 105.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER (TYPE .1)	EA	1	\$ 4,275.00	\$ 4,275.00
JB 105.2	UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER (TYPE .2)	EA	1	\$ 5,050.00	\$ 5,050.00
JB 108.1	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCL. 12" DIAMETER (TYPE .1)	EA	26	\$ 490.00	\$ 12,740.00
JB 108.2	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCL. 12" DIAMETER (TYPE .2)	EA	26	\$ 1,540.00	\$ 40,040.00
JB 108.3	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCL. 12" DIAMETER (TYPE .3)	EA	16	\$ 2,500.00	\$ 40,000.00
JB 109.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .1)	EA	2	\$ 1,260.00	\$ 2,520.00
JB 109.2	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .2)	EA	5	\$ 1,900.00	\$ 9,500.00
JB 109.3	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .3)	EA	2	\$ 3,040.00	\$ 6,080.00
JB 110.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .1)	EA	12	\$ 1,750.00	\$ 21,000.00
JB 110.2	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .2)	EA	4	\$ 2,380.00	\$ 9,520.00
JB 110.3	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .3)	EA	2	\$ 3,400.00	\$ 6,800.00
JB 200	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTION PIPES	L.F.	157	\$ 120.00	\$ 18,840.00
JB 225	INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	EA	13	\$ 5,168.00	\$ 67,184.00
JB 226	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES	EA	23	\$ 3,743.00	\$ 86,089.00
JB 227	REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	EA	8	\$ 1,946.00	\$ 15,568.00
JB 300	SPECIAL CARE EXCAVATION & BACKFILLING	C.Y.	184	\$ 234.00	\$ 43,056.00
JB 301	SPECIAL CARE HAND EXCAVATION OIL-0-STATIC ENCROACHMENT	C.Y.	177	\$ 285.00	\$ 50,445.00

**JOINT BID WORKSHEET****CONTRACT NO. - HWKKP005****FOR INFORMATION ONLY****ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE****FOR CONSOLIDATED EDISON CO.****NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION**

JOINT BID ITEM NUMBER	DESCRIPTION	Unit of Measure	Estimated Quantity	Unit Price	Total
JB 303T	FURNISH, DELIVER AND INSTALL THERMAL SAND BACKFILL	C.Y.	357	\$ 38.00	\$ 13,566.00
JB 330E.1	SUPPORT AND PROTECTION OF UTILITY STRUCTURES WITHIN THE TRENCH	L.F.	80	\$ 25.00	\$ 2,000.00
JB 330E.2	SUPPORT AND PROTECTION OF UTILITY STRUCTURES WITHIN THE TRENCH	L.F.	485	\$ 30.00	\$ 14,550.00
JB 330E.3	SUPPORT AND PROTECTION OF UTILITY STRUCTURES WITHIN THE TRENCH	L.F.	445	\$ 34.00	\$ 15,130.00
JB 400	TEST PITS FOR UTILITY FACILITIES	C.Y.	230	\$ 200.00	\$ 46,000.00
JB 401	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES	C.Y.	525	\$ 240.00	\$ 126,000.00
JB 402.1	EXISTING CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION W/O CONCRETE ENCASEMENT	L.F.	4,765	\$ 71.00	\$ 338,315.00
JB 402.2	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION W/O CONCRETE ENCASEMENT	L.F.	3,165	\$ 44.00	\$ 139,260.00
JB 403	PLACING STEEL PROTECTION PLATES FOR UTILITY FACILITIES	S.F.	384	\$ 2.20	\$ 844.80
JB 403T	PLACING 1" THICK PROTECTION PLATES FOR UTILITY FACILITIES	S.F.	300	\$ 3.00	\$ 900.00
JB 405.1	TRENCH EXCAVATION FOR INSTALLATION OF UTILITY FACILITIES < 5' cover	C.Y.	772	\$ 205.00	\$ 158,260.00
JB 405.2	TRENCH EXCAVATION FOR INSTALLATION OF UTILITY FACILITIES > 5' cover	C.Y.	1,866	\$ 295.00	\$ 550,470.00
JB 406	EXCAVATION FOR INSTALLATION OF UTILITY STRUCTURES	C.Y.	540	\$ 230.00	\$ 124,200.00
JB 410.1	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES UP TO AND INCLUDING 20%	C.Y.	46	\$ 284.00	\$ 13,064.00
JB 410.2	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES OVER 20% UP TO & INCLUDING 40%	C.Y.	641	\$ 355.00	\$ 227,555.00
JB 410.3	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES OVER 40% UP TO & INCLUDING 60%	C.Y.	228	\$ 430.00	\$ 98,040.00
JB 410.5	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES UP TO AND INCLUDING 20% W/ TRENCH DEPTH > THEN FIVE FEET	C.Y.	742	\$ 290.00	\$ 215,180.00
JB 410.6	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES UP TO AND INCLUDING 40% W/ TRENCH DEPTH > THEN FIVE FEET	C.Y.	449	\$ 367.00	\$ 164,783.00
JB 410.7	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES UP TO AND INCLUDING 60% W/ TRENCH DEPTH > THEN FIVE FEET	C.Y.	201	\$ 442.00	\$ 88,842.00
JB 450.1	CONSTRUCTION FIELD SUPPORT - SURVEY CREW	CrHrs	231	\$ 278.00	\$ 64,218.00
JB 450.2	CONSTRUCTION FIELD SUPPORT - SMALL CREW	CrHrs	1,314	\$ 270.00	\$ 354,780.00
JB 450.3	CONSTRUCTION FIELD SUPPORT - MEDIUM CREW	CrHrs	1,346	\$ 780.00	\$1,049,880.00
JB 500	REMOVAL OF ABANDONED UTILITY CONDUITS (NON-CONCRETE, ENCS D)	L.F.	4,800	\$ 3.00	\$ 14,400.00
JB 501	REMOVAL OF ABANDONED MASONRY FOR UTILITY FACILITIES	C.Y.	741	\$ 300.00	\$ 222,300.00
JB 603E.1	INSTALL CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	L.F.	32,125	\$ 4.50	\$ 144,562.50
JB 636 ED	PRIVATELY OWNED UTILITY STRUCTURE HARDWARE ADJUSTED (30" TO UNDER 34" WIDTH)	EA	73	\$ 785.00	\$ 57,305.00

**JOINT BID WORKSHEET****CONTRACT NO.- HWKKP005****FOR INFORMATION ONLY****ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE****FOR CONSOLIDATED EDISON CO.****NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION**

<b>JOINT BID ITEM NUMBER</b>	<b>DESCRIPTION</b>	<b>Unit of Measure</b>	<b>Estimated Quantity</b>	<b>Unit Price</b>	<b>Total</b>
JB 636 EE	PRIVATELY OWNED UTILITY STRUCTURE HARDWARE ADJUSTED (34" TO UNDER 41" WIDTH)	EA	23	\$ 900.00	\$ 20,700.00
JB 636 EH	PRIVATELY OWNED UTILITY STRUCTURE HARDWARE ADJUSTED (75" TO UNDER 125" WIDTH)	EA	12	\$ 1,180.00	\$ 14,160.00
JB 636 R	REPAIR OF UTILITY STRUCTURES	C.Y.	25	\$ 211.00	\$ 5,275.00
JB 638 N	INSTALLATION OF NEW FIELD CONSTRUCTED UTILITY STRUCTURES	CY	236	\$ 990.00	\$ 233,640.00
JB 638 R	BREAKOUT AND REMOVE EXISTING UTILITY STRUCTURE	CY	90	\$ 790.00	\$ 71,100.00
JB 700	SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT U.G. FACIL. WITH LIMITED COVER	C.Y.	1,839	\$ 47.00	\$ 86,433.00
JB 710.1	REMOVAL OF ABANDONED UTILITY STEEL/CAST IRON PIPE, UP TO AND INCL. 12" DIA.. PIPES	L.F.	1,500	\$ 12.00	\$ 18,000.00
JB 781	REMOVABLE CURB SIDEWALK PANEL FOR ACCESS TO UTILITY STRUCTURE OPENINGS	EA	4	\$ 209.00	\$ 836.00
JB 800	MODIFICATION OF TROLLEY STRUCTURE REMOVAL WHEN CROSSING UTILITIES	L.F.	200	\$ 160.00	\$ 32,000.00
JB 801	MODIFICATION OF TROLLEY STRUCTURE REMOVAL PARALLEL TO UTILITIES	L.F.	220	\$ 148.00	\$ 32,560.00
JB 802A	SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	SF	4,750	\$ 3.00	\$ 14,250.00
JB 802B	SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	LF	2,000	\$ 10.00	\$ 20,000.00
JB 803.2	LINE CUT BY PNEUMATIC TOOLS IN LIEU OF SAW CUT	LF	3,684	\$ 8.00	\$ 29,472.00
JB 850	INSTALLATION OF RUBBER SHEETS FOR UTILITY FACILITIES	SF	450	\$ 3.00	\$ 1,350.00
JB 900	EXTRA UTILITY WORK COTS ALLOWANCE	FS	1	\$1,353,700.00	\$1,353,700.00

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 100.1 UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TESTPIT (TYPE .1) EA**

*At the following locations:*

N/E Intr Front St. and Adams St.  
N/E Intr Front St. and Adams St.  
S/E Intr Front St. and Adams St.  
S/W Intr Front St. and Adams St.  
S/W Intr John St. and Jay St.  
N/W Intr Plymouth St. and Adams St.  
S/E Intr Water St. and Gold St.  
C/O John St.; E/O Adams St.

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 100.1 = 8**

**JB 100.2 UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TESTPIT (TYPE .2) EA**

*At the following locations:*

N/E Intr Front St. and Washington St.  
N/W Intr Plymouth St. and Adams St.  
S/S Intr Plymouth St. and Adams St.  
S/W Intr Front St. and Adams St.  
W/S Pearl St.; S/O Front St.  
E/S Main St.; S/O Plymouth St.  
S/E Intr Plymouth St. and Main St.  
N/E Intr Water St. and Gold St.  
S/E Intr Water St. and Gold St.  
S/W Intr John St. and Pearl St.  
S/E Intr John St. and Adams St.  
S/S Front St.; W/O Main St.

**Total Quantity for JB 100.2 = 12**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 100.3                    UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TESTPIT (TYPE .3)                    EA**

*At the following locations:*

- S/E Intr Front St. and Washington St.
- N/S Front St.; W/O Main St.
- W/S Jay St.; S/O John St.
- S/W Intr Front St. and Adams St.
- N/W Intr Front St. and Adams St.
- S/E Intr Front St. and Main St.
- S/W Intr Water St. and Hudson Ave.
- N/W Intr Water St. and Gold St.
- W/S Jay St.; N/O Water Stter St.
- X-ing Jay St.; S/O Plymouth St.
- S/S Front St.; W/O Main St.
- S/E Intr Main St. and Water St.

**Total Quantity for JB 100.3                    = 16**

**JB 100.4                    UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TESTPIT (TYPE .4)                    EA**

*At the following locations:*

- S/E Intr Front St. and Adams St.
- N/W Intr Front St. and Main St.

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 100.4                    = 2**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 101.1 UTILITIES CROSSING TRENCH FOR SEWERS UP TO AND INCL. 24" DIAMETER (TYPE .1) EA**

*At the following locations:*

S/W Intr John St. and Jay St.  
N/E Intr Front St. and Pearl St.  
N/S Water St; F/O #247  
N/S Water St; F/O #244  
X-ing Water St; F/O #263  
X-ing Water St; F/O #267  
S/E Intr John St. and Adams St.  
X-ing Water St.; F/O #205  
X-ing Water St.; F/O #215

**Total Quantity for JB 101.1 = 16**

**JB 101.2 UTILITIES CROSSING TRENCH FOR SEWERS UP TO AND INCL. 24" DIAMETER (TYPE .2) EA**

*At the following locations:*

S/E Intr Plymouth St. and Anchorage Pl.  
S/E Intr John St. and Adams St.  
S/W Intr Pearl St. and Plymouth St.

**Total Quantity for JB 101.2 = 3**

**JB 101.3 UTILITIES CROSSING TRENCH FOR SEWERS UP TO AND INCL. 24" DIAMETER (TYPE .3) EA**

*At the following locations:*

N/E Intr John St. and Jay St.  
S/W Intr John St. and Jay St.  
C/O Water St; F/O #247  
NW Intr Water St. and Gold St.  
NW Intr Water St. and Gold St.  
N/S Water St.; W/O Bridge St.

**AS ENCOUNTERED**

**Total Quantity for JB 101.3 = 10**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 102.2 UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .2) EA**

*At the following locations:*

X-ing John St.; W/O Jay St.

**Total Quantity for JB 102.2 = 1**

**JB 103.2 UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .2) EA**

*At the following locations:*

E/S Pearl St.; F/O #53

**Total Quantity for JB 103.2 = 1**

**JB 104.2 UTILITIES CROSSING TRENCH FOR SEWERS OVER 48" TO 54" DIAMETER (TYPE .2) EA**

*At the following locations:*

S/S John St.; E/O Pearl St.

**Total Quantity for JB 104.2 = 1**

**JB 105.1 UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER (TYPE .1) EA**

*At the following locations:*

S/S John St.; F/O #10

**Total Quantity for JB 105.1 = 1**

**JB 105.2 UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER (TYPE .2) EA**

*At the following locations:*

S/E Intr John St. and Adams St.

**Total Quantity for JB 105.2 = 1**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 108.1**

**UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .1)**

**EA**

*At the following locations:*

W/S Adams St; N/O Water St.  
N/W Intr Front St. and Pearl St.  
S/W Intr Pearl St. and Water St.  
S/W Intr Plymouth St. and Jay St.  
S/S Intr Water St. and Jay St.  
W/S Main St; F/O #40  
S/W Intr John St. and Jay St.  
E/S Main St.; S/O Plymouth St.  
N/S Plymouth St.; E/O Washington St.  
N/S Plymouth St.; F/O #121  
N/W Intr Plymouth St. and Adams St.  
N/E Intr Water St. and Adams St.  
S/S Water St; F/O #244  
S/S Water St; F/O #244  
X-ing Water St; F/O #263  
X-ing Water St; F/O #267  
W/S Jay St.; N/O Water Stter St.  
W/S Jay St.; F/O #42  
X-ing Water St.; F/O #205  
X-ing Water St.; F/O #215  
W/S Main St.; F/O #40

**Total Quantity for JB 108.1 = 26**



**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 108.2**

**UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .2)**

**EA**

*At the following locations:*

N/S Plymouth St.; E/O Washington St.  
E/S Main St; S/O Plymouth St.  
W/S Main St; F/O #40  
W/S Gold St; N/O Front St.  
W/S Gold St; S/O Water St.  
NW Intr Front St. and Pearl St.  
S/W Intr Pearl St. and Water St.  
W/S Adams St.; F/O #133  
NW Intr Plymouth St. and Adams St.  
NW Intr Plymouth St. and Adams St.  
NW Intr Plymouth St. and Pearl St.  
S/S Intr Water St. and Jay St.  
S/S Intr Plymouth St. and Adams St.  
NW Intr Front St. and Main St.  
W/S Pearl St.; S/O Front St.  
E/S Main St.; S/O Plymouth St.  
S/E Intr Plymouth St. and Main St.  
NW Intr Plymouth St. and Adams St.  
S/E Intr Plymouth St. and Anchorage Pl.  
NW Intr John St. and Pearl St.  
S/W Intr Pearl St. and Plymouth St.  
E/S Pearl St.; F/O #53  
C/O Jay St; S/O Water St.

**Total Quantity for JB 108.2 = 26**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 108.3**      **UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE 3)**      **EA**

*At the following locations:*

N/E Intr Water St. and Bridge St.  
S/S Water St.; F/O #200  
S/S Water St.; F/O #200  
S/W Intr Pearl St. and Water St.  
W/S Jay St.; S/O John St.  
W/S Jay St.; F/O #20  
N/W Intr Plymouth St. and Jay St.  
W/S Main St; F/O #30  
N/W Intr Front St. and Main St.  
Intr John St. and Jay St.  
N/E Intr John St. and Jay St.

**Total Quantity for JB 108.3      = 16**

**JB 109.1**      **UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" (TYPE .1)**      **EA**

*At the following locations:*

S/E Intr Front St. and Adams St.  
S/S Front St.; F/O #61

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 109.1      = 2**

**JB 109.2**      **UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" (TYPE .2)**      **EA**

*At the following locations:*

S/S Front St; W/O Washington St.  
S/W Intr Water St. and Gold St.  
S/W Intr Water St. and Gold St.  
C/O Jay St; S/O Water St.  
N/S Water St.; E/O Bridge St.

**Total Quantity for JB 109.2      = 5**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 109.3            UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" (TYPE 3)            EA**

*At the following locations:*

Intr Water St. and Hudson Ave.  
N/W Intr Water St. and Gold St.

**Total Quantity for JB 109.3            = 2**

**JB 110.1            UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 24" AND UP TO 36" (TYPE .1)            EA**

*At the following locations:*

S/W Intr Pearl St. and Water St.  
S/S Intr Plymouth St. and Adams St.  
S/S Water St; F/O #244  
S/S Water St; F/O #244  
X-ing Water St; F/O #263  
X-ing Water St; F/O #267  
X-ing Water St.; F/O #205  
X-ing Water St.; F/O #215

**Total Quantity for JB 110.1            = 12**

**JB 110.2            UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 24" AND UP TO 36" (TYPE 2)            EA**

*At the following locations:*

S/W Intr Pearl St. and Water St.  
S/W Intr Water St. and Gold St.  
N/E Intr Water St. and Bridge St.

**Total Quantity for JB 110.2            = 4**

**JB 110.3            UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 24" AND UP TO 36" (TYPE 3)            EA**

*At the following locations:*

S/W Intr Pearl St. and Water St.  
N/S Water St.; W/O Bridge St.

**Total Quantity for JB 110.3            = 2**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 200**

**EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTION PIPES**

**LF**

*At the following locations:*

N/E Intr Front St. and Washington St.  
N/S Front St.; W/O Main St.  
N/W Intr Front St. and Main St.  
S/E Intr Main St. and Water St.  
E/S Main St; S/O Plymouth St.  
S/E Intr Front St. and Adams St.  
W/S Jay St.; S/O John St.

**Total Quantity for JB 200 = 157**

**JB 225**

**INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES**

**EA**

*At the following locations:*

N/E Intr Front St. and Washington St.  
S/E Intr Front St. and Washington St.  
S/E Intr Main St. and Water St.  
N/E Intr Plymouth St. and Adams St.  
N/W Intr Water St. and Hudson Ave.  
S/W Intr Water St. and Hudson Ave.  
N/E Intr Water St. and Bridge Stidge St.  
S/E Intr Water St. and Bridge Stidge St.  
S/W Intr Gold St. and Water St.  
S/E Intr Gold St. and Water St.  
S/E Intr Water St. AND Gold St.  
N/E Intr Water St. & Gold St.  
N/W Intr Water St. 7 Gold St.

**Total Quantity for JB 225 = 13**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 226**

**INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES**

**EA**

*At the following locations:*

N/S Front St.; W/O Main St.  
N/W Intr Front St. and Main St.  
N/W Intr Main St. and Water St.  
N/E Intr Main St. and Water St.  
S/E Intr Plymouth St. and Main St.  
N/W Intr Plymouth St. and Washington St.  
N/W Intr Plymouth St. and Adams St.  
W/S Intr Plymouth St. and Anchorage Pl.  
S/E Intr Front St. and Adams St.  
S/W Intr Front St. and Adams St.  
N/W Intr Front St. and Adams St.  
N/E Intr John St. and Jay St.  
S/E Intr John St. and Jay St.  
S/W Intr John St. and Jay St.  
N/S Plymouth St.; W/O Jay St.  
S/S Plymouth St.; E/O Jay St.  
W/S Jay St.; S/O Water St.  
E/S Pearl St.; S/O John St.  
N/S John St.; E/O Pearl St.  
S/W Intr John St. and Pearl St.  
N/S Water St.; F/O #247  
N/S Water St.; F/O #247  
S/S Water St.; F/O #244

**Total Quantity for JB 226 = 23**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 227**

**REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES**

**EA**

*At the following locations:*

N/E Intr Front St. and Main St.  
N/W Intr Front St. and Main St.  
N/W Intr Main St. and Water St.  
N/E Intr Main St. and Water St.  
S/E Intr Front St. and Adams St.  
N/W Intr Front St. and Adams St.  
E/S Jay St; N/O Plymouth St.  
E/S Adams St.; F/O #56

**Total Quantity for JB 227            = 8**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 300**

**SPECIAL CARE EXCAVATION AND BACKFILING**

**CY**

*At the following locations:*

N/S Plymouth St.; E/O Washington St.  
E/S Main St; S/O Plymouth St.  
W/S Main St; F/O #40  
N/E Intr Water St. and Bridge St.  
N/W Intr Front St. and Pearl St.  
S/W Intr Pearl St. and Water St.  
N/S Intr Gold St. and Front St.  
S/S Front St; W/O Washongton St.  
S/S Front St; 100' W/O Washongton St.  
N/S Front St.; E/O Main St.  
S/S Front St.; E/O Main St.  
W/S Jay St.; F/O #20  
N/E Intr Plymouth St. and Adams St.  
S/E Intr Front St. and Adams St.  
S/S John St.; E/O Pearl St.  
S/W Intr John St. and Jay St.  
S/E Intr Front St. and Adams St.  
E/S Main St.; S/O Plymouth St.  
N/E Intr Plymouth St. and Main St.  
N/W Intr Plymouth St. and Adams St.  
N/E Intr Water St. and Adams St.  
S/S Intr Plymouth St. and Adams St.  
W/S Gold St.; S/O Water St.  
W/S Jay St.; N/O Water Stter St.  
W/S Jay St.; N/O Water Stter St.  
W/S Jay St.; F/O #42-52  
S/W Intr John St. and Pearl St.  
W/S Pearl St.; S/O John St.  
S/E Intr John St. and Adams St.  
N/W Intr Pearl St. and Plymouth St.  
E/S Pearl St.; S/O Plymouth St.  
E/S Pearl St.; F/O #53  
S/W Intr Water St. and Bridge St.  
N/S Intr Water St. and Bridge St.

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**Total Quantity for JB 300 = 184**

**JB 301                    SPECIAL CARE EXCAVATION AND BACKFILLING FOR OIL-O-STATIC PIPES                    CY**

*At the following locations:*

- W/S Jay St.; S/O John St.
- W/S Jay St.; F/O #20
- W/S Jay St.; N/O Plymouth St.
- N/W Intr Plymouth St. and Jay St.
- S/W Intr Plymouth St. and Jay St.
- Intr John St. and Jay St.
- N/W Intr Plymouth St. and Pearl St.
- S/S Intr Water St. and Jay St.
- N/W Intr John St. and Jay St.
- S/S Water St; F/O #244
- S/W Intr Water St. and Gold St.
- S/W Intr Water St. and Bridge St.

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 301 = 177**



**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 303T**

**FURNISH, DELIVER AND INSTALL THERMAL SAND BACKFILL**

**CY**

*At the following locations:*

S/W Intr Jay St. and Water St.  
N/E Intr Gold St. and Front St.  
N/S Intr Gold St. and Front St.  
W/S Jay St.; S/O John St.  
W/S Jay St.; F/O #20  
W/S Jay St.; N/O Plymouth St.  
N/W Intr Plymouth St. and Jay St.  
S/W Intr Plymouth St. and Jay St.  
Intr John St. and Jay St.  
N/W Intr Plymouth St. and Pearl St.  
W/S Pearl St.; F/O #58  
S/S Intr Water St. and Jay St.  
N/S John St.; E/O Pearl St.  
S/W Intr John St. and Jay St.  
N/W Intr John St. and Jay St.  
E/S Gold St. Btwn Water St. and Front St.  
C/O Water St; F/O #247  
S/S Water St; F/O #244  
N/W Intr Water St. and Gold St.  
N/E Intr Water St. and Gold St.  
S/E Intr Water St. and Gold St.  
S/W Intr Water St. and Gold St.  
X-ing Jay St.; S/O Plymouth St.  
S/E Intr Plymouth St. and Jay St.  
S/E Intr Plymouth St. and Jay St.  
N/E Intr Plymouth St. and Jay St.  
S/W Intr John St. and Pearl St.  
W/S Pearl St.; F/O #155  
N/W Intr Water St. and Pearl St.  
C/O Jay St; S/O Water St.  
S/W Intr Water St. and Bridge St.  
N/S Intr Water St. and Bridge St.  
W/S Pearl St. Btwn Front St. and Water St.

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**AS ENCOUNTERED**

**Total Quantity for JB 303T = 357**

**JB 330E.1 SUPPORT & PROTECT ELEC, GAS & STEAM FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE W/IN TRENCH LIMITS (TYPE .1) LF**

*At the following locations:*

S/S Water St; F/O #267

W/S Pearl St.; F/O #155

**Total Quantity for JB 330E.1 = 80**

**JB 330E.2 SUPPORT & PROTECT ELEC, GAS & STEAM FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE W/IN TRENCH LIMITS (TYPE .2) LF**

*At the following locations:*

N/W Intr Plymouth St. and Adams St.

S/S Intr Plymouth St. and Adams St.

S/S John St.; W/O Jay St.

S/E Intr Plymouth St. and Main St.

E/S Gold St. Btwn Water St. and Front St.

S/W Intr Water St. and Gold St.

N/W Intr John St. and Pearl St.

C/O Jay St; S/O Water St.

**Total Quantity for JB 330E.2 = 485**

**JB 330E.3 SUPPORT & PROTECT ELEC, GAS & STEAM FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE W/IN TRENCH LIMITS (TYPE .3) LF**

*At the following locations:*

E/S Jay St; S/O John St.

S/W Intr John St. and Jay St.

S/S Intr Water St. and Hudson Ave.

E/S Gold St. Btwn Water St. and Front St.

C/O Water St; F/O #247

S/E Intr Water St. and Gold St.

W/S Jay St.; S/O Water Stter St.

W/S Jay St.; N/O Water Stter St.

**Total Quantity for JB 330E.3 = 445**



**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 402.1**

**EXISTING OCCUPIED CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION W/O  
CONCRETE ENCASEMENT**

**LF**

*At the following locations:*

N/S Water St.; F/O #247  
E/S Intr Water St. and Bridge St.  
S/E Intr Water St. and Bridge St.  
S/W Intr Water St. and Bridge St.  
C/O Jay St; S/O Water St.  
N/E Intr Gold St. and Front St.  
E/S Gold St; N/O Front St.  
N/E Intr Front St. and Pearl St.  
W/S Pearl St.; S/O Front St.  
E/S Main St.; F/O #33  
N/E Intr Plymouth St. and Adams St.  
S/E Intr Plymouth St. and Adams St.  
N/E Intr Front St. and Adams St.  
S/W Intr Front St. and Adams St.  
N/W Intr Front St. and Adams St.  
N/W Intr Front St. and Main St.  
N/E Intr Front St. and Main St.  
E/S Jay St; S/O John St.

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 402.1 = 4,765**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 402.2**

**EXISTING OCCUPIED NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION W/O  
CONCRETE ENCASEMENT**

**LF**

*At the following locations:*

N/S Plymouth St.; W/O Washington St.  
N/E Intr Plymouth St. and Pearl St.  
S/W Intr Jay St. and Water St.  
N/W Intr Jay St. and Water St.  
N/W Intr Water St. and Main St.  
E/S Main St.; F/O #33  
N/W Intr Plymouth St. and Washington St.  
W/S Adams St.; F/O #133  
W/S Adams St.; S/O Water St.  
S/E Intr Plymouth St. and Adams St.  
N/W Intr Front St. and Main St.  
N/E Intr Front St. and Main St.  
X-ing John St.; W/O Jay St.  
E/S Jay St; S/O John St.  
S/W Intr John St. and Jay St.

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 402.2 = 3,165**

**JB 403**

**PLACING STEEL PROTECTION PLATES FOR UTILITY FACILITIES**

**SF**

*At the following locations:*

N/E Intr Plymouth St. and Adams St.  
S/E Intr Plymouth St. and Adams St.  
E/S Main St.; F/O #37  
X-ing John St.; W/O Jay St.  
S/S John St.; E/O Pearl St.  
Various

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 403 = 384**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 403T**

**PLACING 1" THICK STEEL PROTECTION PLATES FOR UTILITY FACILITIES**

**SF**

*At the following locations:*

Various

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 403T = 300**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 405.1**

**EXCAVATION FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS LESS THAN 5 FEET**

**CY**

*At the following locations:*

C/O Adams St; S/O John St.  
S/E Intr John St. and Adams St.  
C/O Adams St. Btwn John St. and Plymouth St.  
N/S John St.; E/O Adams St.  
C/O John St. Btwn Adams St. and Pearl St.  
X-ing John St. Btwn Adams St. and Pearl St.  
C/O John St.; W/O Pearl St.  
N/W Intr John St. and Pearl St.  
W/S Pearl St.; S/O John St.  
N/S John St.; E/O Pearl St.  
S/E Intr Pearl St. and Plymouth St.  
W/S Intr Pearl St. and Plymouth St.  
X-ing Pearl St; F/O #54  
N/S Water St; F/O #155  
S/S Front St; E/O Pearl St.  
X-ing Pearl St; S/O Front St.  
W/S Intr Pearl St. and Water St.  
X-ing Water St.; F/O #179  
X-ing Water St.; F/O #177  
Intr Water St. and Jay St.  
S/S Water St.; F/O #192  
S/S Water St.; F/O #200  
N/W Intr Water St. and Bridge St.  
N/E Intr Water St. and Bridge St.  
S/S Water St.; F/O #192  
Intr Plymouth St. and Jay St.  
W/S Intr Plymouth St. and Jay St.  
S/W Intr Front St. and Main St.  
N/S Intr Water St. and Main St.  
S/W Intr Plymouth St. and Main St.  
W/S Intr Plymouth St. and Adams St.  
N/E Intr Plymouth St. and Adams St.  
S/S Intr Plymouth St. and Adams St.  
Intr Plymouth St. and Adams St.

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

Intr Water St. and Adams St.  
S/W Intr John St. and Adams St.  
E/S Pearl St.; S/O John St.  
S/E Intr Plymouth St. and Anchorage Pl.  
N/W Intr Plymouth St. and Pearl St.  
E/S Pearl St.; S/O Plymouth St.  
E/S Pearl St.; N/O Water St.  
E/O Pearl St.; X-ing Water St.  
X-ing Pearl St; S/O Water St.  
X-ing Pearl St; S/O Water St.  
W/S Pearl St; S/O Water St.  
W/S Pearl St; S/O Front St.  
W/S Adams St; N/O Front St.  
X-ing Adams St; S/O Water St.  
X-ing Water St.; F/O #177  
X-ing Jay St.; N/O Water St.  
S/E Intr Water St. and Jay St.  
S/W Intr Water St. and Bridge St.  
S/W Intr Water St. and Bridge St.  
N/E Intr Water St. and Bridge St.  
N/S Water St.; E/O Bridge St.  
S/E Intr Water St. and Bridge St.  
S/S Water St.; E/O Bridge St.  
S/S Water St.; F/O #312  
N/E Intr Plymouth St. and Jay St.  
E/S Jay St; N/O Plymouth St.  
S/E Intr John St. and Jay St.  
E/S Gold St; F/O #79  
E/S Anchorage Pl; F/O #54  
W/S Pearl St; F/O #54  
E/S Main St.; F/O #5  
S/S Front St.; W/O Washington St.  
E/S Adams St. Btwn Plymouth St. and John St.  
E/S Adams St.; F/O #133  
S/E Intr Plymouth St. and Main St.

**Total Quantity for JB 405.1 = 772**



**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 405.2**

**EXCAVATION FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS EQUAL OR  
GREATER THAN 5 FEET**

**CY**

*At the following locations:*

W/S Intr Pearl St. and Plymouth St.  
X-ing Pearl St; S/O Plymouth St.  
E/S Pearl St. Btwn Water St. and Plymouth St.  
Intr Water St. and Pearl St.  
Intr Front St. and Water St.  
S/W Intr Pearl St. and Front St.  
N/W Intr Pearl St. and Front St.  
W/S Pearl St. Btwn Front St. and Water St.  
E/S Pearl St. Btwn Front St. and Water St.  
S/S Intr Water St. and Pearl St.  
S/S Water St. Btwn Pearl St. and E/O Jay St.  
W/S Intr Water St. and Jay St.  
S/S Water St.; E/O Jay St.  
X-ing Water St.; F/O #203  
X-ing Water St.; F/O #205  
X-ing Water St.; F/O #205 (2)  
S/S Water St.; W/O Bridge St.  
S/S Water St.; W/O Bridge St.  
W/S Intr Water St. and Bridge St.  
N/E Intr Water St. and Bridge St.  
S/S Plymouth St. Btwn Pearl St. and Jay St.  
E/S Intr Plymouth St. and Jay St.

**Total Quantity for JB 405.2 = 1,866**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 406**

**EXCAVATION FOR UTILITY STRUCTURE**

**CY**

*At the following locations:*

C/O Adams St; S/O John St.  
C/O John St; E/O Adams St.  
C/O John St; W/O Pearl St.  
W/S Pearl St; S/O John St.  
E/S Pearl St; F/O #55  
N/S Water St; F/O #155  
W/S Pearl St. Btwn Front St. and Water St.  
W/S Jay St.; N/O Water St.  
E/S Pearl St; F/O #51  
S/W Intr Pearl St. and Water St.  
S/S Water St.; F/O #286  
C/O Front St; E/O Pearl St.  
E/S Pearl St; S/O Front St.  
C/O Front St; W/O Pearl St.  
S/S Water St.; F/O #200  
W/S Bridge St; N/O Water St.  
N/S Plymouth St.; E/O Jay St.  
N/S Plymouth St.; E/O Jay St.

**Total Quantity for JB 406 = 540**

**JB 410.1**

**MASS EXCAVATION (VOLUME UP TO AND INCLUDING 20%) FROM TOP OF ROADWAY LESS THAN 5 FT DEEP**

**CY**

*At the following locations:*

N/E Intr Front St. and Pearl St.

**Total Quantity for JB 410.1 = 46**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 410.2      MASS EXCAVATION (VOLUME OVER 20% UP TO AND INCLUDING 40%) FROM TOP OF ROADWAY      CY  
LESS THAN 5 FT DEEP**

*At the following locations:*

Intr Pearl St. and Water St.  
Intr Plymouth St. and Jay St.  
Intr Front St. and Pearl St.  
Intr Front St. and Gold St.  
E/S Gold St; N/O Front St.

**Total Quantity for JB 410.2      = 641**

**JB 410.3      MASS EXCAVATION (VOLUME OVER 40% UP TO AND INCLUDING 60%) FROM TOP OF ROADWAY      CY  
LESS THAN 5 FT DEEP**

*At the following locations:*

Intr Water St. and Gold St.

**Total Quantity for JB 410.3      = 228**

**JB 410.5      MASS EXCAVATION (VOLUME UP TO AND INCLUDING 20%) FROM TOP OF ROADWAY EQUAL OR      CY  
GREATER THAN 5 FT**

*At the following locations:*

Intr Pearl St. and Plymouth St.  
W/S Intr Front St. and Pearl St.  
S/S Water St. Btwn Jay St. and Bridge St.

**Total Quantity for JB 410.5      = 742**

**JB 410.6      MASS EXCAVATION (VOLUME OVER 20% UP TO AND INCLUDING 40%) FROM TOP OF ROADWAY      CY  
EQUAL OR GREATER THAN 5 FT**

*At the following locations:*

E/S Intr Front St. and Pearl St.  
Intr Water St. and Jay St.

**Total Quantity for JB 410.6      = 449**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 410.7**      **MASS EXCAVATION (VOLUME OVER 40% UP TO AND INCLUDING 60%) FROM TOP OF ROADWAY EQUAL OR GREATER THAN 5 FT**      **CY**

*At the following locations:*

S/S Water St. Btwn Jay St. and Pearl St.

**Total Quantity for JB 410.7      = 201**

**JB 450.1**      **CONSTRUCTION FIELD SUPPORT REQUIRING AVERAGE SIZE SURVEY CREW PERFORMING TYPICAL SURVEY FUNCTIONS (TYPE .1)**      **CRHRS**

*At the following locations:*

Various

AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

**Total Quantity for JB 450.1      = 231**

**JB 450.2**      **CONSTRUCTION FIELD SUPPORT REQUIRING AVERAGE SMALL SIZE CREW CAPABLE OF PERFORMING VARIOUS TASKS (TYPE .2)**      **CRHRS**

*At the following locations:*

Various

AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

**Total Quantity for JB 450.2      = 1,314**

**JB 450.3**      **CONSTRUCTION FIELD SUPPORT REQUIRING AVERAGE MEDIUM SIZE CREW CAPABLE OF PERFORMING VARIOUS TASKS (TYPE .3)**      **CRHRS**

*At the following locations:*

Various

AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

**Total Quantity for JB 450.3      = 1,346**

**JB 500**      **REMOVAL OF ABANDONED UTILITY CONDUITS (NON-CONCRETE ENCASED)**      **LF**

*At the following locations:*

Various

AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

**Total Quantity for JB 500      = 4,800**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 501**

**REMOVAL OF ABANDONED MASONRY FOR ELEC. AND TEL. FACILITIES**

**CY**

*At the following locations:*

Various

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 501 = 741**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 603E.1**

**INSTALL UTILITY CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT**

**LF**

*At the following locations:*

C/O Adams St; S/O John St.  
S/E Intr John St. and Adams St.  
C/O Adams St. Btwn John St. and Plymouth St.  
N/S John St.; E/O Adams St.  
C/O John St. Btwn Adams St. and Pearl St.  
X-ing John St. Btwn Adams St. and Pearl St.  
C/O John St.; W/O Pearl St.  
N/W Intr John St. and Pearl St.  
W/S Pearl St.; S/O John St.  
N/S John St.; E/O Pearl St.  
S/E Intr Pearl St. and Plymouth St.  
W/S Intr Pearl St. and Plymouth St.  
W/S Intr Pearl St. and Plymouth St.  
X-ing Pearl St; S/O Plymouth St.  
X-ing Pearl St; F/O #54  
E/S Pearl St. Btwn Water St. and Plymouth St.  
Intr Water St. and Pearl St.  
N/S Water St; F/O #155  
S/S Front St; E/O Pearl St.  
Intr Front St. and Water St.  
X-ing Pearl St; S/O Front St.  
S/W Intr Pearl St. and Front St.  
S/W Intr Pearl St. and Front St.  
W/S Pearl St. Btwn Front St. and Water St.  
E/S Pearl St. Btwn Front St. and Water St.  
S/S Intr Water St. and Pearl St.  
W/S Intr Pearl St. and Water St.  
S/S Water St. Btwn Pearl St. and E/O Jay St.  
X-ing Water St.; F/O #179  
X-ing Water St.; F/O #177  
Intr Water St. and Jay St.  
W/S Intr Water St. and Jay St.  
S/S Water St.; E/O Jay St.  
S/S Water St.; F/O #192

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

S/S Water St.; F/O #200  
X-ing Water St.; F/O #203  
X-ing Water St.; F/O #205  
X-ing Water St.; F/O #205 (2)  
S/S Water St.; W/O Bridge St.  
S/S Water St.; W/O Bridge St.  
W/S Intr Water St. and Bridge St.  
N/W Intr Water St. and Bridge St.  
N/E Intr Water St. and Bridge St.  
N/E Intr Water St. and Bridge St.  
S/S Water St.; F/O #192  
S/S Plymouth St. Btwn Pearl St. and Jay St.  
Intr Plymouth St. and Jay St.  
W/S Intr Plymouth St. and Jay St.  
E/S Intr Plymouth St. and Jay St.  
S/W Intr Front St. and Main St.  
N/S Intr Water St. and Main St.  
S/W Intr Plymouth St. and Main St.  
W/S Intr Plymouth St. and Adams St.  
N/E Intr Plymouth St. and Adams St.  
S/S Intr Plymouth St. and Adams St.  
Intr Plymouth St. and Adams St.  
Intr Water St. and Adams St.  
S/W Intr John St. and Adams St.  
E/S Pearl St.; S/O John St.  
S/E Intr Plymouth St. and Anchorage Pl.  
N/W Intr Plymouth St. and Pearl St.  
E/S Pearl St.; S/O Plymouth St.  
E/S Pearl St.; N/O Water St.  
E/O Pearl St.; X-ing Water St.  
X-ing Pearl St; S/O Water St.  
X-ing Pearl St; S/O Water St.  
W/S Pearl St; S/O Water St.  
W/S Pearl St; S/O Front St.  
W/S Adams St; N/O Front St.  
X-ing Adams St; S/O Water St.  
X-ing Water St.; F/O #177

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

X-ing Jay St.; N/O Water St.  
S/E Intr Water St. and Jay St.  
N/E Intr Water St. and Bridge St.  
N/S Water St.; E/O Bridge St.  
S/E Intr Water St. and Bridge St.  
S/S Water St.; E/O Bridge St.  
S/S Water St.; F/O #312  
N/E Intr Plymouth St. and Jay St.  
E/S Jay St; N/O Plymouth St.  
S/E Intr John St. and Jay St.  
E/S Gold St; F/O #79  
E/S Anchorage Pl; F/O #54  
W/S Pearl St; F/O #54  
E/S Main St.; F/O #5  
S/S Front St.; W/O Washington St.  
E/S Adams St. Btwn Plymouth St. and John St.  
E/S Adams St.; F/O #133  
S/E Intr Plymouth St. and Main St.

**Total Quantity for JB 603E.1 = 32,125**

*[Faint, illegible text, likely bleed-through from the reverse side of the page]*



**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 636 ED**

**ADJUSTMENT OF UTILITY HARDWARE (30" TO UNDER 34" WIDTH)**

**EA**

*At the following locations:*

N/E Intr Front St. and Washington St.  
C/O Front St; W/O Washington St.  
S/S Front St; W/O Washington St.  
C/O Front St.; 150' W/O Washington St.  
N/E Intr Front St. and Main St.  
N/W Intr Front St. and Main St.  
S/W Intr Front St. and Main St.  
N/W Intr Front St. and Main St.  
S/E Intr Front St. and Main St.  
N/E Intr Front St. and Main St.  
E/S Main St; F/O #37  
W/S Main St; F/O #30  
N/E Intr Main St. and Water St.  
N/W Intr Main St. and Water St.  
E/S Main St.; F/O #33  
E/S Main St.; S/O Plymouth St.  
N/W Intr Plymouth St. and Adams St.  
N/E Intr Plymouth St. and Adams St.  
S/E Intr Plymouth St. and Adams St.  
W/S Pearl St.; S/O John St.  
E/S Pearl St.; S/O John St.  
S/S John St.; E/O Pearl St.  
S/S John St.; W/O Jay St.  
Intr John St. and Jay St.  
W/S Jay St.; S/O John St.  
N/W Intr Plymouth St. and Kay St.  
S/S Intr Plymouth St. and Jay St.  
C/O Jay St; N/O Water St.  
W/S Jay St; N/O Water St.  
E/S Jay St; N/O Water St.  
S/E Intr Water St. and Jay St.  
S/S Water St. Btwn Jay St. and Bridge St.  
S/S Water St.; W/O Bridge St.  
W/S Bridge St.; S/O Water St.;

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

N/S Water St.; E/O Bridge St.  
N/S Water St.; F/O #255  
N/S Water St.; F/O #261  
N/S Water St.; W/O Gold St.  
W/S Gold St; S/O Water St.  
S/E Intr Water St. and Gold St.  
S/S Water St.; F/O #286  
S/S Water St.; F/O #290  
S/S Water St.; F/O #300  
S/S Water St.; F/O #302  
E/S Gold St; N/O Front St.  
W/S Gold St; N/O Front St.  
N/W Intr Front St. and Gold St.  
S/S Water St.; W/O Gold St.  
N/W Intr Plymouth St. and Pearl St.  
S/W Intr Plymouth St. and Pearl St.  
S/S Plymouth St.; F/O #142  
S/S Plymouth St.; F/O #140  
N/S Plymouth St.; F/O #139  
W/S Pearl St.; F/O #52  
E/S Pearl St.; S/O Plymouth St.  
E/S Pearl St.; F/O #55  
N/S Water St.; W/O Pearl St.  
S/S Water St.; E/O Pearl St.  
S/W Intr Pearl St. and Water St.  
W/S Pearl St.; N/O Front St.  
W/S Adams St.; F/O #192  
N/W Intr Front St. and Pearl St.  
S/W Intr Front St. and Pearl St.  
S/S Intr Front St. and Adams St.  
N/E Intr Front St. and Adams St.  
N/W Intr Front St. and Adams St.  
S/W Intr Front St. and Adams St.  
C/O Front St.; W/O Adams St.

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 636 ED = 73**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 636 EE      ADJUSTMENT OF UTILITY HARDWARE (34" TO UNDER 41" WIDTH)**

**EA**

*At the following locations:*

E/S Main St; F/O #45  
N/S Plymouth St.; E/O Washington St.  
S/S Plymouth St.; E/O Washington St.  
S/S Plymouth St.; F/O #25  
W/S Adams St.; F/O #133  
NW Intr Water St. and Adams St.  
C/O Adams St.; S/O John St.  
C/O John St.; E/O Adams St.  
C/O John St.; W/O Pearl St.  
E/S Jay St; S/O Plymouth St.  
N/S Water St.; F/O #257  
N/S Water St.; W/O Gold St.  
S/E Intr Water St. and Gold St.  
N/S Water St.; F/O #301  
N/S Water St.; F/O #307  
N/S Water St.; F/O #311  
S/S Water St.; F/O #312  
N/E Intr Front St. and Gold St.  
NW Intr Plymouth St. and Pearl St.  
W/S Pearl St.; F/O #52  
W/S Pearl St.; S/O Front St.  
S/S Front St.; E/O Adams St.

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 636 EE      = 23**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 636 EH      ADJUSTMENT OF UTILITY HARDWARE (75" TO UNDER 125" WIDTH)**

**EA**

*At the following locations:*

- S/S Front St; 100' W/O Washington St.
- N/W Intr Front St. and Washington St.
- N/E Intr Front St. and Main St.
- E/S Main St; F/O #37
- S/E Intr Main St. and Water St.
- E/S Jay St; S/O Plymouth St.
- N/S Water St. Btwn Jay St. and Bridge St.
- N/S Plymouth St.; F/O #139

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 636 EH      = 12**

**JB 636 R      REPAIR TO UTILITY STRUCTURES**

**CY**

*At the following locations:*

Various

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 636 R      = 25**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 638 N**

**INSTALLATION OF FIELD CONSTRUCTED UTILITY STRUCTURE**

**CY**

*At the following locations:*

C/O Adams St; S/O John St.  
C/O John St; E/O Adams St.  
C/O John St; W/O Pearl St.  
W/S Pearl St; S/O John St.  
E/S Pearl St; F/O #55  
N/S Water St; F/O #155  
W/S Pearl St. Btwn Front St. and Water St.  
W/S Jay St.; N/O Water St.  
E/S Pearl St; F/O #51  
SW Intr Pearl St. and Water St.  
S/S Water St.; F/O #286  
C/O Front St; E/O Pearl St.  
E/S Pearl St; S/O Front St.  
C/O Front St; W/O Pearl St.  
S/S Water St.; F/O #200  
W/S Bridge St; N/O Water St.  
E/S Main St; F/O #37  
E/S Main St; F/O #45  
N/E Intr Front St. and Main St.  
N/E Intr Main St. and Water St.  
E/S Main St.; F/O #33  
E/S Main St.; F/O #33  
W/S Adams St.; F/O #133  
N/W Intr Water St. and Adams St.  
W/S Adams St.; F/O #192  
N/W Intr Front St. and Adams St.  
N/E Intr Front St. and Adams St.  
S/S Intr Front St. and Adams St.  
N/W Intr Front St. and Pearl St.  
S/E Intr Plymouth St. and Adams St.  
Intr John St. and Jay St.  
S/E Intr Water St. and Jay St.  
W/S Bridge St.; S/O Water St.;  
N/S Water St.; E/O Bridge St.

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

N/S Water St.; F/O #255  
NW Intr Plymouth St. and Kay St.  
NW Intr Plymouth St. and Pearl St.  
N/S Plymouth St.; E/O Jay St.  
S/E Intr Water St. and Gold St.  
N/S Plymouth St.; E/O Jay St.  
NW Intr Front St. and Main St.

**Total Quantity for JB 638 N = 236**

**JB 638 R BREAK OUT AND REMOVE UTILITY STRUCTURE**

**CY**

*At the following locations:*

E/S Main St; F/O #37  
E/S Main St; F/O #45  
N/E Intr Front St. and Main St.  
N/E Intr Main St. and Water St.  
W/S Adams St.; F/O #133  
N/W Intr Water St. and Adams St.  
W/S Adams St.; F/O #192  
N/W Intr Front St. and Adams St.  
N/E Intr Front St. and Adams St.  
S/S Intr Front St. and Adams St.  
N/W Intr Front St. and Pearl St.  
S/E Intr Plymouth St. and Adams St.  
Intr John St. and Jay St.  
S/E Intr Water St. and Jay St.  
W/S Bridge St.; S/O Water St.;  
N/S Water St.; E/O Bridge St.  
N/S Water St.; F/O #255  
NW Intr Plymouth St. and Kay St.  
NW Intr Plymouth St. and Pearl St.  
S/E Intr Water St. and Gold St.  
NW Intr Front St. and Main St.

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 638 R = 90**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 700**

**SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER**

**CY**

*At the following locations:*

Intr Front St. and Main St.  
N/S Front St; W/O Main St.  
N/S Front St; E/O Main St.  
X-ing Main St; F/O #40  
X-ing Main St; F/O #38  
X-ing Main St; F/O #30  
N/S Plymouth St; F/O #92  
N/S Plymouth St; E/O Washington St.  
N/W Intr Plymouth St. and Adams St. (S)  
W/S Intr Adams St. and Water St.  
W/S Adams St.; N/O Water St.  
W/S Adams St.; S/O Water St.  
W/S Adams St.; F/O #56  
N/E Intr Front St. and Adams St.  
N/W Intr Front St. and Adams St.  
C/O Pearl St. Btwn Front St. and Water St.  
Intr Pearl St. and Water St.  
C/O Pearl St.; F/O #55  
C/O Pearl St.; F/O #52  
W/S Intr Pearl St. and Plymouth St.  
N/S Plymouth St; F/O #139  
N/S John St. Btwn Pearl St. and Jay St.  
S/S John St.; W/O Jay St.  
Intr John St. and Jay St.  
S/S John St.; E/O Jay St.  
W/S Jay St.; S/O John St.  
Intr John St. and Jay St.  
X-ing Plymouth St; W/O Jay St.  
C/O Jay St; S/O Plymouth St.  
C/O Jay St; N/O Water St.  
Intr Water St. and Jay St.  
C/O Jay St; S/O Water St.  
X-ing Water St; F/O #215  
E/S Intr Water St. and Bridge St.

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

E/S Bridge St.; N/O Water St.  
E/S Bridge St.; S/O Water St.  
X-ing Water St; F/O #247  
X-ing Water St; F/O #255  
X-ing Water St; F/O #263  
X-ing Water St; F/O #267  
Intr Water St. and Gold St.  
Gold St; N/O Water St.  
Gold St. Btwn Water St. and Front St.  
Intr Front St. and Gold St.  
S/S Water St; F/O #312  
E/S Jay St; N/O Water St.

AS SHOWN ON CONTRACT DRAWINGS AND DIRECTED BY A CON EDISON REP.

**Total Quantity for JB 700 = 1,839**

**JB 710.1**

**REMOVAL OF ABANDONED UTILITY STEEL/CAST IRON/PLASTIC, UP TO AND INCL. 12" DIAMETER PIPES**

**LF**

*At the following locations:*

Various

**Total Quantity for JB 710.1 = 1,500**

**JB 781**

**REMOVABLE CURB SIDEWALK PANEL FOR ACCESS TO UTILITY STRUCTURE OPENINGS**

**EA**

*At the following locations:*

S/S Intr Plymouth St. and Adams St.

W/S Adams St.; F/O #192

E/S Main St.; F/O #5

W/S Gold St; S/O Water St.

AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

**Total Quantity for JB 781 = 4**



**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 800                    MODIFICATION OF TROLLEY STRUCTURES REMOVAL WHEN CROSSING UTILITY FACILITIES                    LF**

*At the following locations:*

- Intr Plymouth St. and Adams St.
- Intr Plymouth St. and Washington St.
- NW Intr Water St. and Adams St.
- S/E Intr Plymouth St. and Adams St.
- W/S Adams St.; F/O #133
- S/E Intr Plymouth St. and Jay St.
- X-ing Adams St; F/O #133
- C/O Jay St; N/O Plymouth St.

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 800                    = 200**

**JB 801                    MODIFICATION OF TROLLEY STRUCTURES REMOVAL PARALLEL TO UTILITY FACILITIES                    LF**

*At the following locations:*

- Intr Plymouth St. and Adams St.
- Intr Plymouth St. and Washington St.
- N/W Intr Water St. and Adams St.

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 801                    = 220**

**JB 802A                    SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK                    SF**

*At the following locations:*

Various

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 802A                    = 4,750**

**JB 802B                    SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK                    LF**

*At the following locations:*

Various

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 802B                    = 2,000**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 803.2**

**LINE CUT BY PNEUMATIC TOOLS IN LIEU OF SAW CUT ASSOCIATED WITH RDWY REMOVAL  
(LINE CUT ASPHALT AND CONCRETE ROADWAY)**

**LF**

*At the following locations:*

- W/S Pearl St. Btwn Front St. and Water St.
- Intr Pearl St. and Water St.
- N/O Pearl St; W/S Water St.
- Intr Pearl St. and Plymouth St.
- W/S Pearl St. Btwn Plymouth St. and John St.
- Intr Pearl St. and John St.
- N/S John St. Btwn Pearl St. and Jay St.
- Intr John St. and Jay St.
- W/S Jay St. Btwn John St. and Plymouth St.
- Intr Plymouth St. and Jay St.
- W/S Jay St.; S/O Plymouth St.
- W/S Jay St.; N/O Water St.
- Intr Water St. and Jay St.
- W/S Jay St.; S/O Water St.
- X-ing Water St; E/O Gold St.
- N/O Waterl St; E/O Gold St.
- Intr Water St. and Gold St.
- N/O Waterl St; C/O Gold St.
- C/O Gold St. Btwn Water St. and Front St.
- Intr Front St. and Gold St.

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 803.2 = 3,684**

**JB 850**

**INSTALLATION OF RUBBER SHEETS FOR UTILITY FACILITIES**

**SF**

*At the following locations:*

Various

**Total Quantity for JB 850 = 450**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO / VINEGAR HILL (PHASE II AND III)  
BOROUGH OF BROOKLYN**

---

**JB 900**

**EXTRA UTILITY WORK COSTS ALLOWANCE**

**FS**

*At the following locations:*

Various

**AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE**

**Total Quantity for JB 900 = 1**

## HWKKP005

## Borough of Brooklyn

## Schedule: Cost Estimate of Work for JB items

JB ITEM NUMBER	Unit of Measure	Estimated Quantity	DESCRIPTION	Unit Prices	Total Cost
JB 100.1	EACH	12	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTIONS AND/OR TEST PITS (TYPE .1)	\$595.00	\$7,140.00
JB 100.2	EACH	10	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTIONS AND/OR TEST PITS (TYPE .2)	\$808.00	\$8,080.00
JB 100.3	EACH	1	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTIONS AND/OR TEST PITS (TYPE .3)	\$998.00	\$998.00
JB 100.4	EACH	2	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTIONS AND/OR TEST PITS (TYPE .4)	\$1,413.00	\$2,826.00
JB 101.1	EACH	4	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .1)	\$2,364.00	\$9,456.00
JB 101.2	EACH	1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .2)	\$2,394.00	\$2,394.00
JB 101.3	EACH	1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .3)	\$3,309.00	\$3,309.00
JB 101.4	EACH	1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .4)	\$3,630.00	\$3,630.00
JB 102.1	EACH	9	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .1)	\$2,905.00	\$26,145.00
JB 102.2	EACH	6	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .2)	\$2,905.00	\$17,430.00
JB 103.1	EACH	1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .1)	\$3,971.00	\$3,971.00
JB 103.2	EACH	1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .2)	\$3,971.00	\$3,971.00
JB 103.3	EACH	1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .3)	\$4,900.00	\$4,900.00
JB 108.1	EACH	20	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .1)	\$886.00	\$17,720.00
JB 108.2	EACH	12	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .2)	\$1,097.00	\$13,164.00
JB 108.3	EACH	1	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .3)	\$1,322.00	\$1,322.00
JB 109.1	EACH	8	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .1)	\$1,003.00	\$8,024.00
JB 109.2	EACH	2	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .2)	\$1,345.00	\$2,690.00
JB 109.3	EACH	1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .3)	\$1,666.00	\$1,666.00
JB 109.4	EACH	1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .4)	\$2,007.00	\$2,007.00

JB-93

HWKKP005

Verizon

For Information Only

October 2017

HWKKP005

Borough of Brooklyn

Schedule: Cost Estimate of Work for JB Items

JB ITEM NUMBER	Unit of Measure	Estimated Quantity	DESCRIPTION	Unit Price	Total Cost
JB 110.1	EACH	3	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12' AND UP TO 36" DIAMETER (TYPE .1)	\$1,345.00	\$4,035.00
JB 110.2	EACH	4	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12' AND UP TO 36" DIAMETER (TYPE .2)	\$1,505.00	\$6,020.00
JB 200	LF	62	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTION PIPES	\$170.00	\$10,540.00
JB 225	EACH	5	INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	\$2,925.00	\$14,625.00
JB 226	EACH	16	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES	\$1,463.00	\$23,408.00
JB 227	EACH	6	REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES NOT BEING REPLACED	\$1,463.00	\$8,778.00
JB 300	CY	20	SPECIAL CARE EXCAVATION AND BACKFILLING	\$167.00	\$3,340.00
JB 330T1	LF	1,530	SUPPORT AND PROTECTION OF COMMUNICATION UTILITY FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE IN OR IN CLOSE PROXIMITY TO TRENCH LIMITS	\$115.00	\$175,950.00
JB 350T/TWC	LS	1	OVERHEAD ACCOMMODATION PROTECTION OF OVERHEAD FACILITIES, POLES AND APPURTENANCES	\$6,370.00	\$6,370.00
JB 400	CY	50	TEST PITS FOR UTILITY FACILITIES	\$218.00	\$10,900.00
JB 401	CY	107	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES	\$228.00	\$24,396.00
JB 401.AT	CY	175	SPECIAL CARE PAVEMENT EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES CONNECTED TO THE BASE PAVEMENT	\$76.00	\$13,300.00
JB 402T.2A	LF	1,468	EXISTING NON-CONCRETE ENCASED TELECOMM. CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	\$44.00	\$64,592.00
JB 402T.V2A	LF	367	EXISTING VACANT NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	\$26.00	\$9,542.00
JB 403T.2	SF	1,500	FURNISH AND INSTALL STEEL PROTECTION PLATES FOR TELECOMMUNICATIONS FACILITIES	\$14.85	\$22,275.00
JB 636 EE RD	EA	7	ADJUSTMENT OF UTILITY HARDWARE (34" TO UNDER 41" WIDTH)	\$490.00	\$3,430.00
JB 636 EE SW	EA	10	ADJUSTMENT OF UTILITY HARDWARE (34" TO UNDER 41" WIDTH)	\$490.00	\$4,900.00
JB 638N	CY	10	INSTALLATION OF FIELD CONSTRUCTED TELEPHONE UTILITY STRUCTURE	\$2,576.00	\$25,760.00
JB 638R	CY	10	BREAK OUT AND REMOVAL OF UTILITY STRUCTURE	\$353.00	\$3,530.00
JB 700	CY	852	SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER	\$95.00	\$80,940.00
JB 788	LF	135	MODIFICATION OF NON CONCRETE YOKE TROLLEY STRUCTURES REMOVAL WHEN CROSSING UTILITY FACILITIES	\$150.00	\$20,250.00

JB-94

HWKKP005

Verizon

For Information Only

October 2017

HWKKP005

Borough of Brooklyn

Schedule: Cost Estimate of Work for JB Items

JB ITEM NUMBER	Unit of Measure	Estimated Quantity	DESCRIPTION	Unit Price	Total Cost
JB 790	LF	325	MODIFICATION OF NON CONCRETE TROLLEY STRUCTURE REMOVAL WHEN PARALLELING UTILITY FACILITIES	\$32.00	\$10,400.00
JB 802A	SF	8980	SPECIAL MODIFICATION OF WORK FOR INSTALLATION OF NEW SIDEWALK	\$4.00	\$35,920.00
JB 802B	LF	765	SPECIAL MODIFICATION OF WORK METHODS FOR INSTALLATION OF NEW CURB	\$10.00	\$7,650.00
JB 900	FS	1	EXTRA UTILITY WORK COSTS ALLOWANCE	\$ 150,000.00	\$150,000.00
TOTAL					\$881,694.00

**HWKKP005****Borough of Brooklyn****Schedule: Scope of Work for JB items****JB 100.1****UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTIONS  
AND/OR TEST PITS (TYPE .1)****@ THE FOLLOWING LOCATIONS**

	<b>QTY(EA)</b>
SEC INT OF WATER STREET & BRIDGE STREET	1
S SIDE OF WATER STREET BTWN BRIDGE STREET & GOLD STREET	2
SEC INT OF WATER STREET & GOLD STREET	2
E SIDE INT OF FRONT STREET & WASHINGTON STREET	1
NWC INT OF FRONT STREET & ADAMS STREET	2
SWC INT OF FRONT STREET & ADAMS STREET	1
NEC INT OF FRONT STREET & ADAMS STREET	1
NEC INT OF FRONT STREET & PEARL STREET	1
W SIDE INT OF FRONT STREET & MAIN STREET	1

<b>JB 100.1</b>	<b>TOTAL</b>	<b>12</b>
-----------------	--------------	-----------

**JB 100.2****UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTIONS  
AND/OR TEST PITS (TYPE .2)****@ THE FOLLOWING LOCATIONS**

	<b>QTY(EA)</b>
NWC INT OF WATER STREET & GOLD STREET	1
SWC INT OF WATER STREET & GOLD STREET	1
SWC INT OF PLYMOUTH STREET & JAY STREET	1
SEC INT OF JOHN STREET & JAY STREET	2
E SIDE INT OF FRONT STREET & WASHINGTON STREET	1
NEC INT OF FRONT STREET & ADAMS STREET	1
SWC INT OF MAIN STREET & WATER STREET	1
N SIDE OF FRONT STREET BTWN MAIN STREET & WASHINGTON STREET	1
S SIDE OF FRONT STREET BTWN MAIN STREET & YORK STREET	1

<b>JB 100.2</b>	<b>TOTAL</b>	<b>10</b>
-----------------	--------------	-----------

**JB 100.3****UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTIONS  
AND/OR TEST PITS (TYPE .3)****@ THE FOLLOWING LOCATIONS**

	<b>QTY(EA)</b>
SEC INT OF PLYMOUTH STREET & JAY STREET	1

<b>JB 100.3</b>	<b>TOTAL</b>	<b>1</b>
-----------------	--------------	----------

**HWKKP005**

**Borough of Brooklyn**

**Schedule: Scope of Work for JB items**

**JB 100.4**

**UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTIONS AND/OR TEST PITS (TYPE .4)**

**@ THE FOLLOWING LOCATIONS**

SEC INT OF WATER STREET & JAY STREET	QTY(EA)
	1
SEC INT OF PLYMOUTH STREET & JAY STREET	1

<b>JB 100.4</b>	<b>TOTAL</b>	<b>2</b>
-----------------	--------------	----------

**JB 101.1**

**UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .1)**

**@ THE FOLLOWING LOCATIONS**

W SIDE INT OF WATER STREET & ANCHORAGE PLACE	QTY(EA)
	1
S SIDE OF WATER STREET BTWN JAY STREET & BRIDGE STREET	1
NEC INT OF WATER STREET & BRIDGE STREET	1
SEC INT OF FRONT STREET & PEARL STREET	1

<b>JB 101.1</b>	<b>TOTAL</b>	<b>4</b>
-----------------	--------------	----------

**JB 101.2**

**UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .2)**

**@ THE FOLLOWING LOCATIONS**

NEC INT OF WATER STREET & BRIDGE STREET	QTY(EA)
	1

<b>JB 101.2</b>	<b>TOTAL</b>	<b>1</b>
-----------------	--------------	----------

**JB 101.3**

**UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .3)**

**@ THE FOLLOWING LOCATIONS**

S SIDE INT OF WATER STREET & BRIDGE STREET	QTY(EA)
	1

<b>JB 101.3</b>	<b>TOTAL</b>	<b>1</b>
-----------------	--------------	----------

**JB 101.4**

**UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .4)**



Verizon

For Information Only

October 2017

**HWKKP005**  
**Borough of Brooklyn**  
**Schedule: Scope of Work for JB Items**

---

<b>@ THE FOLLOWING LOCATIONS</b>		<b>QTY(EA)</b>
<b>E SIDE INT OF WATER STREET &amp; JAY STREET</b>		<b>1</b>
<b>JB 101.4</b>	<b>TOTAL</b>	<b>1</b>

---

**JB 102.1**  
**UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER**  
**(TYPE .1)**

<b>@ THE FOLLOWING LOCATIONS</b>		<b>QTY(EA)</b>
<b>N SIDE OF WATER STREET BTWN JAY STREET &amp; BRIDGE STREET</b>		<b>1</b>
<b>SWC INT OF WATER STREET &amp; BRIDGE STREET</b>		<b>1</b>
<b>SWC INT OF JOHN STREET &amp; JAY STREET</b>		<b>4</b>
<b>W SIDE INT OF JOHN STREET &amp; JAY STREET</b>		<b>1</b>
<b>N SIDE INT OF JOHN STREET &amp; JAY STREET</b>		<b>1</b>
<b>E SIDE OF PEARL STREET BTWN FRONT STREET &amp; WATER STREET</b>		<b>1</b>
<b>JB 102.1</b>	<b>TOTAL</b>	<b>9</b>

---

**JB 102.2**  
**UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER**  
**(TYPE .1)**

<b>@ THE FOLLOWING LOCATIONS</b>		<b>QTY(EA)</b>
<b>N SIDE INT OF WATER STREET &amp; JAY STREET</b>		<b>1</b>
<b>N SIDE INT OF WATER STREET &amp; PEARL STREET</b>		<b>1</b>
<b>SWC INT OF PLYMOUTH STREET &amp; ANCHORAGE PLACE</b>		<b>1</b>
<b>N SIDE INT OF JOHN STREET &amp; JAY STREET</b>		<b>1</b>
<b>NEC INT OF FRONT STREET &amp; PEARL STREET</b>		<b>2</b>
<b>JB 102.2</b>	<b>TOTAL</b>	<b>6</b>

---

**JB 103.1**  
**UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER**  
**(TYPE .1)**

<b>@ THE FOLLOWING LOCATIONS</b>		<b>QTY(EA)</b>
<b>N SIDE INT OF WATER STREET &amp; JAY STREET</b>		<b>1</b>
<b>JB 103.1</b>	<b>TOTAL</b>	<b>1</b>

---

**HWKKP005**

**Borough of Brooklyn**

**Schedule: Scope of Work for JB items**

**JB 103.2**

**UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER  
(TYPE .2)**

**@ THE FOLLOWING LOCATIONS**

**SEC INT OF PLYMOUTH STREET & PEARL STREET**

**QTY(EA)  
1**

**JB 103.2**

**TOTAL 1**

**JB 103.3**

**UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER  
(TYPE .3)**

**@ THE FOLLOWING LOCATIONS**

**N SIDE INT OF WATER STREET & JAY STREET**

**QTY(EA)  
1**

**JB 103.3**

**TOTAL 1**

**JB 108.1**

**UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING  
12" DIAMETER (TYPE .1)**

**@ THE FOLLOWING LOCATIONS**

**S SIDE OF WATER STREET BTWN JAY STREET & BRIDGE STREET**

**QTY(EA)  
2**

**S SIDE OF WATER STREET BTWN BRIDGE STREET & GOLD STREET**

**3**

**SWC INT OF WATER STREET & GOLD STREET**

**2**

**NEC INT OF PLYMOUTH STREET & WASHINGTON STREET**

**1**

**SWC INT OF PLYMOUTH STREET & JAY STREET**

**1**

**W SIDE INT OF JOHN STREET & JAY STREET**

**2**

**SWC INT JOHN STREET & JAY STREET**

**1**

**N SIDE INT OF JOHN STREET & JAY STREET**

**1**

**S SIDE INT OF FRONT STREET & PEARL STREET**

**1**

**NWC INT OF FRONT STREET & PEARL STREET**

**2**

**W SIDE OF PEARL STREET BTWN FRONT STREET & WATER STREET**

**1**

**SWC INT OF WATER STREET & MAIN STREET**

**1**

**W SIDE OF MAIN STREET BTWN FRONT STREET & WATER STREET**

**1**

**S SIDE OF FRONT STREET BTWN MAIN STREET & WASHINGTON STREET**

**1**

**JB 108.1**

**TOTAL 20**

**HWKKP005****Borough of Brooklyn****Schedule: Scope of Work for JB items****JB 108.2****UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING  
12" DIAMETER (TYPE .2)****@ THE FOLLOWING LOCATIONS**

	QTY(EA)
N SIDE INT OF WATER STREET & JAY STREET	1
NWC INT OF WATER STREET & PEARL STREET	1
SWC INT OF WATER STREET & BRIDGE STREET	1
W SIDE OF BRIDGE STREET BTWN WATER STREET & PLYMOUTH STREET	1
NEC INT OF MAIN STREET & PLYMOUTH STREET	1
N SIDE INT OF PLYMOUTH STREET & ADAMS STREET	1
SEC INT OF PLYMOUTH STREET & ANCHORAGE PLACE	1
SWC INT OF PLYMOUTH STREET & PEARL STREET	1
SWC INT OF PLYMOUTH STREET & JAY STREET	1
N SIDE INT OF JOHN STREET & JAY STREET	1
NWC INT OF FRONT STREET & PEARL STREET	1
SWC INT OF FRONT STREET & MAIN STREET	1

**JB 108.2****TOTAL 12****JB 108.3****UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING  
12" DIAMETER (TYPE 3)****@ THE FOLLOWING LOCATIONS**

	QTY(EA)
SEC INT OF WATER STREET & JAY STREET	1

**JB 108.3****TOTAL 1****JB 109.1****UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO  
24" DIAMETER (TYPE .1)****@ THE FOLLOWING LOCATIONS**

	QTY(EA)
SWC INT OF WATER STREET & PEARL STREET	1
SEC INT OF WATER STREET & ANCHORAGE PLACE	2
NWC INT OF WATER STREET & GOLD STREET	2
S SIDE OF FRONT STREET BTWN MAIN STREET & WASHINGTON STREET	1
S SIDE OF FRONT STREET BTWN ADAMS STREET & PEARL STREET	1
S SIDE OF FRONT STREET BTWN MAIN STREET & WASHINGTON STREET	1

**JB 109.1****TOTAL 8**

**HWKKP005**

**Borough of Brooklyn**

**Schedule: Scope of Work for JB items**

**JB 109.2**  
**UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .2)**

**@ THE FOLLOWING LOCATIONS**

SWC INT OF WATER STREET & PEARL STREET	QTY(EA)
	1
SWC INT OF WATER STREET & GOLD STREET	1

<b>JB 109.2</b>	<b>TOTAL</b>	<b>2</b>
-----------------	--------------	----------

**JB 109.3**  
**UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .3)**

**@ THE FOLLOWING LOCATIONS**

S SIDE INT OF WATER STREET & BRIDGE STREET	QTY(EA)
	1

<b>JB 109.3</b>	<b>TOTAL</b>	<b>1</b>
-----------------	--------------	----------

**JB 109.4**  
**UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .4)**

**@ THE FOLLOWING LOCATIONS**

SEC INT OF WATER STREET & JAY STREET	QTY(EA)
	1

<b>JB 109.4</b>	<b>TOTAL</b>	<b>1</b>
-----------------	--------------	----------

**JB 110.1**  
**UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .1)**

**@ THE FOLLOWING LOCATIONS**

S SIDE OF WATER STREET BTWN JAY STREET & BRIDGE STREET	QTY(EA)
	1
SEC INT OF WATER STREET & GOLD STREET	2

<b>JB 110.1</b>	<b>TOTAL</b>	<b>3</b>
-----------------	--------------	----------

**JB 110.2**  
**UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .2)**

**@ THE FOLLOWING LOCATIONS**

**QTY(EA)**

**HWKKP005**  
**Borough of Brooklyn**  
**Schedule: Scope of Work for JB items**

SEC INT OF PLYMOUTH STREET & ADAMS STREET	2
SWC INT OF PLYMOUTH STREET & ANCHORAGE PLACE	1
SEC INT OF PLYMOUTH STREET & ANCHORAGE PLACE	1

<b>JB 110.2</b>	<b>TOTAL</b>	<b>4</b>
-----------------	--------------	----------

**JB 200****EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTION PIPES****@ THE FOLLOWING LOCATIONS**

	QTY(LF)
SWC INT OF PLYMOUTH STREET & JAY STREET	10
SEC INT OF PLYMOUTH STREET & JAY STREET ON PLYMOUTH STREET	10
SEC INT OF PLYMOUTH STREET & JAY STREET ON JAY STREET	20
N SIDE OF FRONT STREET BTWN MAIN STREET & WASHINGTON STREET	22

<b>JB 200</b>	<b>TOTAL</b>	<b>62</b>
---------------	--------------	-----------

**JB 225****INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES****@ THE FOLLOWING LOCATIONS**

	QTY(EA)
SEC INT OF WATER STREET & BRIDGE STREET	1
SWC INT OF WATER STREET & GOLD STREET	1
SWC INT OF PLYMOUTH STREET & JAY STREET	1
NWC INT OF GOLD STREET & WATER STREET	1
NEC INT OF WATER STREET & PEARL STREET	1

<b>JB 225</b>	<b>TOTAL</b>	<b>5</b>
---------------	--------------	----------

**JB 226****INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES****@ THE FOLLOWING LOCATIONS**

	QTY(EA)
NEC INT OF WATER STREET & JAY STREET	1
N SIDE OF WATER STREET BTWN BRIDGE STREET & GOLD STREET	1
S SIDE OF WATER STREET BTWN BRIDGE STREET & GOLD STREET	1
NEC INT OF MAIN STREET & PLYMOUTH STREET	1
SEC INT OF PLYMOUTH STREET & JAY STREET	2
SEC INT OF JOHN STREET & JAY STREET	2
NWC INT OF FRONT STREET & ADAMS STREET	1
SWC INT OF FRONT STREET & ADAMS STREET	1
NEC INT OF FRONT STREET & ADAMS STREET	1

**HWKKP005**

**Borough of Brooklyn**

**Schedule: Scope of Work for JB items**

SWC INT OF MAIN STREET & WATER STREET	1
SEC INT OF FRONT STREET & MAIN STREET	1
NWC INT OF FRONT STREET & MAIN STREET	1
S SIDE OF FRONT STREET BTWN MAIN STREET & YORK STREET	1
SEC INT OF ADAMS STREET & WATER STREET	1

<b>JB 226</b>	<b>TOTAL</b>	<b>16</b>
---------------	--------------	-----------

**JB 227**

**REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES  
NOT BEING REPLACED**

**@ THE FOLLOWING LOCATIONS**

	QTY(EA)
SEC INT OF WATER STREET & BRIDGE STREET	1
NEC INT OF WATER STREET & JAY STREET	1
SEC INT OF PLYMOUTH STREET & JAY STREET	1
SEC INT OF JOHN STREET & JAY STREET	1
NWC INT OF FRONT STREET & MAIN STREET	1
SEC INT OF ADAMS STREET & WATER STREET	1

<b>JB 227</b>	<b>TOTAL</b>	<b>6</b>
---------------	--------------	----------

**JB 300**

**SPECIAL CARE EXCAVATION AND BACKFILLING**

**@ THE FOLLOWING LOCATIONS**

	QTY(CY)
W SIDE INT OF HUDSON AVENUE & WATER STREET	20

<b>JB 300</b>	<b>TOTAL</b>	<b>20</b>
---------------	--------------	-----------

**JB 330T1**

**SUPPORT AND PROTECTION OF COMMUNICATION UTILITY FACILITIES  
DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE IN OR  
IN CLOSE PROXIMITY TO TRENCH LIMITS**

**@ THE FOLLOWING LOCATIONS**

	QTY(LF)
N SIDE OF WATER STREET BTWN JAY STREET & BRIDGE STREET	180
NEC INT OF WATER STREET & PEARL STREET	50
N SIDE OF WATER STREET BTWN JAY STREET & BRIDGE STREET	15
S SIDE OF WATER STREET BTWN JAY STREET & BRIDGE STREET	100
W SIDE OF BRIDGE STREET BTWN WATER STREET & PLYMOUTH STREET	20
S SIDE OF WATER STREET BTWN BRIDGE STREET & GOLD STREET	500
S SIDE INT OF WATER STREET & GOLD STREET	50

Verizon

For Information Only

October 2017

**HWKKP005**

**Borough of Brooklyn**

**Schedule: Scope of Work for JB items**

W SIDE OF GOLD STREET BTWN WATER STREET & FRONT STREET	140
SEC INT OF PLYMOUTH STREET & PEARL STREET	15
SWC INT OF PLYMOUTH STREET & JAY STREET	15
SEC INT OF PLYMOUTH STREET & JAY STREET	30
W SIDE INT OF JOHN STREET & JAY STREET	50
S SIDE INT OF JOHN STREET & JAY STREET	25
W SIDE OF PEARL STREET BTWN FRONT STREET & WATER STREET	120
W SIDE OF MAIN STREET BTWN FRONT STREET & WATER STREET	220

**JB 330T1** **TOTAL** **1530**

**JB 350T/TWC**

**OVERHEAD ACCOMMODATION PROTECTION OF OVERHEAD FACILITIES, POLES AND APPURTENANCES**

**@ THE FOLLOWING LOCATIONS**

**LS**

AS ENCOUNTERED AND DIRECTED BY THE VERIZON FIELD REPRESENTATIVE **1**

**JB 350T/TWC** **TOTAL** **1**

**JB 400**

**TEST PITS FOR UTILITY FACILITIES**

**@ THE FOLLOWING LOCATIONS**

**QTY(CY)**

AS ENCOUNTERED AND DIRECTED BY THE VERIZON FIELD REPRESENTATIVE **50**

**JB 400** **TOTAL** **50**

**JB 401**

**TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES**

**@ THE FOLLOWING LOCATIONS**

**QTY(CY)**

N SIDE INT OF WATER STREET & JAY STREET	35
E SIDE INT OF WATER STREET & JAY STREET	30
SEC INT OF WATER STREET & ANCHORAGE PLACE	5
SWC INT OF WATER STREET & BRIDGE STREET	12
NWC INT OF WATER STREET & BRIDGE STREET	18
NWC INT OF FRONT STREET & MAIN STREET	7

**JB 401** **TOTAL** **107**

**JB 401.AT**

**SPECIAL CARE PAVEMENT EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES CONNECTED TO THE BASE PAVEMENT**

Verizon

For Information Only

October 2017

**HWKKP005**

**Borough of Brooklyn**

**Schedule: Scope of Work for JB items**

---

**@ THE FOLLOWING LOCATIONS** **QTY(CY)**  
**AS ENCOUNTERED AND DIRECTED BY THE VERIZON FIELD REPRESENTATIVE** **175**

**JB 401.AT**

**TOTAL 175**

---

**JB 402T.2A**

**EXISTING NON-CONCRETE ENCASED TELECOMMUNICATION CONDUITS  
PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT**

**@ THE FOLLOWING LOCATIONS** **QTY(LF)**

<b>N SIDE INT OF WATER STREET &amp; JAY STREET</b>	<b>384</b>
<b>E SIDE INT OF WATER STREET &amp; JAY STREET</b>	<b>600</b>
<b>SEC INT OF WATER STREET &amp; ANCHORAGE PLACE</b>	<b>20</b>
<b>SWC INT OF WATER STREET &amp; BRIDGE STREET</b>	<b>96</b>
<b>NWC INT OF WATER STREET &amp; BRIDGE STREET</b>	<b>336</b>
<b>NWC INT OF FRONT STREET &amp; MAIN STREET</b>	<b>32</b>

**JB 402T.2A**

**TOTAL 1468**

---

**JB 402T.V2A**

**EXISTING NON-CONCRETE ENCASED VACANT TELECOMMUNICATION CONDUITS  
PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT**

**@ THE FOLLOWING LOCATIONS** **QTY(LF)**

<b>N SIDE INT OF WATER STREET &amp; JAY STREET</b>	<b>96</b>
<b>E SIDE INT OF WATER STREET &amp; JAY STREET</b>	<b>150</b>
<b>SEC INT OF WATER STREET &amp; ANCHORAGE PLACE</b>	<b>5</b>
<b>SWC INT OF WATER STREET &amp; BRIDGE STREET</b>	<b>24</b>
<b>NWC INT OF WATER STREET &amp; BRIDGE STREET</b>	<b>84</b>
<b>NWC INT OF FRONT STREET &amp; MAIN STREET</b>	<b>8</b>

**JB 402T.V2A**

**TOTAL 367**

---

**JB 403T.2**

**FURNISH AND INSTALL STEEL PROTECTION PLATES FOR TELECOMMUNICATIONS  
FACILITIES**

**@ THE FOLLOWING LOCATIONS** **QTY(SF)**  
**AS ENCOUNTERED AND DIRECTED BY THE VERIZON FIELD REPRESENTATIVE** **1500**

**JB 403T.2**

**TOTAL 1500**

---



**HWKKP005**

**Borough of Brooklyn**

**Schedule: Scope of Work for JB items**

**JB 636EE RD**

**ADJUSTMENT OF UTILITY HARDWARE (34" TO UNDER 41" WIDTH)**

@ THE FOLLOWING LOCATIONS	QTY(EA)
SWC INT OF WATER STREET & BRIDGE STREET	1
SWC INT OF PLYMOUTH STREET & WASHINGTON STREET	1
N SIDE INT OF JOHN STREET & JAY STREET	1
NEC INT OF FRONT STREET & WASHINGTON STREET	1
NWC INT OF FRONT STREET & ADAMS STREET	1
N SIDE INT OF FRONT STREET & PEARL STREET	1
SEC INT OF PLYMOUTH STREET & JAY STREET	1

**JB 636EE RD**

**TOTAL 7**

**JB 636EE SW**

**ADJUSTMENT OF UTILITY HARDWARE (34" TO UNDER 41" WIDTH)**

@ THE FOLLOWING LOCATIONS	QTY(EA)
S SIDE INT OF FRONT STREET & MAIN STREET	2
W SIDE OF PEARL STREET BTWN WATER STREET & ANCHORAGE PLACE	1
NWC INT OF WATER STREET & JAY STREET	1
NWC INT OF WATER STREET & GOLD STREET	1
SEC INT OF PLYMOUTH STREET & ADAMS STREET	1
S SIDE INT OF PLYMOUTH STREET & ADAMS STREET	1
S SIDE OF PLYMOUTH STREET BTWN ANCHORAGE PLACE & PEARL STREET	1
SWC INT OF FRONT STREET & ADAMS STREET	1
W SIDE OF MAIN STREET BTWN WATER STREET & PLYMOUTH STREET	1

**JB 636EE SW**

**TOTAL 10**

**JB 638 N**

**INSTALLATION OF FIELD CONSTRUCTED UTILITY STRUCTURE**

@ THE FOLLOWING LOCATIONS	QTY(CY)
AS ENCOUNTERED AND DIRECTED BY THE VERIZON FIELD REPRESENTATIVE	10

**JB 638 N**

**TOTAL 10**

**JB 638 R**

**BREAK OUT AND REMOVE UTILITY STRUCTURE**

@ THE FOLLOWING LOCATIONS	QTY(CY)
AS ENCOUNTERED AND DIRECTED BY THE VERIZON FIELD REPRESENTATIVE	10

**HWKKP005****Borough of Brooklyn****Schedule: Scope of Work for JB items**

<b>JB 638 R</b>	<b>TOTAL</b>	<b>10</b>
<b>JB 700</b>		
<b>SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER</b>		
<b>@ THE FOLLOWING LOCATIONS</b>		
	<b>QTY(CY)</b>	
NWC INT OF WATER STREET & PEARL STREET	22	
N SIDE INT OF WATER STREET & JAY STREET	25	
SEC SIDE INT OF WATER STREET & JAY STREET	28	
S SIDE OF WATER STREET BTWN JAY STREET & BRIDGE STREET	40	
SWC INT OF WATER STREET & BRIDGE STREET	12	
S SIDE INT OF WATER STREET & BRIDGE STREET	30	
S SIDE OF WATER STREET BTWN BRIDGE STREET & GOLD STREET	57	
W SIDE OF GOLD STREET BTWN WATER STREET & FRONT STREET	57	
S SIDE OF WATER STREE BTWN GOLD STREET & HUDSON AVENUE	67	
E SIDE INT OF PLYMOUTH STREET & WASHINGTON STREET	10	
S SIDE OF PLYMOUTH STREET BTWN WASHINGTON STREET & ADAMS STREET	60	
S SIDE INT OF PLYMOUTH STREET & PEARL STREET	22	
W SIDE INT OF JOHN STREET & JAY STREET	33	
SEC INT OF JOHN STREET & JAY STREET	14	
E SIDE OF JAY STREET BTWN JOHNS STREET & PLYMOUTH STREET	61	
N SIDE OF FRONT STREET BTWN WASHINGTON STREET & ADAMS STREET	27	
NWC INT OF FRONT STREET & ADAMS STREET	22	
N SIDE OF FRONT STREET BTWN ADAMS STREET & PEARL STREET	33	
S SIDE INT OF FRONT STREET & PEARL STREET	20	
N SIDE INT OF FRONT STREET & PEARL STREET	22	
E SIDE INT OF FRONT STREET & PEARL STREET	13	
NWC INT OF MAIN STREET & WATER STREET	10	
W SIDE INT OF MAIN STREET & WATER STREET	22	
SWC INT OF FRONT STREET & MAIN STREET	33	
W SIDE INT OF FRONT STREET & MAIN STREET	8	
E SIDE INT OF FRONT STREET & MAIN STREET	10	
N SIDE OF FRONT STREET BTWN MAIN STREET & WASHINGTON STREET	22	
S SIDE INT OF PLYMOUTH STREET & JAY STREET	22	
W SIDE OF PEARL STREET BTWN FRONT STREET & ANCHORAGE PLACE	50	
<b>JB 700</b>	<b>TOTAL</b>	<b>852</b>

**HWKKP005****Borough of Brooklyn****Schedule: Scope of Work for JB items****JB 798****MODIFICATION OF NON CONCRETE YOKE TROLLEY STRUCTURES REMOVAL WHEN CROSSING UTILITY FACILITIES****@ THE FOLLOWING LOCATIONS**

	QTY(LF)
N SIDE INT OF PLYMOUTH STREET & MAIN STREET	15
S SIDE INT OF PLYMOUTH STREET & ADAMS STREET	15
SWC INT OF PLYMOUTH STREET & ANCHORAGE PLACE	15
NEC INT OF PLYMOUTH STREET & JAY STREET	15
SEC INT OF PLYMOUTH STREET & JAY STREET	15
E SIDE INT OF JOHN STREET & JAY STREET	15
W SIDE ON ADAMS STREET BTWN PLYMOUTH STREET & WATER STREET	15
NWC INT OF WATER STREET & ADAMS STREET	15
NEC INT OF WATER STREET & ANCHORAGE	15

**JB 798****TOTAL 135****JB 799****MODIFICATION OF NON CONCRETE TROLLEY STRUCTURES REMOVAL PARALLEL TO UTILITY FACILITIES****@ THE FOLLOWING LOCATIONS**

	QTY(LF)
S SIDE OF PLYMOUTH STREET BTWN MAIN STREET & WASHINGTON STREET	200
S SIDE OF PLYMOUTH STREET BTWN WASHINGTON STREET & ADAMS STREET	100
NWC INT OF JOHN STREET & JAY STREET	25

**JB 799****TOTAL 325****JB 802A****SPECIAL MODIFICATION OF WORK METHODS FOR INSTALLATION OF NEW SIDEWALK****@ THE FOLLOWING LOCATIONS**

	QTY(SF)
W SIDE OF PEARL STREET BTWN WATER STREET & ANCHORAGE PLACE	600
N SIDE OF WATER STREET BTWN PEARL STREET & JAY STREET	800
NWC INT OF WATER STREET & JAY STREET	100
N SIDE OF WATER STREET BTWN JAY STREET & BRIDGE STREET	800
N SIDE OF WATER STREET BTWN BRIDGE STREET & GOLD STREET	1600
S SIDE OF WATER STREET BTWN BRIDGE STREET & GOLD STREET	40
N SIDE OF WATER STREET BTWN GOLD STREET & HUDSON AVENUE	60
S SIDE OF PLYMOUTH STREET BTWN WASHINGTON STREET & ADAMS STREET	100
S SIDE INT OF PLYMOUTH STREET & ADAMS STREET	400
SEC INT OF PLYMOUTH STREET & ADAMS STREET	400
S SIDE OF PLYMOUTH STREET BTWN ANCHORAGE PLACE & PEARL STREET	200

**HWKPP005****Borough of Brooklyn****Schedule: Scope of Work for JB items**

SWC INT OF PLYMOUTH STREET & PEARL STREET	50
S SIDE OF PLYMOUTH STREET BTWN PEARL STREET & JAY STREET	800
SWC INT OF JOHN STREET & JAY STREET	400
E SIDE OF JAY STREET BTWN JOHN STREET & PLYMOUTH STREET	180
S SIDE OF FRONT STREET BTWN WASHINGTON STREET & ADAMS STREET	60
S SIDE OF FRONT STREET BTWN ADAMS STREET & PEARL STREET	60
S SIDE INT OF FRONT STREET & PEARL STREET	60
N SIDE INT OF FRONT STREET & PEARL STREET	60
E SIDE INT OF FRONT STREET & PEARL STREET	60
W SIDE OF MAIN STREET BTWN WATER STREET & PLYMOUTH STREET	800
NEC INT OF MAIN STREET & WATER STREET	120
NWC INT OF MAIN STREET & WATER STREET	40
W SIDE OF MAIN STREET BTWN WATER STREET & FRONT STREET	850
SWC INT OF FRONT STREET & MAIN STREET	60
W SIDE INT OF FRONT STREET & MAIN STREET	60
E SIDE INT OF FRONT STREET & MAIN STREET	60
E SIDE OF ADAMS STREET BTWN FRONT STREET & WATER STREET	160
<b>JB 802A</b>	<b>TOTAL 8980</b>

**JB 802B****SPECIAL MODIFICATION OF WORK METHODS FOR INSTALLATION OF NEW CURB****@ THE FOLLOWING LOCATIONS**

	<b>QTY(LF)</b>
N SIDE OF WATER STREET BTWN PEARL STREET & JAY STREET	20
NWC INT OF WATER STREET & JAY STREET	10
N SIDE OF WATER STREET BTWN JAY STREET & BRIDGE STREET	200
N SIDE OF WATER STREET BTWN BRIDGE STREET & GOLD STREET	20
S SIDE OF WATER STREET BTWN BRIDGE STREET & GOLD STREET	5
N SIDE OF WATER STREET BTWN GOLD STREET & HUDSON AVENUE	20
S SIDE OF PLYMOUTH STREET BTWN MAIN STREET & WASHINGTON STREET	200
S SIDE OF PLYMOUTH STREET BTWN WASHINGTON STREET & ADAMS STREET	10
S SIDE INT OF PLYMOUTH STREET & ADAMS STREET	20
SEC INT OF PLYMOUTH STREET & ADAMS STREET	10
S SIDE OF PLYMOUTH STREET BTWN ANCHORAGE PLACE & PEARL STREET	20
SWC INT OF PLYMOUTH STREET & PEARL STREET	10
S SIDE OF PLYMOUTH STREET BTWN PEARL STREET & JAY STREET	25
SWC INT OF JOHN STREET & JAY STREET	10
E SIDE OF JAY STREET BTWN JOHN STREET & PLYMOUTH STREET	15
S SIDE OF FRONT STREET BTWN WASHINGTON STREET & ADAMS STREET	5
S SIDE OF FRONT STREET BTWN ADAMS STREET & PEARL STREET	5
S SIDE INT OF FRONT STREET & PEARL STREET	5
N SIDE INT OF FRONT STREET & PEARL STREET	5

Verizon

For Information Only

October 2017

**HWKKP005**

**Borough of Brooklyn**

**Schedule: Scope of Work for JB items**

E SIDE INT OF FRONT STREET & PEARL STREET	5
W SIDE OF MAIN STREET BTWN WATER STREET & PLYMOUTH STREET	20
NEC INT OF MAIN STREET & WATER STREET	5
NWC INT OF MAIN STREET & WATER STREET	5
W SIDE OF MAIN STREET BTWN WATER STREET & FRONT STREET	10
SWC INT OF FRONT STREET & MAIN STREET	5
W SIDE INT OF FRONT STREET & MAIN STREET	5
E SIDE INT OF FRONT STREET & MAIN STREET	85
E SIDE OF ADAMS STREET BTWN FRONT STREET & WATER STREET	10

**JB 802B**

**TOTAL 765**

**JB 900**

**EXTRA UTILITY WORK COSTS ALLOWANCE**

**@ THE FOLLOWING LOCATIONS**

**AS ENCOUNTERED AND DIRECTED BY THE VERIZON FIELD REPRESENTATIVE**

**QTY (FS)  
1**

**JB 900**

**TOTAL 1**

*[Faint, illegible text, likely bleed-through from the reverse side of the page]*

Verizon

For Information Only

October 2017

HWKKP005

Borough of Brooklyn

Schedule: Cost Estimate of Work for JB Contingency Items

JB CONTINGENCY ITEM NUMBER	Unit	DESCRIPTION	Unit Price
JB 100.5	EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTIONS AND/OR TEST PITS (TYPE .5)	\$1,697.00
JB 100.6	EACH	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTIONS AND/OR TEST PITS (TYPE .6)	\$1,707.00
JB 101.5	EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .5)	\$4,302.00
JB 101.6	EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .6)	\$4,784.00
JB 102.3	EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .3)	\$3,261.00
JB 102.4	EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .4)	\$3,617.00
JB 102.5	EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .5)	\$3,973.00
JB 102.6	EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .6)	\$3,973.00
JB 103.4	EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .4)	\$5,857.00
JB 103.5	EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .5)	\$7,743.00
JB 103.6	EACH	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .6)	\$7,743.00
JB 108.4	EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .4)	\$1,622.00
JB 108.5	EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .5)	\$1,983.00
JB 108.6	EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP 12" DIAMETER (TYPE .6)	\$2,313.00
JB 109.5	EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .5)	\$2,508.00
JB 109.6	EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .6)	\$3,010.00
JB 110.3	EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .3)	\$1,666.00
JB 110.4	EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .4)	\$2,007.00

Verizon

For Information Only

October 2017

HWKKP005

Borough of Brooklyn

Schedule: Cost Estimate of Work for JB Contingency Items

JB CONTINGENCY ITEM NUMBER	Unit	DESCRIPTION	Unit Price
JB 110.5	EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .5)	\$2,508.00
JB 110.6	EACH	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .6)	\$3,010.00
JB 402T.1	LF	EXISTING CONCRETE ENCASED NON-STEEL/IRON CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	\$47.00
JB 402T.1A	LF	EXISTING CONCRETE ENCASED NON-STEEL/IRON CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	\$53.00
JB 402T.2	LF	EXISTING NON-CONCRETE ENCASED NON-STEEL/IRON CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	\$39.00
JB 402T.R1A	LF	EXISTING CONCRETE ENCASED STEEL/IRON CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	\$43.50
JB 402T.R2A	LF	EXISTING NON-CONCRETE ENCASED STEEL/IRON CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	\$42.80
JB 402T.V1	LF	EXISTING VACANT CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	\$35.00
JB 402T.V1A	LF	EXISTING VACANT CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	\$41.00
JB 402T.V2	LF	EXISTING VACANT NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	\$21.00
JB 402T.J1	LF	EXISTING CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT IN WHICH ONLY CONDUIT JOINTS ARE BROKEN OUT AND CONDUITS REMAIN INTACT	\$47.00
JB 402T.J1A	LF	EXISTING CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT IN WHICH ONLY CONDUIT JOINTS ARE BROKEN OUT AND CONDUITS REMAIN INTACT	\$53.00
JB 402T.J2	LF	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT IN WHICH ONLY CONDUIT JOINTS ARE BROKEN OUT AND CONDUITS REMAIN INTACT	\$39.00
JB 402T.J2A	LF	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT IN WHICH ONLY CONDUIT JOINTS ARE BROKEN OUT AND CONDUITS REMAIN INTACT	\$44.00
JB 405.1	LF	TRENCH EXCAVATIONS FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS LESS THAN FIVE FEET	\$346.00
JB 500	LF	REMOVAL OF ABANDONED UTILITY CONDUITS (NON-CONCRETE ENCASED)	\$4.00
JB 603T.2	LF	FURNISH AND INSTALL 2 EA. 2", 4" OR 1.25" QUAD CONDUITS IN ANY COMBINATION	\$11.00

JB-112  
HWKKP005

October 2017

**Verizon****For Information Only****October 2017****HWKKP005****Borough of Brooklyn****Schedule: Cost Estimate of Work for JB Contingency Items**

<b>JB CONTINGENCY ITEM NUMBER</b>	<b>Unit</b>	<b>DESCRIPTION</b>	<b>Unit Price</b>
JB 603T.4	LF	FURNISH AND INSTALL 6 EA. 4" OR 1.25" QUAD CONDUITS IN ANY COMBINATION	\$33.00
JB 603T.6	LF	FURNISH AND INSTALL 12 EA. 4" OR 1.25" QUAD CONDUITS IN ANY COMBINATION	\$66.00
JB 636R	CY	REPAIR OF UTILITY STRUCTURE	\$211.00
JB 800	LF	MODIFICATION OF CONCRETE YOKE TROLLEY STRUCTURES REMOVAL WHEN CROSSING UTILITY FACILITIES	\$241.00
JB 801	LF	MODIFICATION OF CONCRETE YOKE TROLLEY STRUCTURES REMOVAL PARALLEL TO UTILITY FACILITIES	\$76.00
JB 803	LF	LINE CUT BY PNEUMATIC TOOLS IN LIEU OF SAW CUT ASSOCIATED WITH ROADWAY REMOVAL OPERATIONS	\$15.80



**FOR INFORMATION ONLY  
ENGINEER'S ESTIMATE OF QUANTITIES AND TYPES OF INTERFERENCE  
CHARTER SPECTRUM  
HWKCP005  
RECONSTRUCTION OF DUMBO/VINEGAR HILL  
Borough of Brooklyn**

JB ITEM	DESCRIPTION	UNITS	ESTIMATED QUANTITY	UNIT PRICE	TOTAL
JB 100.1	UTILITIES CROSSING TRENCH FOR CB CHUTE CONNECTION	EA	21	\$550.00	\$11,550.00
JB 101.1	UTILITIES CROSSING TRENCH FOR SEWERS UP TO AND INCLUDING 24" DIAMETER	EA	8	\$2,000.00	\$16,000.00
JB 102.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER	EA	3	\$3,000.00	\$9,000.00
JB 103.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER	EA	1	\$3,500.00	\$3,500.00
JB 108.1	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER	EA	20	\$600.00	\$12,000.00
JB 109.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" TO 24" DIAMETER	EA	7	\$1,000.00	\$7,000.00
JB 110.1	UTILITIES CROSSING TRENCH FOR WATER MAIN 24" TO 36" DIAMETER	EA	6	\$1,400.00	\$8,400.00
JB 225	INSTALLATION / REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	EA	7	\$2,800.00	\$19,600.00
JB 300	SPECIAL CARE EXCAVATION AND BACKFILLING	CY	19	\$150.00	\$2,850.00
JB 330T1	PARALLELING COMMUNICATION FACILITIES LIE COMPLETELY IN THE PROPOSED TRENCH	LF	995	\$100.00	\$99,500.00
JB 401	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES	CY	57	\$200.00	\$11,400.00
JB 402.2A	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	LF	176	\$35.00	\$6,160.00
JB 638EG	ADJUSTMENT OF UTILITY HARDWARE	EA	14	\$500.00	\$7,000.00
JB 700	SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER	CY	638	\$75.00	\$47,850.00
JB 802A	SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	SF	877	\$5.00	\$4,385.00
JB 802B	SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	LF	76	\$10.00	\$760.00
JB 900	EXTRA UTILITY WORK COSTS ALLOWANCE (\$40,043.25) FOURTY THOUSAND FORTY THREE DOLLARS AND TWENTY FIVE CENTS	FS	1	\$40,043.25	\$40,043.25
				<b>TOTAL</b>	<b>\$306,998.25</b>

**CHARTER SPECTRUM  
SUPPORT & PROTECTION  
HWKKP066  
RECONSTRUCTION OF DUMBO/VINEGAR HILL  
Borough of Brooklyn**

<b>JB 100.1</b>	<b>UTILITIES CROSSING TRENCH FOR CS CHUTE CONNECTION</b>	<b>EA</b>
	At the following locations:	
	SWC Front Street & Main Street	1
	NEC Front Street & Washington Street	1
	NEC Front Street & Adams Street	1
	SEC Front Street & Adams Street	1
	NWC Front Street & Adams Street	2
	SWC Front Street & Adams Street	2
	NEC Pearl Street & Front Street	1
	SEC Pearl Street & Front Street	1
	SEC Pearl Street & Water Street	1
	SEC Water Street & Jay Street	1
	NEC Water Street & Jay Street	1
	SEC Plymouth Street & Jay Street	1
	SWC Plymouth Street & Jay Street	1
	SEC Bridge Street & Water Street	1
	SWC Gold Street & Water Street	2
	SEC Jay Street & John Street	1
	SEC Water Street & Jay Street	1
	SWC Pearl Street & Water Street	1
		1
	<b>Total quantity for JB 100.1</b>	<b>21</b>
<b>JB 101.1</b>	<b>UTILITIES CROSSING TRENCH FOR SEWERS UP TO AND INCLUDING 24" DIAMETER</b>	<b>EA</b>
	At the following locations:	
	NEC Pearl Street & Front Street	1
	Intersection of Pearl Street & Water Street	2
	Water Street EO Pearl Street	1
	Intersection of Water Street & Jay Street	2
	NWC Water Street & Bridge Street	1
	Intersection of Water Street & Bridge Street	1
		1
	<b>Total quantity for JB 101.1</b>	<b>8</b>
<b>JB 102.1</b>	<b>UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER</b>	<b>EA</b>
	At the following locations:	
	Water Street EO Pearl Street	1
	Intersection of Jay Street & Water Street	2
		2
	<b>Total quantity for JB 102.1</b>	<b>3</b>
<b>JB 103.1</b>	<b>UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER</b>	<b>EA</b>
	At the following location:	
	NEC Water Street & Pearl Street	1
		1
	<b>Total quantity for JB 103.1</b>	<b>1</b>
<b>JB 106.1</b>	<b>UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER</b>	<b>EA</b>
	At the following locations:	
	Intersection of Front Street & Main Street	2
	Main Street between Front Street & Howard Alley Street	1
	NWC Pearl Street & Front Street	2
	Water Street EO Pearl Street	2
	I/O Plaza SO Water St	1
	Intersection of Pearl Street & Water Street	2
	SWC Water Street & Jay Street	1
	NWC Water Street & Jay Street	1
	I/O #182 Water Street	1
	I/O #200 Water Street	1
	NEC Water Street & Bridge Street	1
	SWC Water Street & Gold Street	2
	Intersection of Jay Street & John Street	2
	NWC Front Street & Gold Street	1
		1
	<b>Total quantity for JB 106.1</b>	<b>20</b>

**CHARTER SPECTRUM  
SUPPORT & PROTECTION  
HWKPP008  
RECONSTRUCTION OF DUMBO/VINEGAR HILL  
Borough of Brooklyn**

<b>JB 109.1</b>	<b>UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" TO 24" DIAMETER</b>	<b>EA</b>
	At the following location:	
	Intersection of Main Street & Front Street	1
	Front Street E/O Main Street	1
	Intersection of Jay Street & John Street	2
	NWC Front Street & Gold Street	1
	Intersection of Water Street & Jay Street	1
	Intersection of Water Street & Bridge Street	1
	<b>Total quantity for JB 109.1</b>	<b>7</b>
<b>JB 110.1</b>	<b>UTILITIES CROSSING TRENCH FOR WATER MAIN 24" TO 36" DIAMETER</b>	<b>EA</b>
	At the following locations:	
	Water Street E/O Pearl Street	1
	Intersection of Pearl Street & Water Street	1
	Intersection of Water & Jay St SE Corner	1
	IFO #200 Water Street	1
	SWC Water Street & Gold Street	1
	IFO #263 Water Street	1
	<b>Total quantity for JB 110.1</b>	<b>6</b>
<b>JB 225</b>	<b>INSTALLATION / REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES</b>	<b>EA</b>
	At the following locations:	
	NEC Front Street & Washington Street	1
	NWC Adams Street & Front Street	1
	SWC Adams Street & Front Street	1
	NEC Water Street & Pearl Street	1
	SEC Water Street & Pearl Street	1
	SEC Water Street & Jay Street	1
	SEC Jay Street & John Street	1
	<b>Total quantity for JB 225</b>	<b>7</b>
<b>JB 300</b>	<b>SPECIAL CARE EXCAVATION AND BACKFILLING</b>	<b>CY</b>
	At the following locations:	
	NEC Front Street & Pearl Street	7
	Intersection of Pearl Street & Anchorage Place	2
	IFO#244 Water Street	10
	<b>Total quantity for JB 300</b>	<b>19</b>
<b>JB 330T1</b>	<b>PARALLELING COMMUNICATION FACILITIES LIE COMPLETELY IN THE PROPOSED TRENCH</b>	<b>LF</b>
	At the following locations:	
	Main Street Between Front Street & Water Street	43
	NWC Front Street & Adams Street	8
	NEC Front Street & Adams Street	7
	Pearl Street Between Front Street & Anchorage Place	48
	NEC Water Street & Pearl Street	25
	IFO #177 Water Street	22
	IFO #179-81 Water Street	140
	IFO #200 Water Street	97
	IFO #220 Water Street	121
	SEC Water Street & Bridge Street	79
	Bridge Street N/O Water Street	50
	Intersection of Water Street & Bridge Street	10
	IFO #261 Water Street	128
	S/S Water Street W/O Gold Street	146
	IFO #263 Water Street	29
	Intersection of Front Street & Gold Street	24
	Intersection of Jay Street & Plymouth Street	16
	<b>Total quantity for JB 330</b>	<b>995</b>

**CHARTER SPECTRUM  
SUPPORT & PROTECTION  
HWKKP005  
RECONSTRUCTION OF DUMBO/VINEGAR HILL  
Borough of Brooklyn**

<b>JB 401</b>	<b>TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES</b>	<b>CY</b>
	At the following locations:	
	W/S Pearl Street S/O Water Street	8
	SEC Water Street & Jay Street	12
	SEC Jay Street & Plymouth Street	12
	Intersection of Water Street & Jay Street	12
	SWC Water Street & Gold Street	12
	<b>Total quantity for JB 401</b>	<b>57</b>

<b>JB 402.2A</b>	<b>EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT</b>	<b>LF</b>
	At the following locations:	
	W/S Pearl Street S/O Water Street	44
	SEC Jay Street & Plymouth Street	33
	SEC Water Street & Jay Street	33
	Intersection of Water Street & Jay Street	33
	SWC Water Street & Gold Street	33
	<b>Total quantity for JB 402.2A</b>	<b>176</b>

<b>JB 636EG</b>	<b>ADJUSTMENT OF UTILITY HARDWARE</b>	<b>EA</b>
	At the following locations:	
	NEC Front Street & Main Street	2
	Intersection of Front Street & Main Street	1
	SEC Front Street & Washington Street	1
	SWC Front Street & Adams Street	2
	NEC Pearl Street & Front Street	1
	IFO #177 Water Street	1
	SEC Jay Street & Water Street	1
	NEC Water Street & Bridge Street	1
	S/S Water Street Opposite #263 Water Street	1
	W/S Jay Street S/O Plymouth Street	1
	NWC Gold Street & Front Street	1
	ES Jay Street S/O John Street	1
	<b>Total quantity for JB 636EG</b>	<b>14</b>

<b>JB 700</b>	<b>SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER</b>	<b>CY</b>
	At the following locations:	
	Main Street between Front Street & Howard Alley Street	9
	Intersection of Front Street & Main Street	18
	Front St bet Main St & Washington St to mid block	40
	Front Street from mid block to Washington St pave limits	33
	Front St bet Washington St pave limits & Adam St to mid block	21
	Front Street from mid block to Adams Street	17
	Intersection of Adams Street & Front Street	12
	Front Street between Adams St & Pearl St to mid block	29
	Front St between Adams St & Pearl St from mid block to Pearl St	14
	Pearl Street Between Front Street & Anchorage Place	46
	Front Street E/O Pearl Street	7
	Water Street E/O Pearl Street to mid Block	41
	IFO Plaza SO Water St	13
	Pearl Street SO Water Street to mid block	18

**CHARTER SPECTRUM  
SUPPORT & PROTECTION  
HWKOP008  
RECONSTRUCTION OF DUMBO/VINEGAR HILL  
Borough of Brooklyn**

Jay Street N/O Water Street to mid block	20
S/S Water Street from #68 Jay Street thru #51 Jay Street	83
Intersection of Jay Street & Water Street	6
I/O #200 Water Street	36
I/O #220 Water Street	25
NEC Bridge Street & Water Street	10
Water Street E/O Bridge Street	6
I/O #244 Water Street	57
Intersection of Water Street & Gold Street	2
Gold Street S/O Water Street south to mid block	12
Jay Street N/O Plymouth Street to mid block	12
Jay Street S/O Plymouth Street at mid block	3
Intersection of Jay Street & Plymouth Street	4
Jay Street S/O John Street south to mid block	20
Intersection of Jay Street & John Street	4
Gold Street N/O Front Street to mid block	20
<b>Total quantity for JB 700</b>	<b>638</b>
<b>JB 802A SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK</b>	<b>SF</b>
At the following locations:	
W/S Main Street Between Front Street & Water Street	45
E/S Main Street Between Front Street & Water Street	179
S/S Front St EO Main St	90
NEC Front Street & Washington Street	59
NWC Adams Street & Front Street	101
NEC Pearl Street & Front Street	77
NWC Pearl Street & Front Street	41
NEC Water Street & Pearl Street	94
S/S Water Street EO Pearl Street	35
SEC Water Street & Jay Street	74
NWC John Street & Jay Street	35
SWC Jay St & Plymouth St	47
<b>Total quantity for JB 802A</b>	<b>877</b>
<b>JB 802B SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK</b>	<b>LF</b>
At the following locations:	
W/S Main Street Between Front Street & Water Street	3
E/S Main Street Between Front Street & Water Street	3
NEC Main Street & Front Street	3
SS Front Street Intersection of Main Street	3
NWC Adams Street & Front Street	3
SEC Front Street & Washington Street	3
SWC Adams Street & Front Street	3
NWC Pearl Street & Front Street	3
NWC Pearl Street & Front Street	3
NEC Pearl Street & Front Street	3
NEC Pearl Street & Front Street	3
NEC Water Street & Pearl Street	3
I/O #177 Water Street	5
S/S Water Street EO Pearl Street	3
SEC Water Street & Jay Street	8
SWC Plymouth Street & Jay Street	3
NEC Water Street & Bridge Street	3
NWC John Street & Jay Street	6
SEC John St and Jay St	3
NWC Gold Street & Front Street	3
<b>Total quantity for JB 802B</b>	<b>76</b>
<b>JB 900 EXTRA UTILITY COSTS ALLOWANCE</b>	<b>FS</b>
<b>Total quantity for JB 900</b>	<b>1</b>

**FOR INFORMATION ONLY  
CONTINGENCY ITEMS  
CHARTER/ SPECTRUM  
HWKKP005  
Reconstruction of Dumbo/Vinegar Hill Area  
Borough of Brooklyn**

JOINT BID ITEM	DESCRIPTION	UNITS	JB PRICE
JB 104.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 48" TO 54" DIAMETER	EA	\$4,000.00
JB 105.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER	EA	\$4,200.00
JB 106.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 60" TO 72" DIAMETER	EA	\$4,400.00
JB 107.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 72" TO 84" DIAMETER	EA	\$4,500.00
JB 111.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 36" TO 48" DIAMETER	EA	\$1,500.00
JB 112.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 48" TO 54" DIAMETER	EA	\$1,600.00
JB 113.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 54" TO 60" DIAMETER	EA	\$1,800.00
JB 114.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 60" TO 72" DIAMETER	EA	\$2,000.00
JB 115.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 72" TO 84" DIAMETER	EA	\$2,200.00
JB 200	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTION PIPES	LF	\$150.00
JB 226	INSTALLATION OF CATCH BASIN WITH UTILITY INTERFERENCES	EA	\$1,400.00
JB 227	REMOVAL OF CATCH BASIN WITH UTILITY INTERFERENCES	EA	\$1,400.00
JB 400	TEST PITS FOR UTILITY FACILITIES	CY	\$175.00
JB 401AC	SPECIAL CARE PAVEMENT EXCAVATION FOR ADJUSTMENT OF CABLE TV FACILITIES CONNECTED TO THE BASE PAVEMENT	CY	\$75.00
JB 402.1	EXISTING CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION W/O CONC. ENCASEMENT	LF	\$35.00
JB 402.1A	EXISTING CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONC. ENCASEMENT	LF	\$45.00
JB 402.2	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION W/O CONC. ENCASEMENT	LF	\$25.00
JB 403	PLACING STEEL PROTECTION PLATES FOR UTILITY FACILITIES	SF	\$4.00
JB 405.1	TRENCH EXCAVATIONS FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS LESS THAN FIVE FEET	CY	\$150.00
JB 405.2	TRENCH EXCAVATIONS FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS EQUAL TO OR GREATER THAN FIVE FEET, REQUIRING SHEETING	CY	\$200.00
JB 406	EXCAVATION FOR UTILITY STRUCTURE	CY	\$150.00
JB 500	REMOVAL OF ABANDONED UTILITY CONDUITS	LF	\$4.00
JB 501	REMOVAL OF ABANDONED MASONRY FOR UTILITY FACILITIES	CY	\$200.00
JB 501.1	REMOVAL OF ABANDONED CABLE TELEVISION SIDEWALK PULL BOXES	EA	\$500.00
JB 603T.1	INSTALL 1 ea. 2", 4" or 1 1/4" QUAD (PVC or STEEL) IN ANY COMBINATION	LF	\$5.00
JB 603T.2	INSTALL 2 ea. 2", 4" or 1 1/4" QUAD (PVC or STEEL) IN ANY COMBINATION	LF	\$8.00
JB 603T.3	INSTALL 4 ea. 2", 4" or 1 1/4" QUAD (PVC or STEEL) IN ANY COMBINATION	LF	\$12.00
JB 638N	INSTALLATION OF FIELD CONSTRUCTED UTILITY STRUCTURE	CY	\$1,054.00
JB 638R	BREAKOUT & REMOVE UTILITY STRUCTURE	CY	\$350.00
JB 800	MODIFICATION OF TROLLEY STRUCTURE REMOVAL WHEN CROSSING UTILITY FACILITIES	LF	\$190.00
JB 801	MODIFICATION OF TROLLEY STRUCTURE REMOVAL PARALLEL TO UTILITY FACILITIES	LF	\$80.00

JB-119

**Support & Protection**  
**CONTRACT NO. HWKKP005**  
**Vinegar Hill Area/DUMBO**  
**Borough of Brooklyn**

<b>JB Item Number</b>	<b>Description</b>	<b>Unit of Measure</b>	<b>Estimated Quantity</b>	<b>Unit Price</b>	<b>Total</b>
300	Special Care Excavation & Backfilling	CY	200	\$160.77	\$32,154.00
636EA	Adjustment Of Utility Hardware (Under 7")	Each	50	\$179.99	\$8,999.50
636EB	Adjustment Of Utility Hardware (7" To 14")	Each	10	\$185.55	\$1,855.50
636EC	Adjustment Of Utility Hardware (14" to under 30" Width)	Each	6	\$270.52	\$1,623.12
700	Special Modification Of Work To Accommodate Utilities	CY	500	\$140.26	\$70,130.00
710.1	Removal of Abandoned Utility Steel/Cast Iron Pipes/Plastic Pipes	LF	450	\$15.23	\$6,853.50
802A	Special Care Excavation and Restoration For Sidewalk Work	SF	7400	\$7.88	\$58,312.00
802B	Special Care Excavation and Restoration For Curb Work	LF	1000	\$13.35	\$13,350.00
900	Extra Utility Work Costs Allowance	FS			<u>\$38,655.52</u>
<b>TOTAL</b>					<b>\$231,933.14</b>

# **nationalgrid**

287 Maspeth Avenue  
Brooklyn, N.Y. 11211-1788

**HWKKP005**

<b>JB Item Number</b>	<b>Description</b>
<b>300</b>	<b>Special Care Excavation &amp; Backfilling</b>  At the following locations: <b>AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID</b> Quantity - 200 CY
<b>636EA</b>	<b>Adjustment Of Utility Hardware (under 7" width)</b>  At the following locations: <b>AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID</b> Quantity - 50 Ea.
<b>636EB</b>	<b>Adjustment Of Utility Hardware (7" To 14")</b>  At the following locations: <b>AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID</b> Quantity - 10 Ea.
<b>636EC</b>	<b>Adjustment Of Utility Hardware (14" to under 30" Width)</b> At the following locations: <b>AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID</b> Quantity - 6 Ea.
<b>700</b>	<b>Special Modification Of Work To Accommodate Underground Utilities with Limited Cover</b>  At the following locations: <b>AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID</b> Quantity - 500 CY
<b>710.1</b>	<b>Removal of Abandoned Utility Steel/Cast Iron Pipes/Plastic Pipes</b>  At the following locations: <b>AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID</b> Quantity - 450 LF
<b>802A</b>	<b>Special Care Excavation and Restoration For Sidewalk Work</b>  At the following locations: <b>AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID</b> Quantity - 7400 SF
<b>802B</b>	<b>Special Care Excavation and Restoration For Curb Work</b>  At the following locations: <b>AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID</b> Quantity - 1000 LF
<b>900</b>	<b>Extra Utility Work Costs Allowance</b>  At the following locations: <b>AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID</b> Quantity - \$38,655.52 FS



**TEST PITS**

- (1) THESE TEST PITS DETAIL EXISTING CONDITIONS (AS OF BID DATE) OF UTILITIES AND OTHER SUBSURFACE FACILITIES AT LOCATIONS AS SHOWN ON THE TEST PIT LOCATIONS PLAN OF THE CONTRACT DRAWINGS.**
  
- (2) DEPTHS OF FACILITIES ARE FROM EXISTING ROADWAY AND SIDEWALK ELEVATIONS AS SHOWN, OFFSETS ARE FROM EXISTING CURB, PROPERTY AND BUILDING LINES, AS SHOWN.**
  
- (3) RELEVANT ITEMS ARE NOTED ON EACH TEST PIT DIAGRAM.**

**(NO TEXT IN THIS SECTION)**



conEdison

JOB NO: HWKKP005

PREPARED BY: P. MALLARI

CHECKED BY: C. ALBEA

TEST PIT # 3

DATE: 11/01/13

DATE: 11/01/13

PAGE 1 OF 1

JOB NAME: DUMBO - VINEGAR HILL

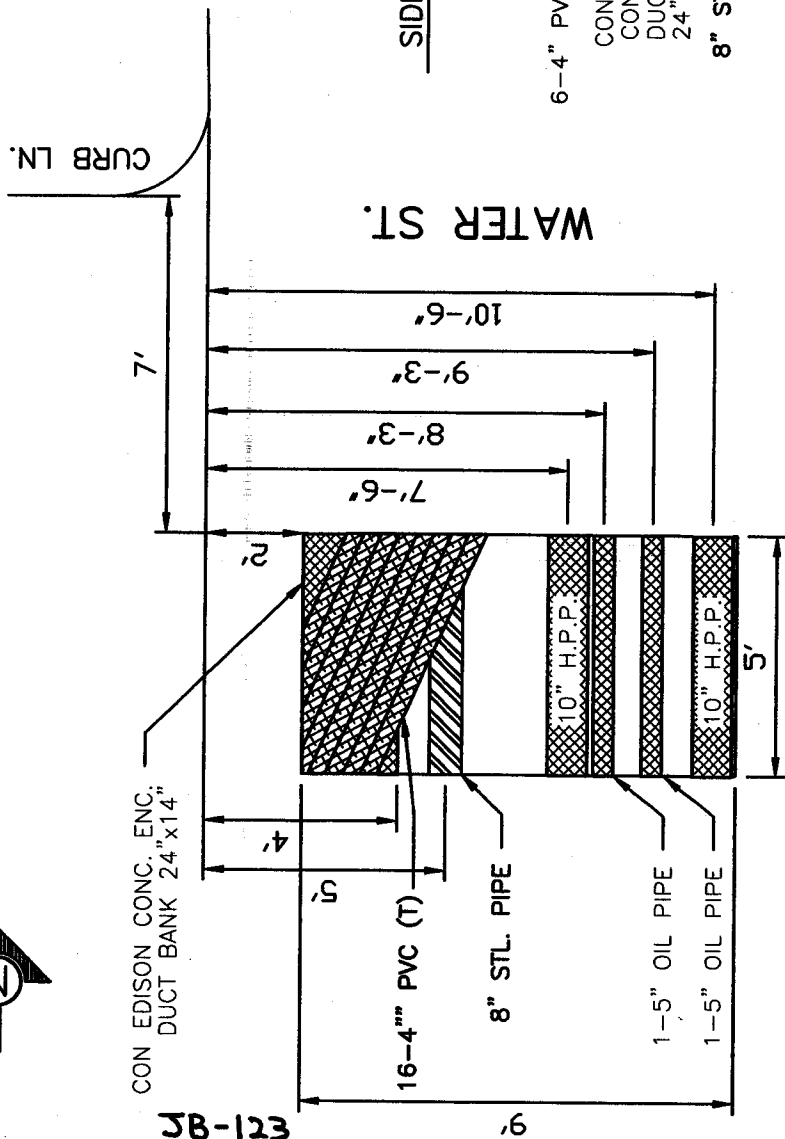
LOCATION: 7' S/N/C WATER STREET

PURPOSE: LOCATE SUB-SURFACE FACILITIES

2' E/W/C PEARL STREET

DATE OF EXCAVATION: 10/24/13

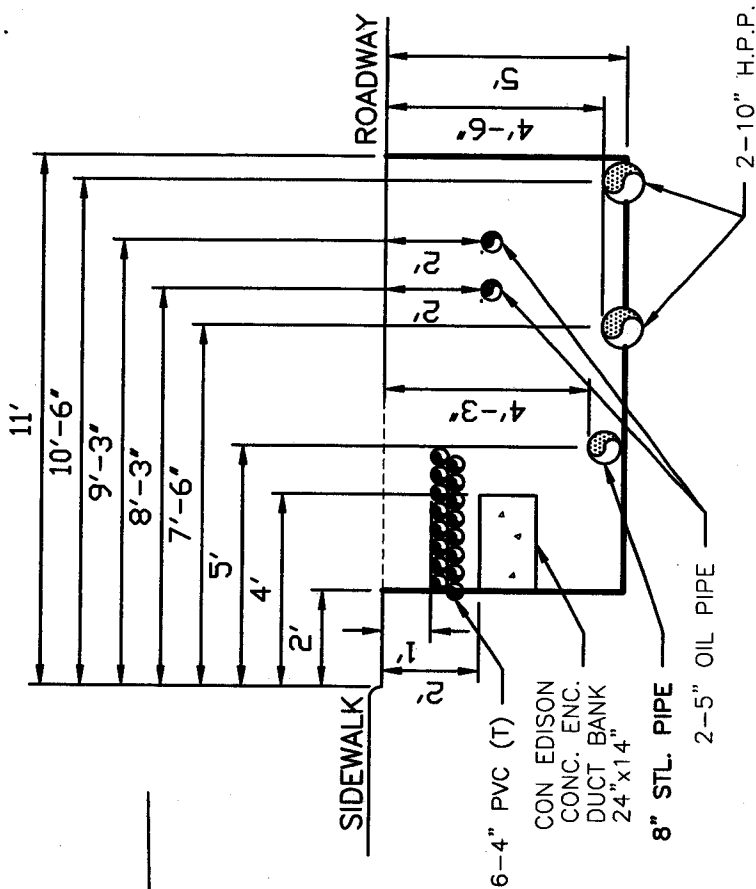
CONTRACT SHEET NO: 4 OF 16



PEARL STREET

PLAN

N.T.S.



PROFILE -- LOOKING NORTH

N.T.S.

JB-123

6



conEdison

JOB NO: HWKKF003

PREPARED BY: P. MALLARI

CHECKED BY: C. ALBEA

TEST PILE # 0

DATE: 11/04/13

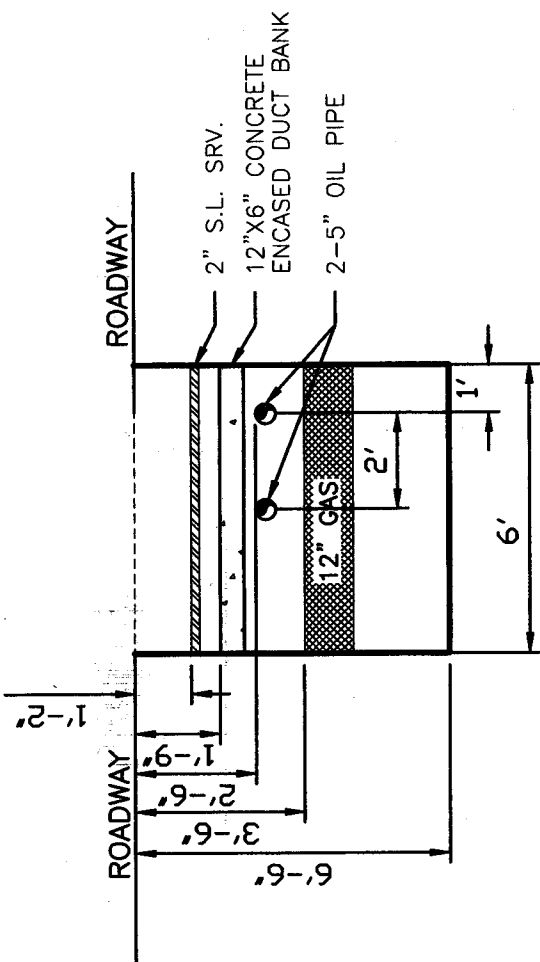
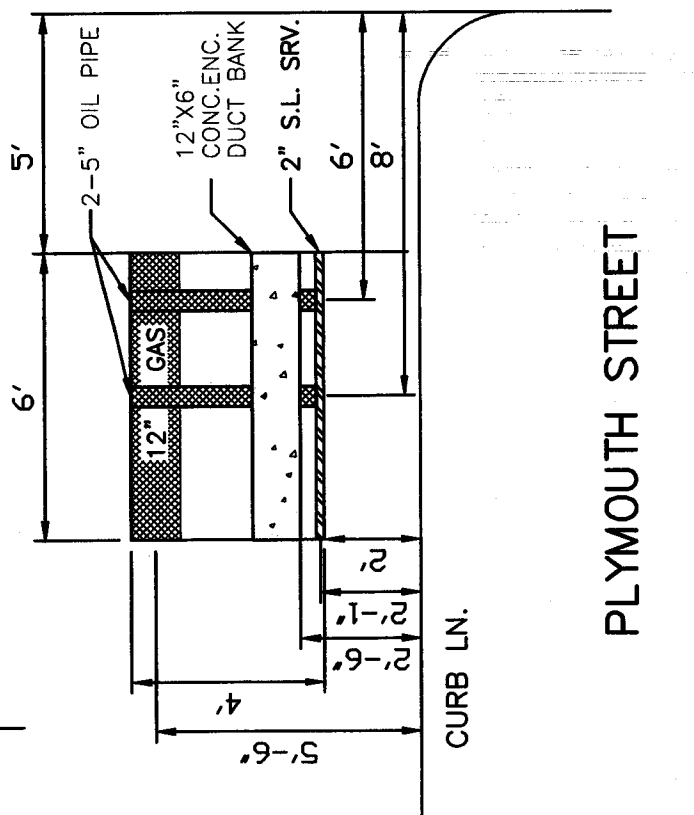
DATE: 11/04/13

PAGE 1 OF 1

JOB NAME: DUMBO - VINEGAR HILL LOCATION: 2' N/S/C PLYMOUTH STREET

PURPOSE: LOCATE SUB-SURFACE FACILITIES 5' W/W/C PEARL STREET

DATE OF EXCAVATION: 10/22/13 CONTRACT SHEET NO: 4 OF 16



PLYMOUTH STREET

PEARL STREET

PLAN

N.T.S.

PROFILE -- LOOKING NORTH

N.T.S.

JB-124



**conEdison**

JOB NO: HWKKP005

TEST PIT # 31

PREPARED BY: I.Eydelman

DATE: 3.28.2014

CHECKED BY: A.Owens

DATE: 3.28.2014

JOB NAME: DUMBO - VINEGAR HILL

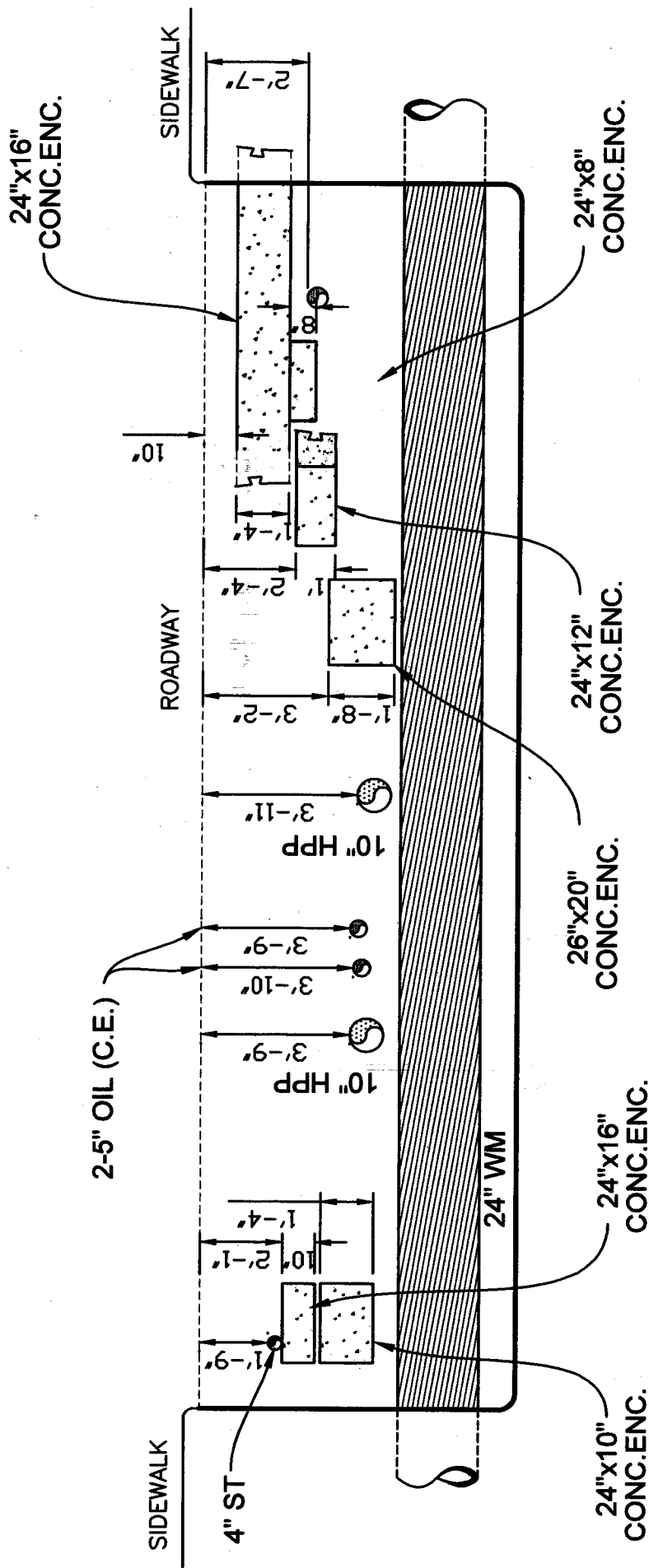
LOCATION: INTERSECTION OF WATER STREET

PURPOSE: LOCATE SUB-SURFACE FACILITIES

& JAY STREET ( CURB-TO-CURB )

DATE OF EXCAVATION: 3.26.2014

CONTRACT SHEET NO: 2 OF 16



JB-125

**PROFILE -- LOOKING NORTH**

N.T.S.



conEdison

JOB NO: HWKKF003

PREPARED BY: I.Eydelman

DATE: 4.24.2014

CHECKED BY: A.Dwens

DATE: 4.24.2014

TEST PII # 40

JOB NAME: DUMBO - VINEGAR HILL

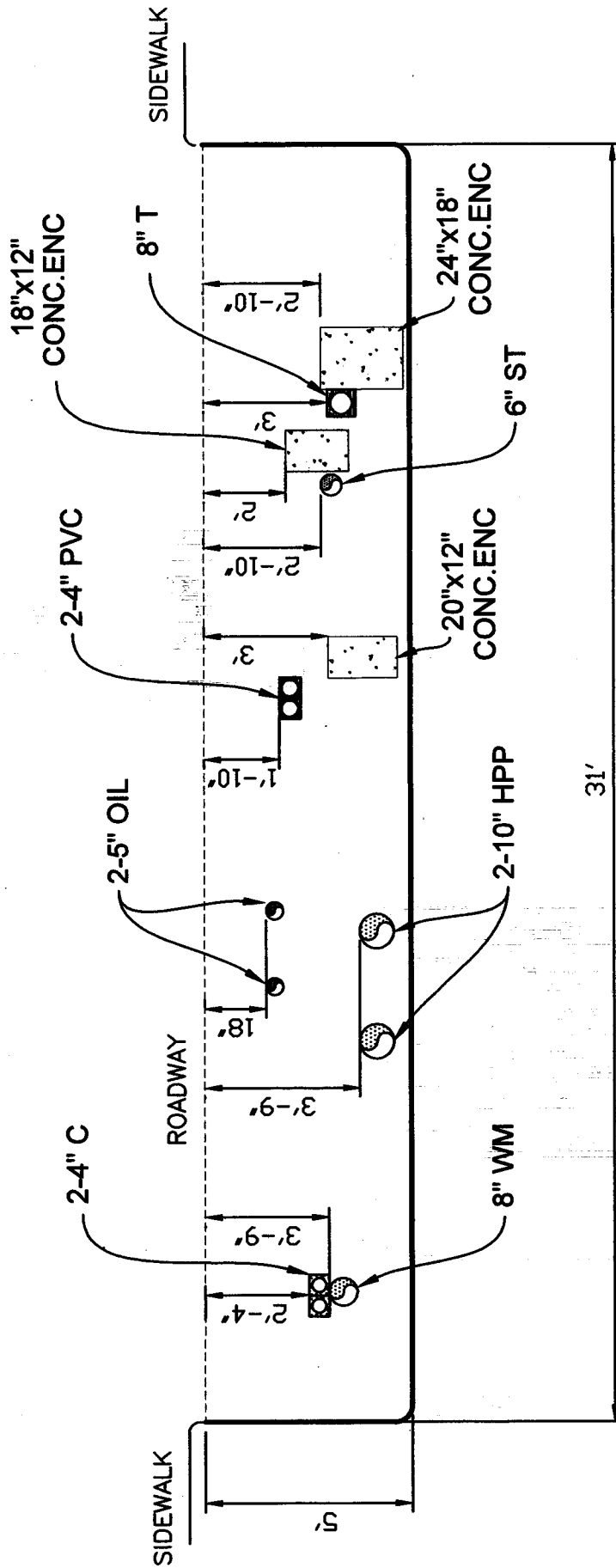
LOCATION: INTERSECTION OF JAY STREET &

PURPOSE: LOCATE SUB-SURFACE FACILITIES

PLYMOUTH STREET (CURB-TO-CURB)

DATE OF EXCAVATION: 3.27.2014

CONTRACT SHEET NO: 13 OF 16



JB-126

PROFILE - LOOKING NORTH

N.T.S.



JOB NO: HWKPP005

TEST PIT # 45

PREPARED BY: I.Eydelman

DATE: 6.15.2015

CHECKED BY: A.Dwens

DATE: 6.16.2015

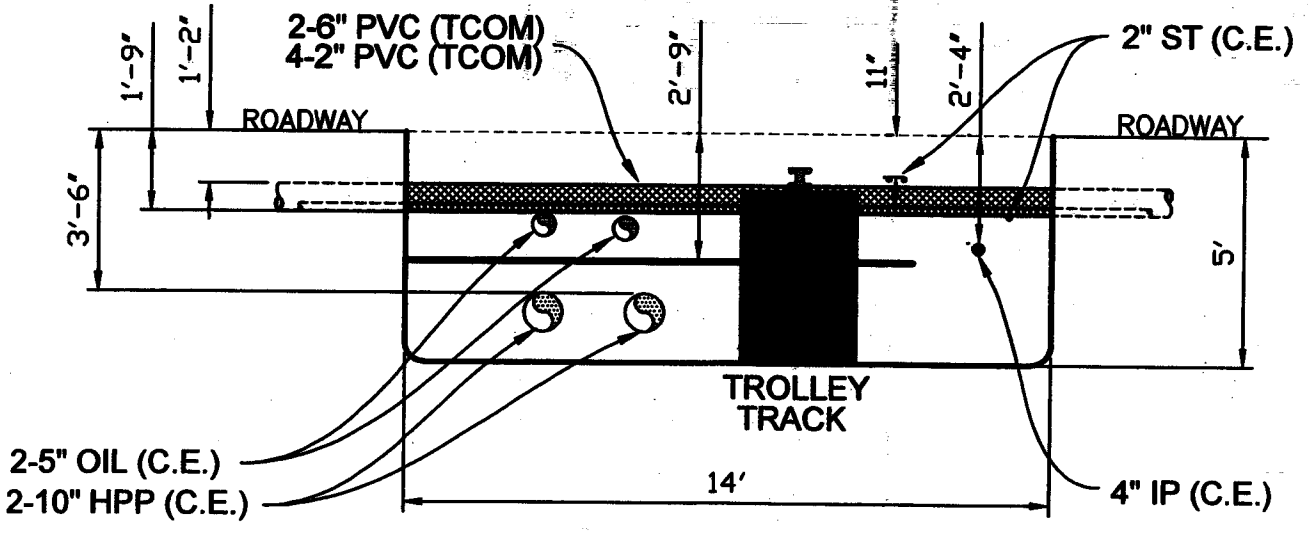
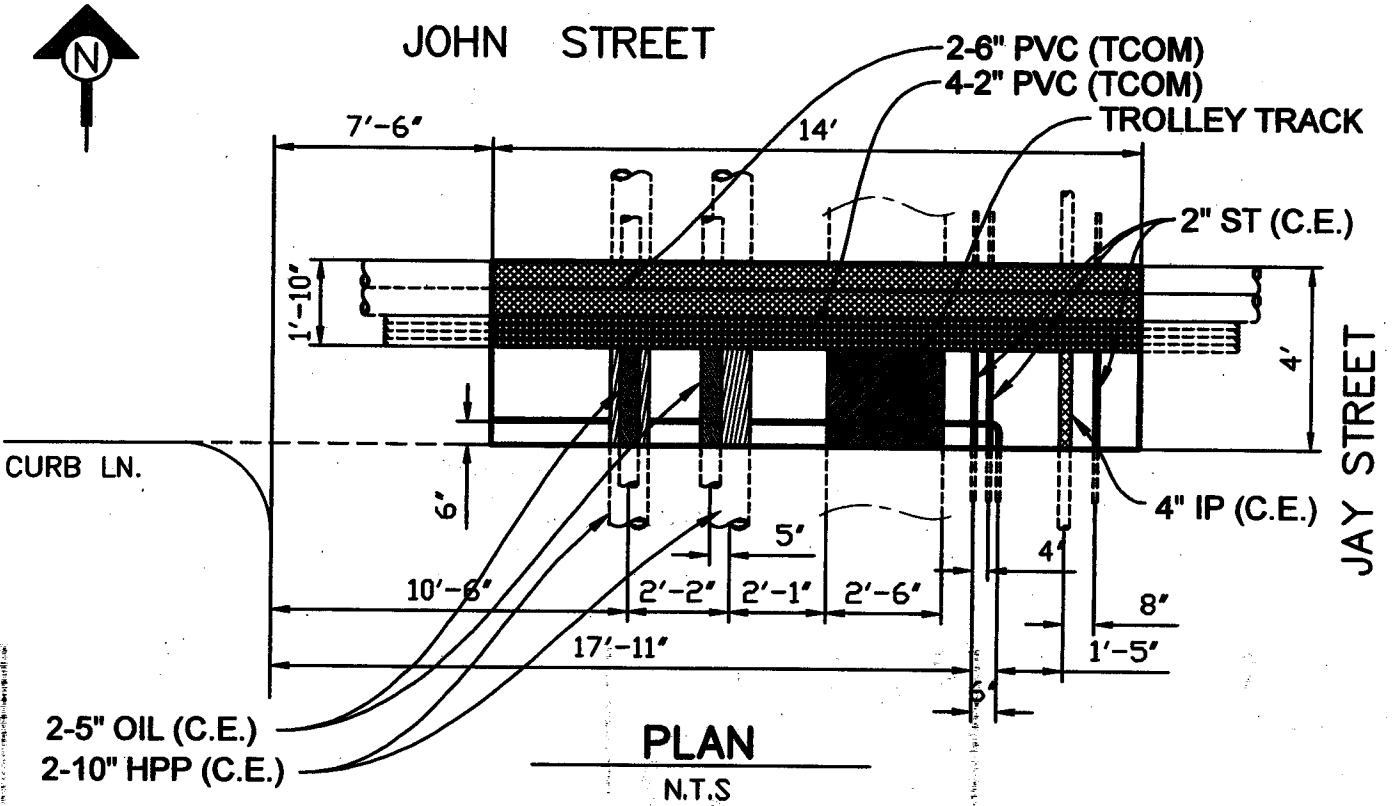
JOB NAME: DUMBO - VINEGAR HILL

LOCATION: INTERSECTION OF JOHN STREET & JAY STREET ( SW CORNER)

PURPOSE: LOCATE UG ELECTRIC SYSTEM

DATE OF EXCAVATION: 5.18.2015

CONTRACT SHEET NO: 12 OF 16





JOB NO: HWKKP005

TEST PIT # 53

PREPARED BY: I.Eydelman

DATE: 8.16.2016

CHECKED BY: A.Dwens

DATE: 8.16.2016

JOB NAME: DUMBO - VINEGAR HILL

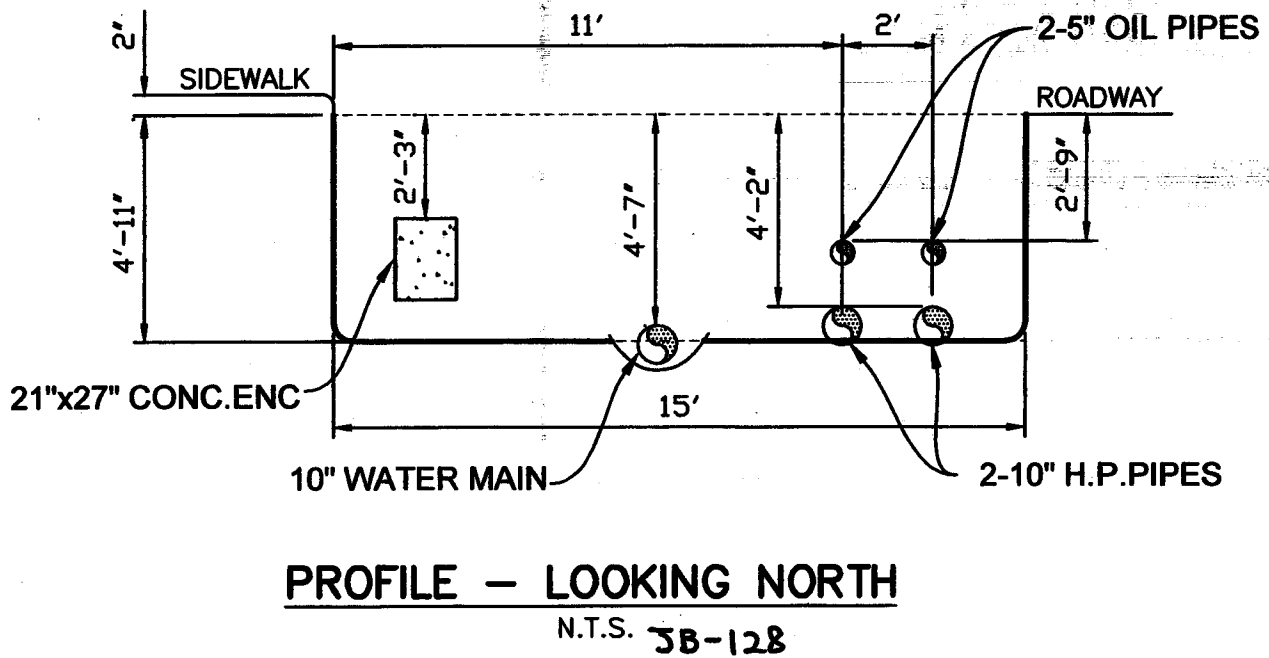
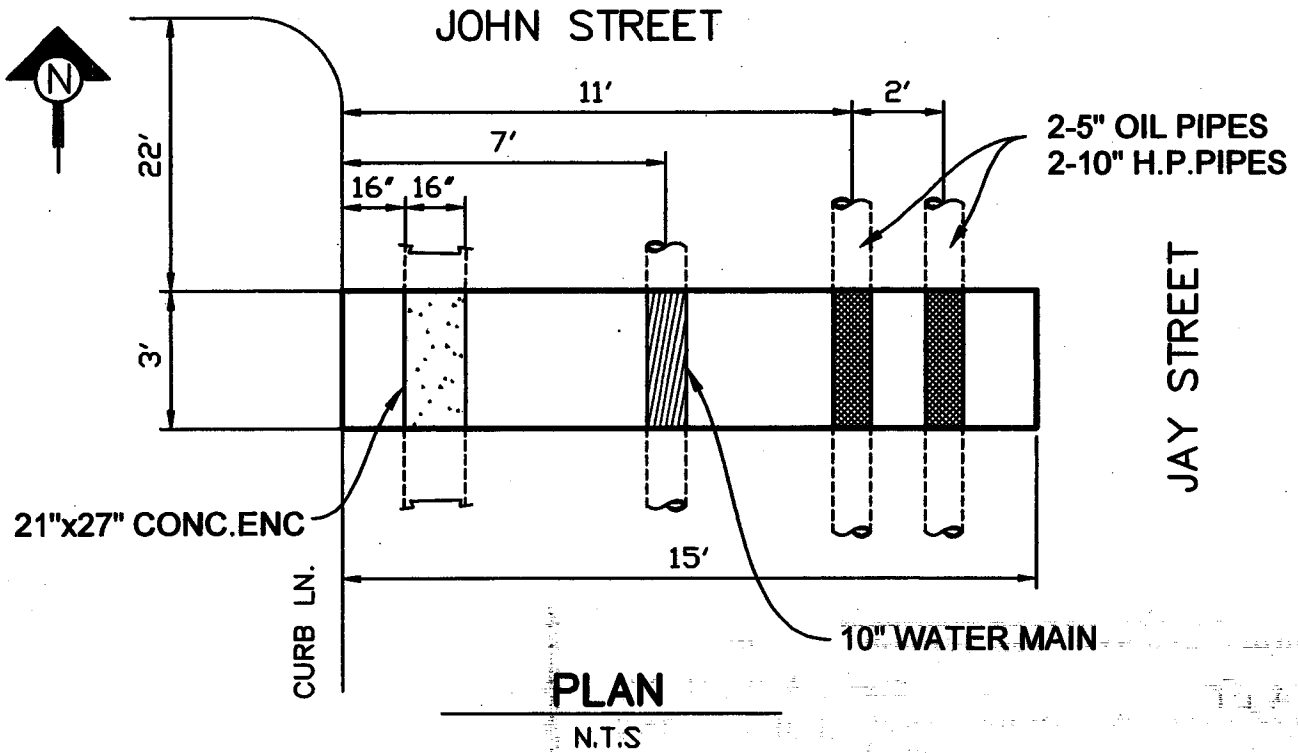
LOCATION: W/S JAY STREET &

PURPOSE: LOCATE UG ELECTRICAL SYSTEM

22' S/O PLYMOUTH STREET

DATE OF EXCAVATION: 3.21.2016

CONTRACT SHEET NO: 12 OF 16





JOB NO: HWKKP005

TEST PIT # 54

PREPARED BY: I.Eydelman

DATE: 8.16.2016

CHECKED BY: A.Owens

DATE: 8.16.2016

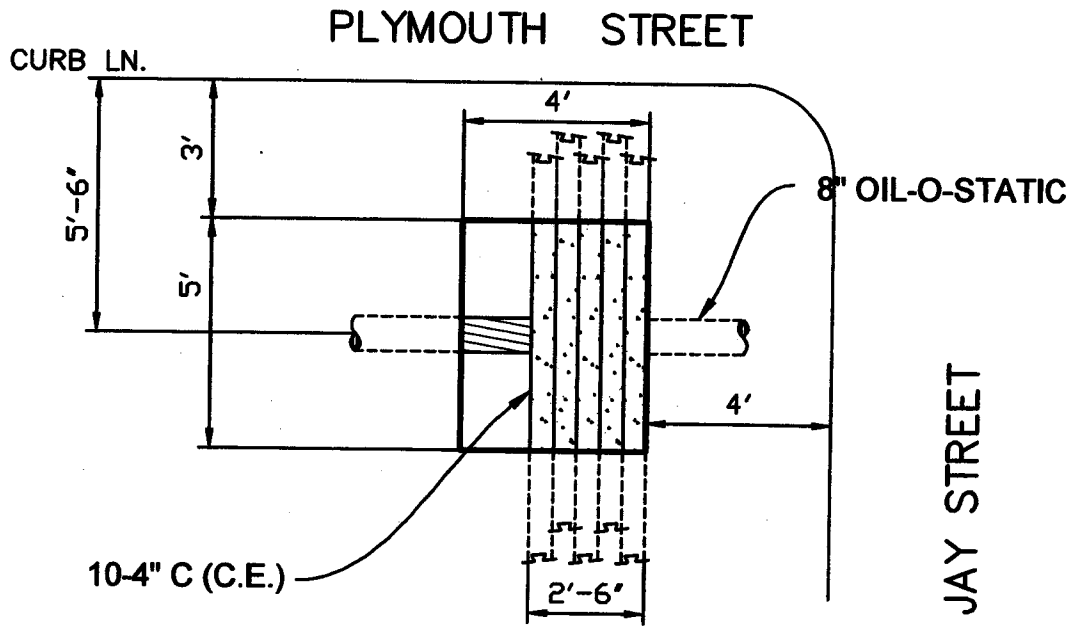
JOB NAME: DUMBO - VINEGAR HILL

LOCATION: INTERSECTION OF PLYMOUTH ST  
& JAY STREET ( SW CORNER)

PURPOSE: LOCATE UG ELECTRIC SYSTEM

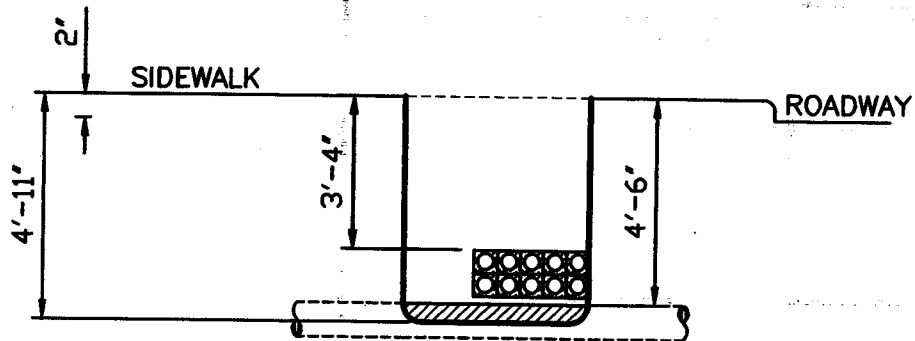
DATE OF EXCAVATION: 3.21.2016

CONTRACT SHEET NO: 12 OF 16



**PLAN**

N.T.S.



**PROFILE - LOOKING NORTH**

N.T.S. 3B-129

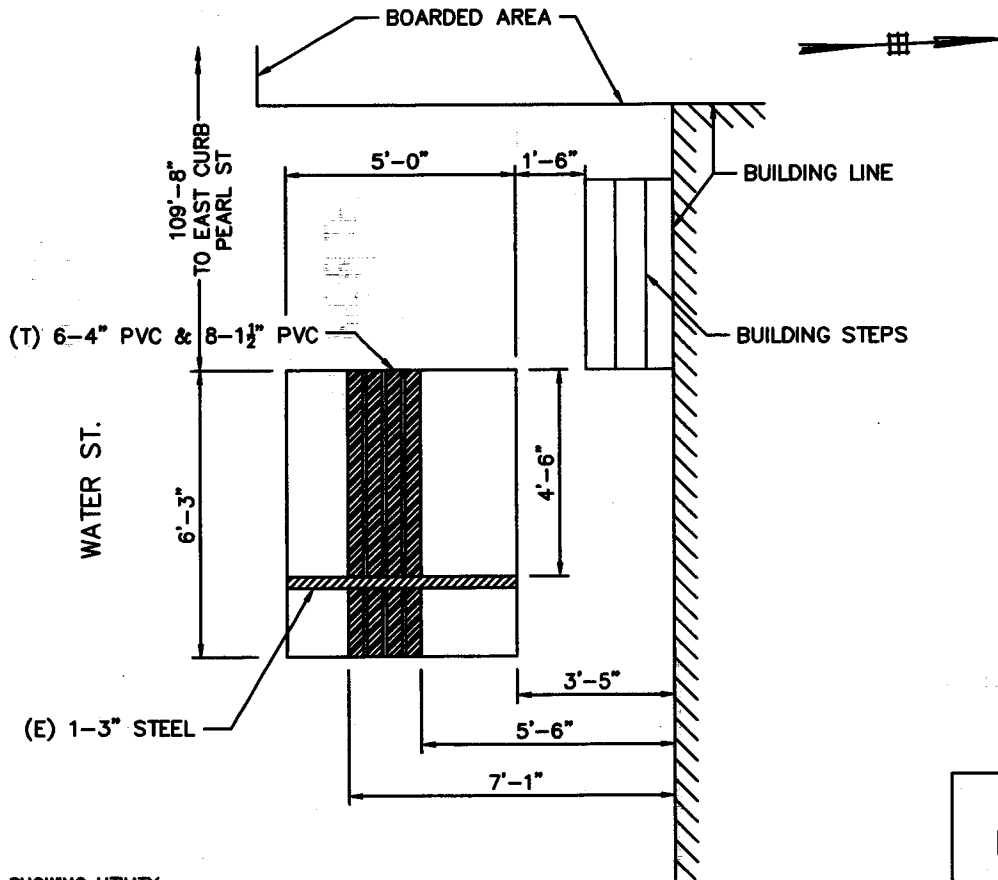




JOB: DUMBO/VINEGAR HILL, BROOKLYN PREPARED BY: J.PELAEZ DATE: 01/08/2014  
JOB NO: HWKKP005 CHECKED BY: G.CASTRO DATE: 01/21/2014

TEST PIT # 1 LOCATION: NORTH SIDE OF WATER ST. BETWEEN  
PURPOSE: LOCATE FACILITIES PEARL ST. AND JAY ST.

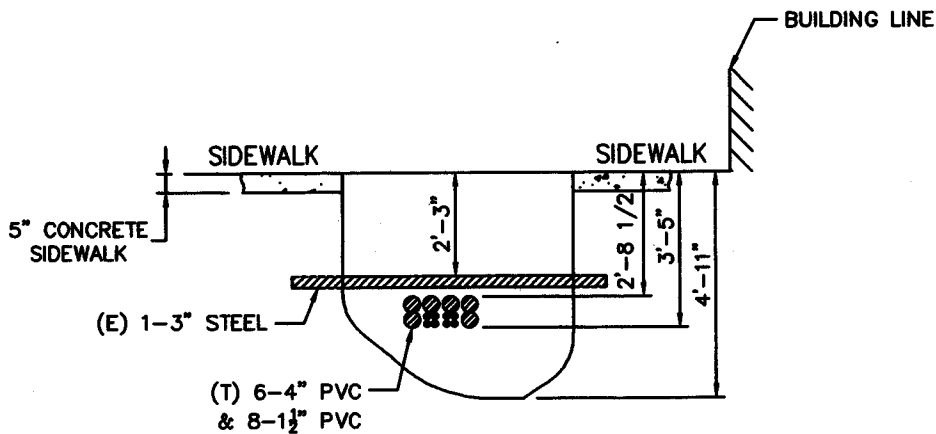
TEST PIT DIMENSION  
5'-0"X6'-3"X(DEPTH: 4'-11")



NOTE:  
1. ALL DRAWINGS SHOWING UTILITY  
SUPPORT AND PROTECT WORK ARE  
FOR REFERENCE ONLY.

PLAN

JB  
ITEMS



SECTION LOOKING WEST

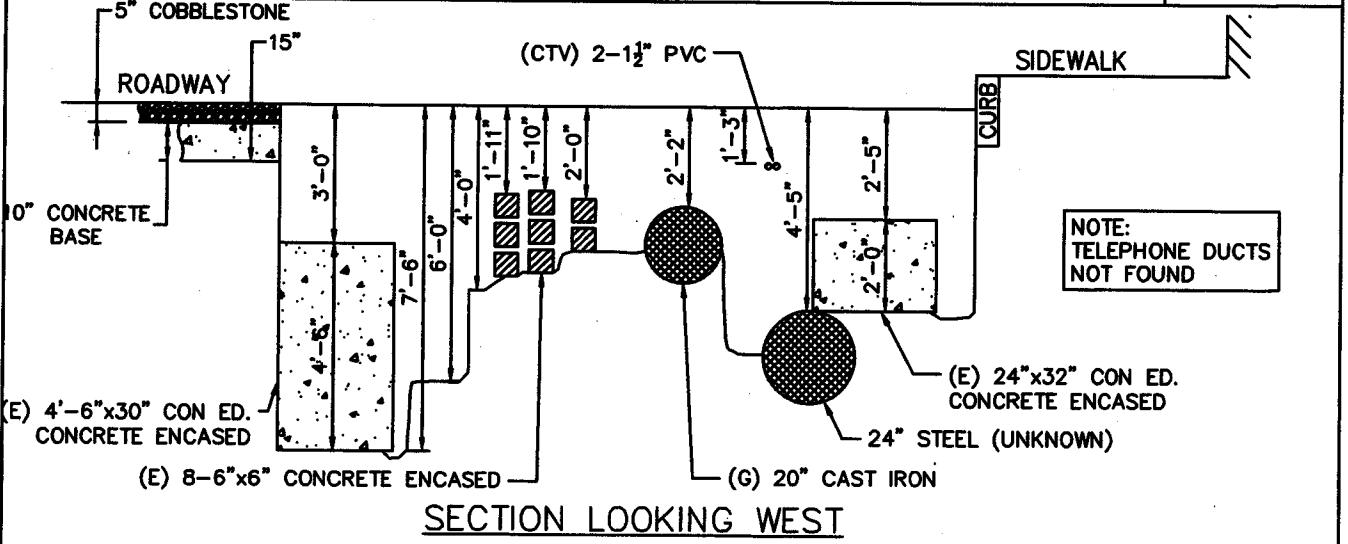
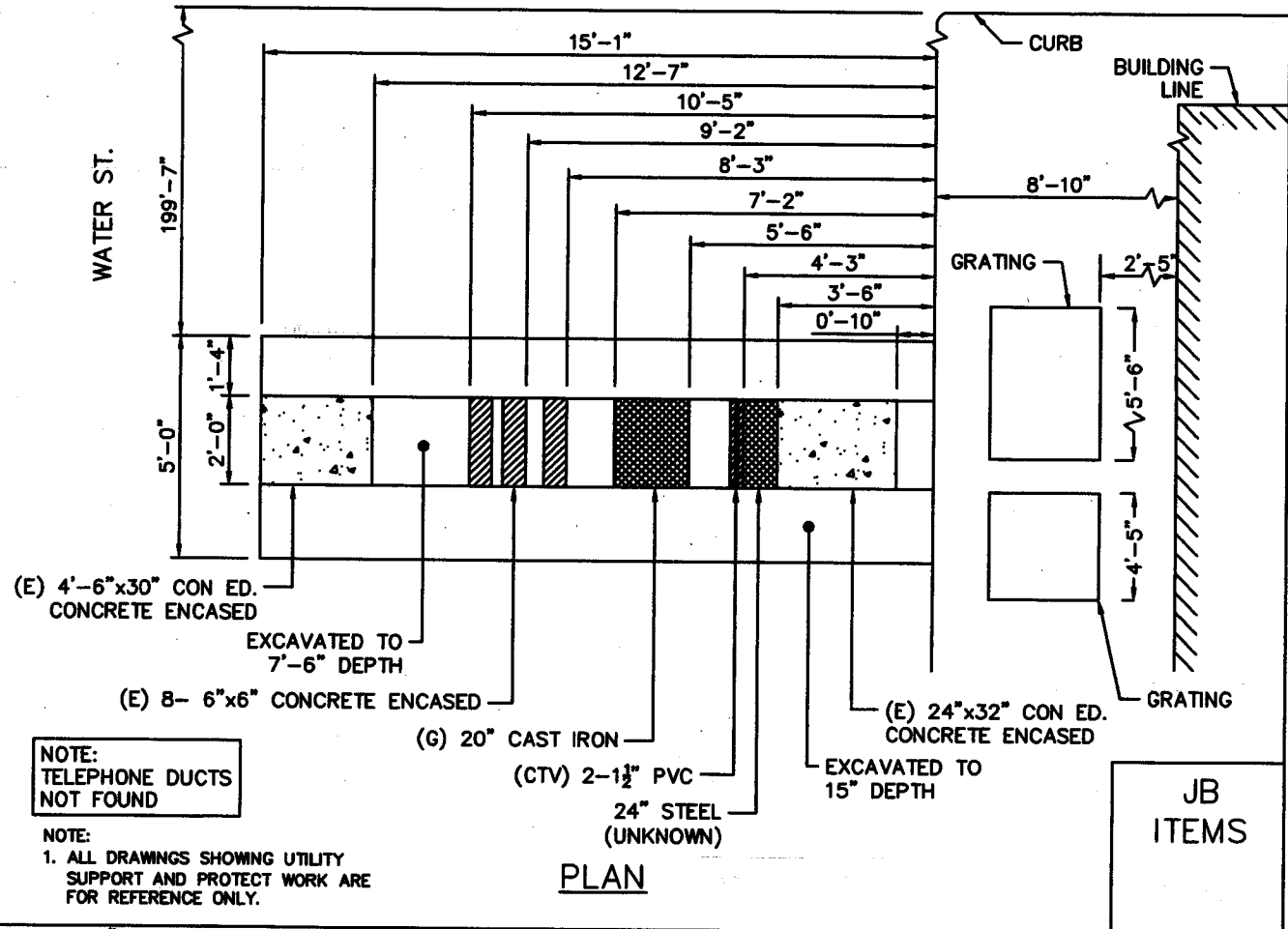


JOB: DUMBO/VINEGAR HILL, BROOKLYN PREPARED BY: J.PELAEZ DATE: 01/14/2014  
JOB NO: HWKKP005 CHECKED BY: G.CASTRO DATE: 01/21/2014

TEST PIT # 2 LOCATION: WATER ST. BETWEEN JAY ST.  
PURPOSE: LOCATE FACILITIES AND BRIDGE ST.

TEST PIT DIMENSION

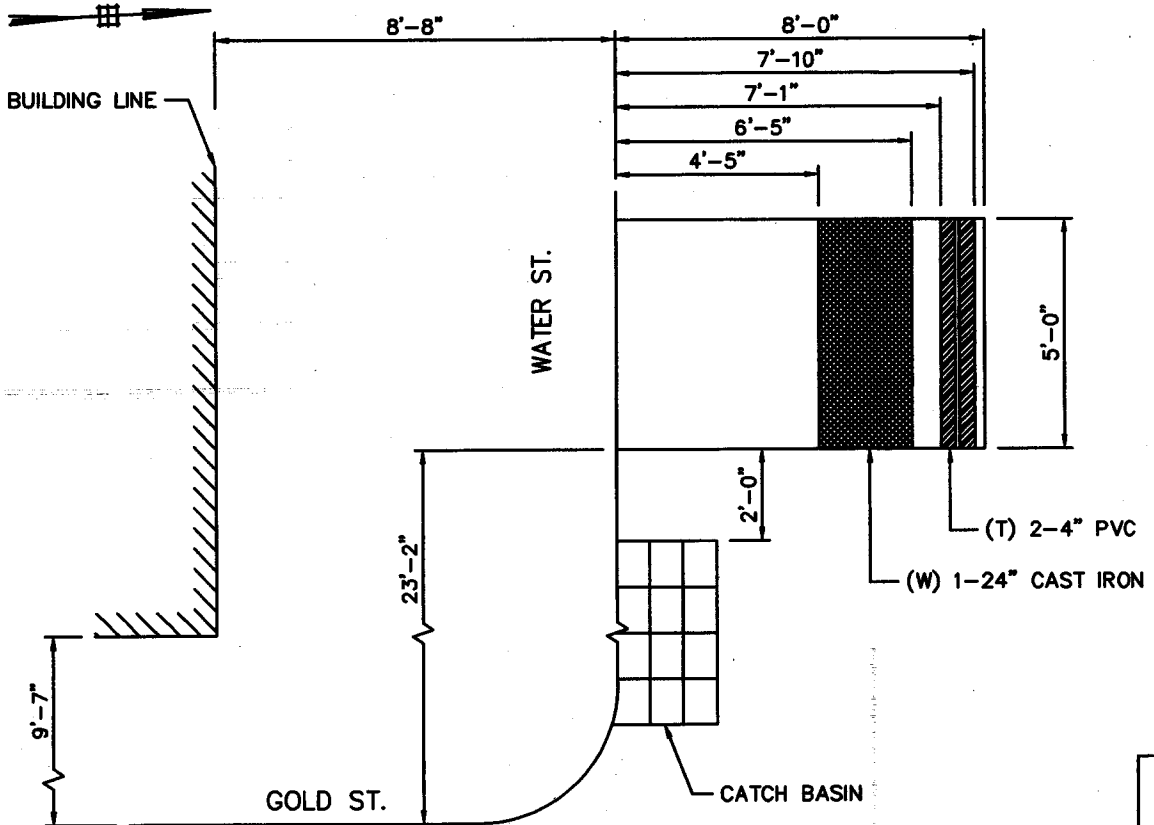
5'-0"X10'-0"X(DEPTH VARIES: 15" TO 7'-6")



JOB: DUMBO/VINEGAR HILL, BROOKLYN PREPARED BY: J.PELAEZ DATE: 01/08/2014  
 JOB NO: HWKKP005 CHECKED BY: G.CASTRO DATE: 01/21/2014

TEST PIT # 3 LOCATION: SW CORNER OF WATER ST  
 PURPOSE: LOCATE FACILITIES AND GOLD ST.

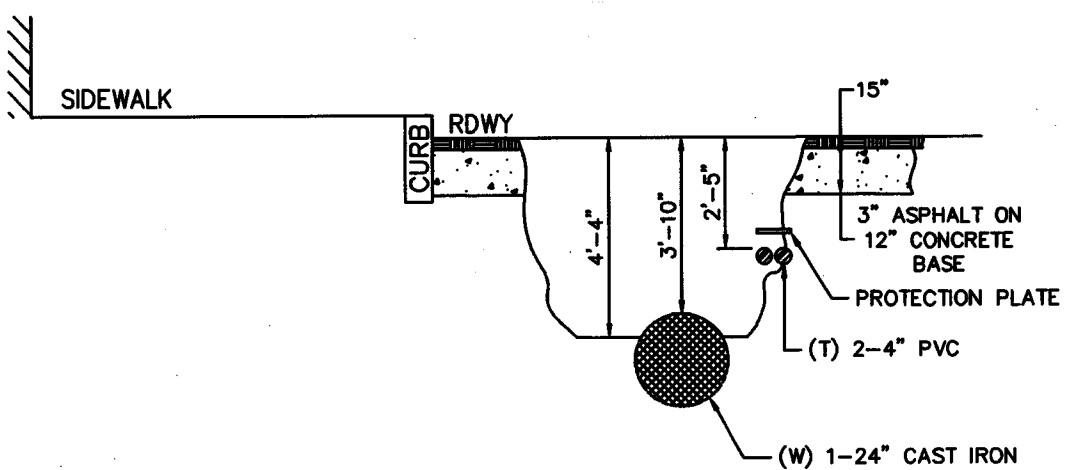
TEST PIT DIMENSION  
 5'-0" X 8'-0" X (DEPTH: 4'-4" DEEP)



JB  
 ITEMS

NOTE:  
 1. ALL DRAWINGS SHOWING UTILITY  
 SUPPORT AND PROTECT WORK ARE  
 FOR REFERENCE ONLY.

PLAN

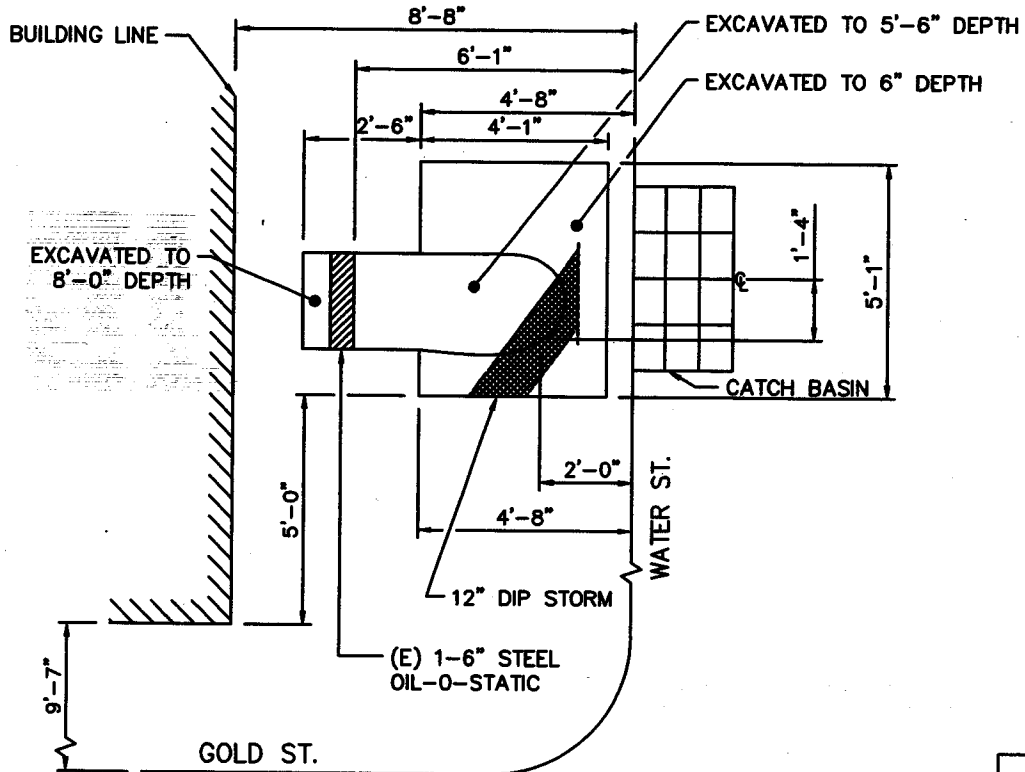


SECTION LOOKING WEST

JOB: DUMBO/VINEGAR HILL, BROOKLYN PREPARED BY: J.PELAEZ DATE: 01/08/2014  
 JOB NO: HWKKP005 CHECKED BY: G.CASTRO DATE: 01/21/2014

TEST PIT # 4 LOCATION: SW CORNER OF WATER ST  
 PURPOSE: LOCATE FACILITIES AND GOLD ST.

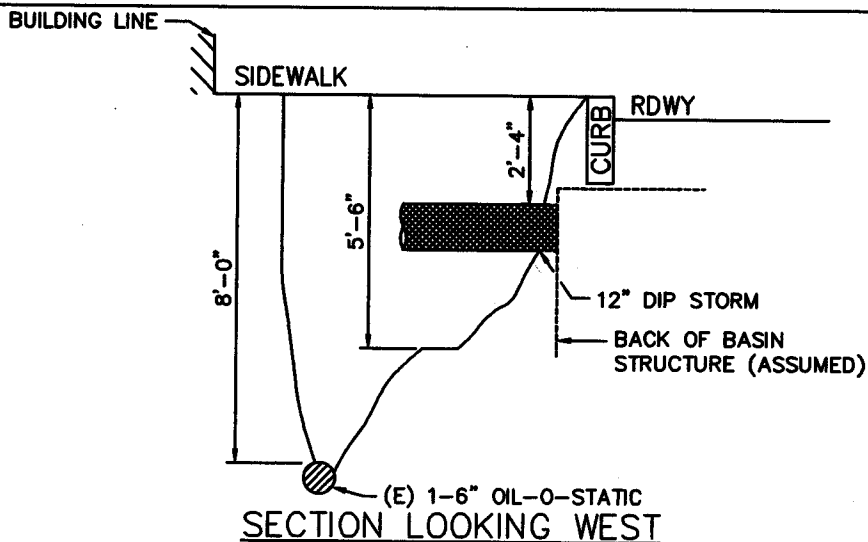
TEST PIT DIMENSION  
 5'-1"X6'-7"X(DEPTH VARIES: 6" TO 8'-0")



NOTE:  
 1. ALL DRAWINGS SHOWING UTILITY  
 SUPPORT AND PROTECT WORK ARE  
 FOR REFERENCE ONLY.

PLAN

JB  
 ITEMS



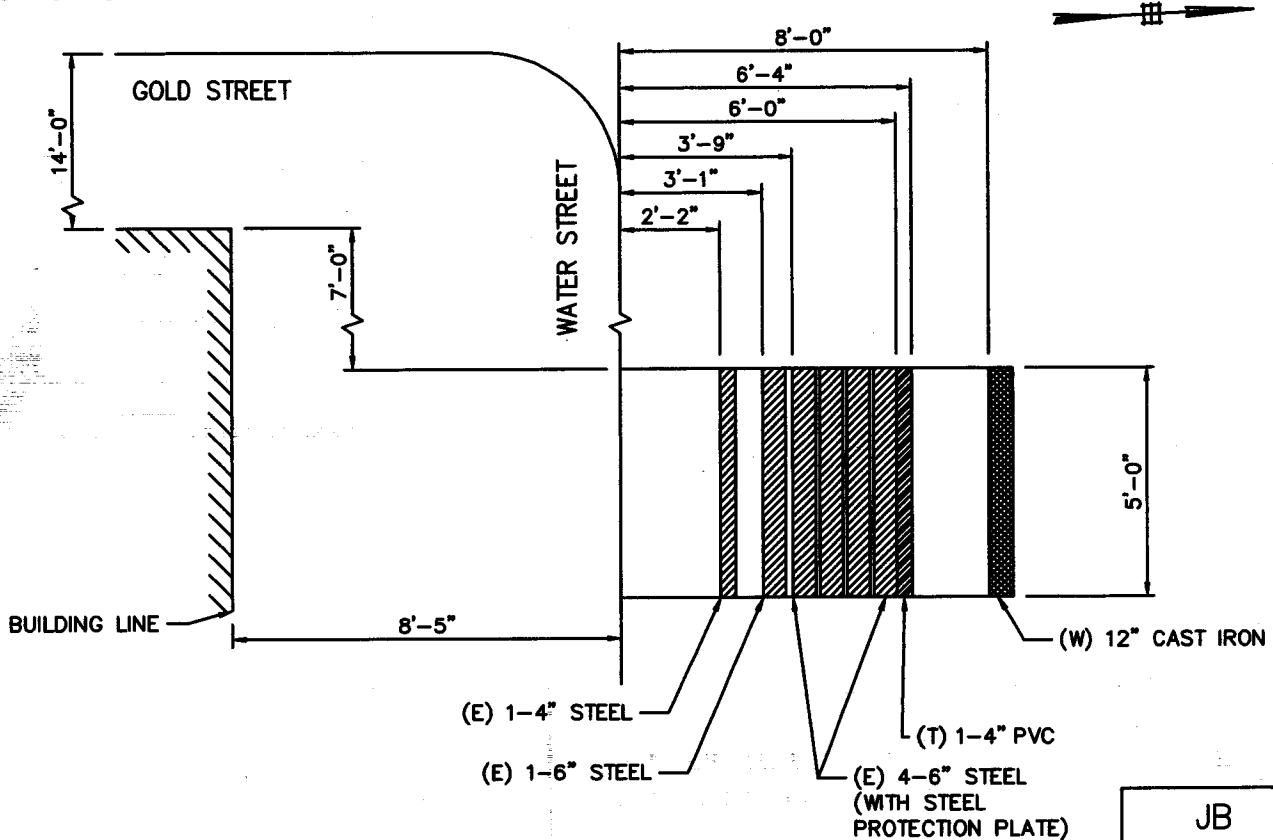
SECTION LOOKING WEST



JOB: DUMBO/VINEGAR HILL, BROOKLYN PREPARED BY: J.PELAEZ DATE: 01/09/2014  
JOB NO: HWKKP005 CHECKED BY: G.CASTRO DATE: 01/21/2014

TEST PIT # 5 LOCATION: SE CORNER OF WATER ST.  
PURPOSE: LOCATE FACILITIES AND GOLD ST.

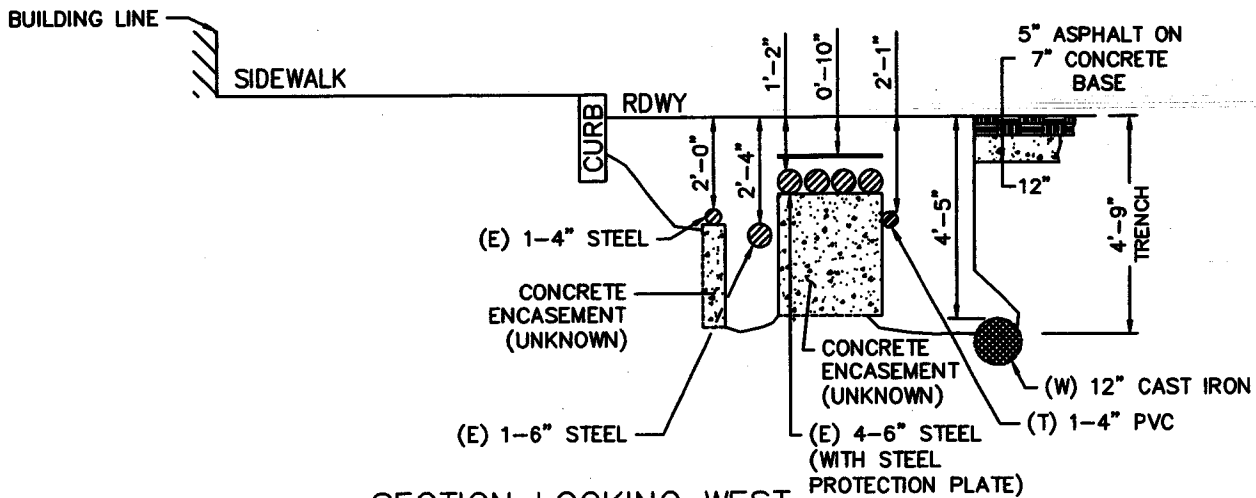
TEST PIT DIMENSION  
5'-0" X 8'-0" X 4'-9" DEEP



JB  
ITEMS

NOTE:  
1. ALL DRAWINGS SHOWING UTILITY  
SUPPORT AND PROTECT WORK ARE  
FOR REFERENCE ONLY.

PLAN

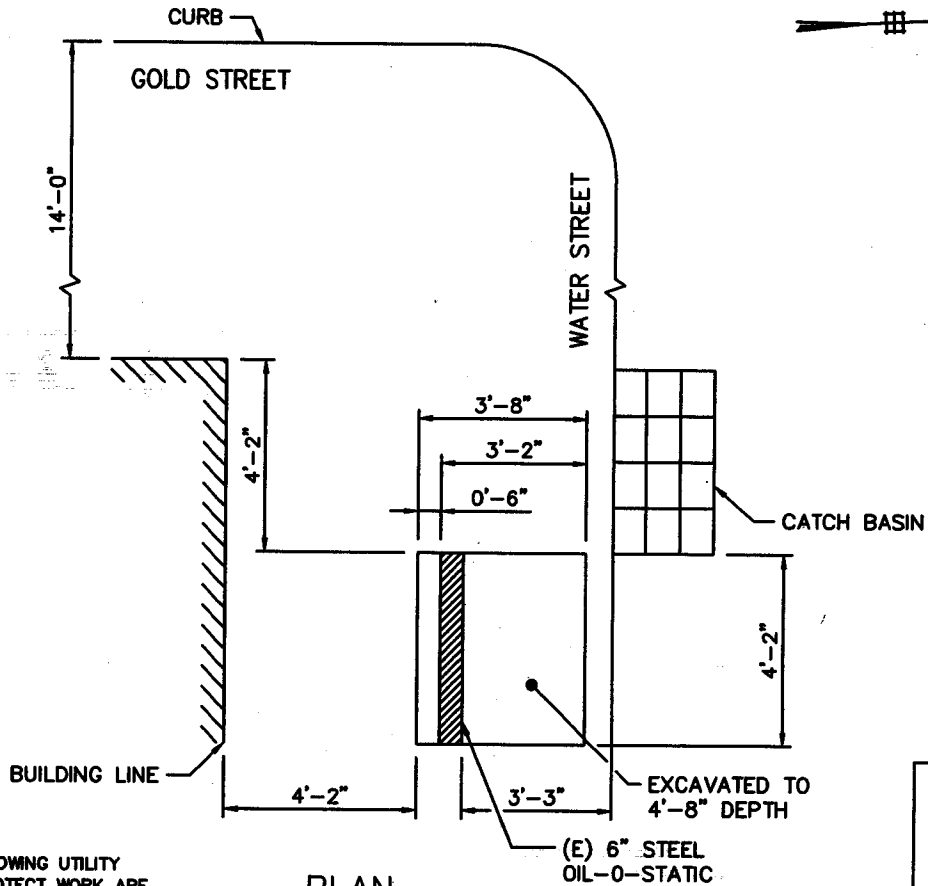


SECTION LOOKING WEST

JOB: DUMBO/VINEGAR HILL, BROOKLYN PREPARED BY: J.PELAEZ DATE: 01/09/2014  
 JOB NO: HWKKP005 CHECKED BY: G.CASTRO DATE: 01/21/2014

TEST PIT # 6 LOCATION: SE CORNER OF WATER ST.  
 PURPOSE: LOCATE FACILITIES AND GOLD ST.

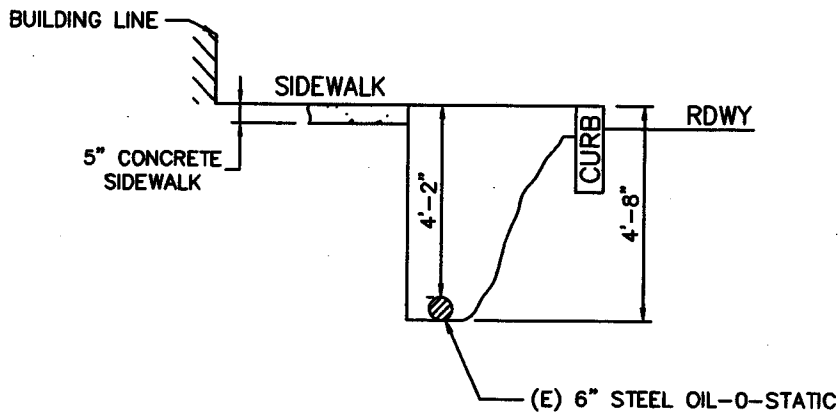
TEST PIT DIMENSION  
 4'-2"X3'-8"X(DEPTH: 4'-8")



NOTE:  
 1. ALL DRAWINGS SHOWING UTILITY  
 SUPPORT AND PROTECT WORK ARE  
 FOR REFERENCE ONLY.

PLAN

JB  
 ITEMS



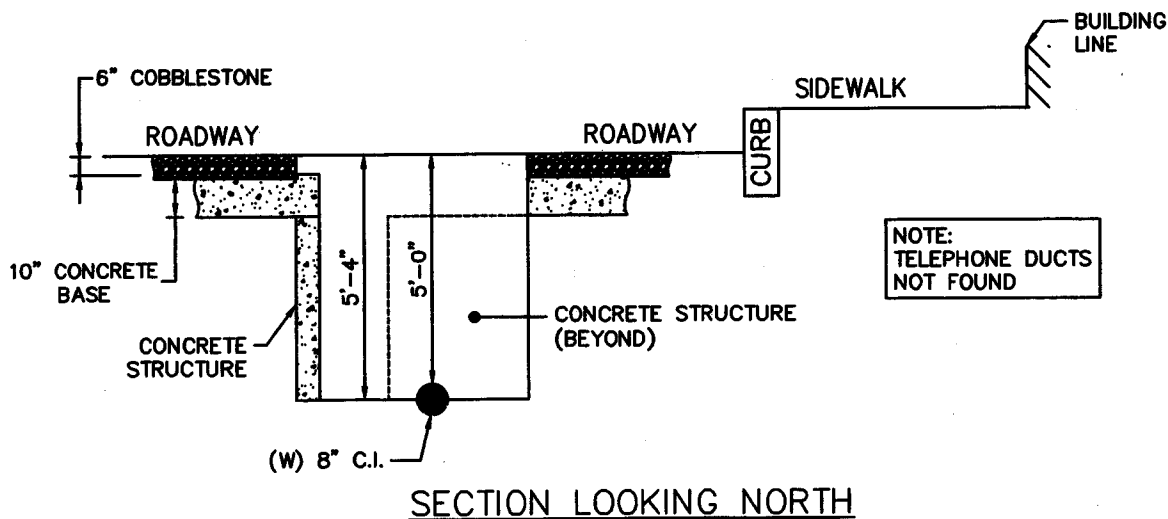
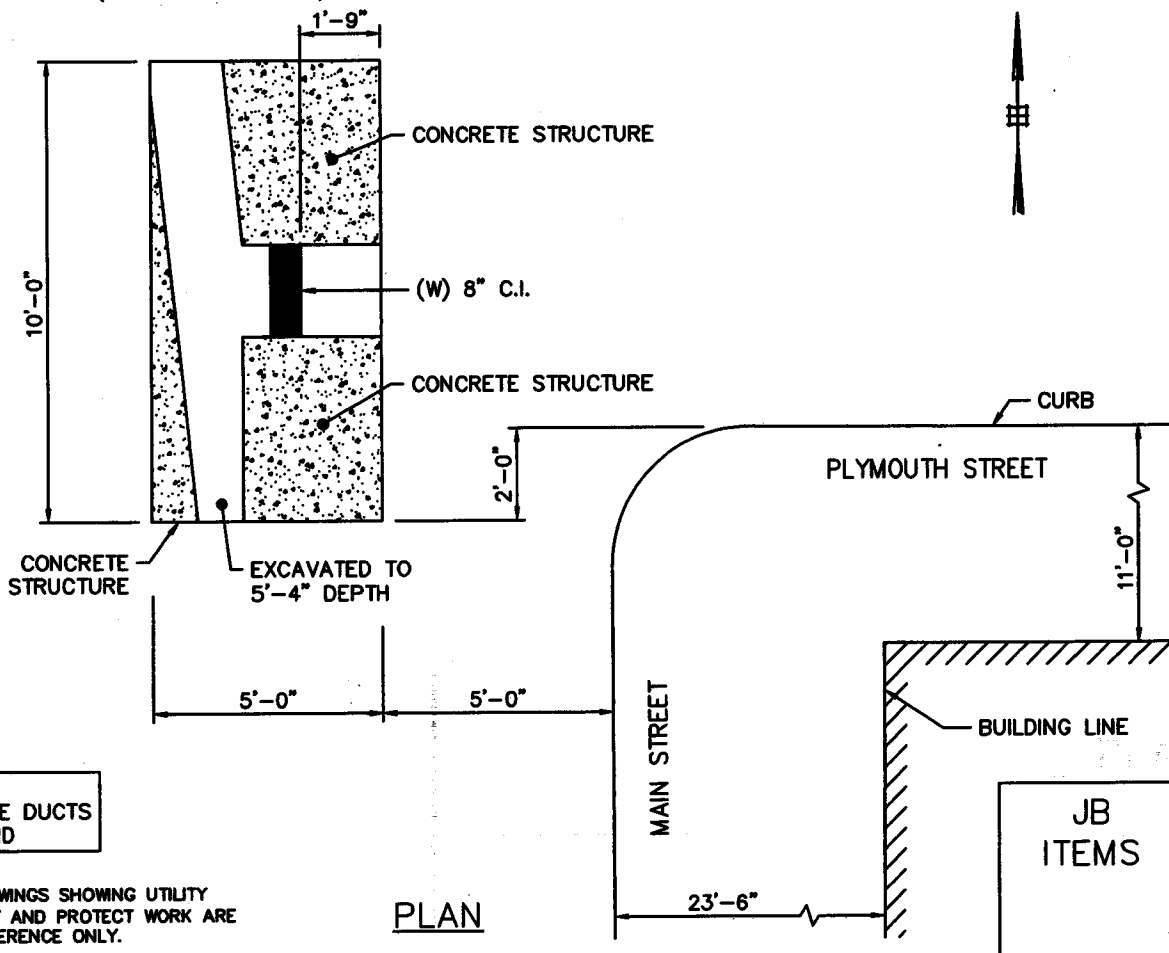
SECTION LOOKING WEST



JOB: DUMBO/VNEGAR HILL, BROOKLYN PREPARED BY: J.PELAEZ DATE: 01/14/2014  
JOB NO: HWKKP005 CHECKED BY: G.CASTRO DATE: 01/21/2014

TEST PIT # 7 LOCATION: ROADWAY OF PLYMOUTH ST.  
PURPOSE: LOCATE FACILITIES AT MAIN ST.

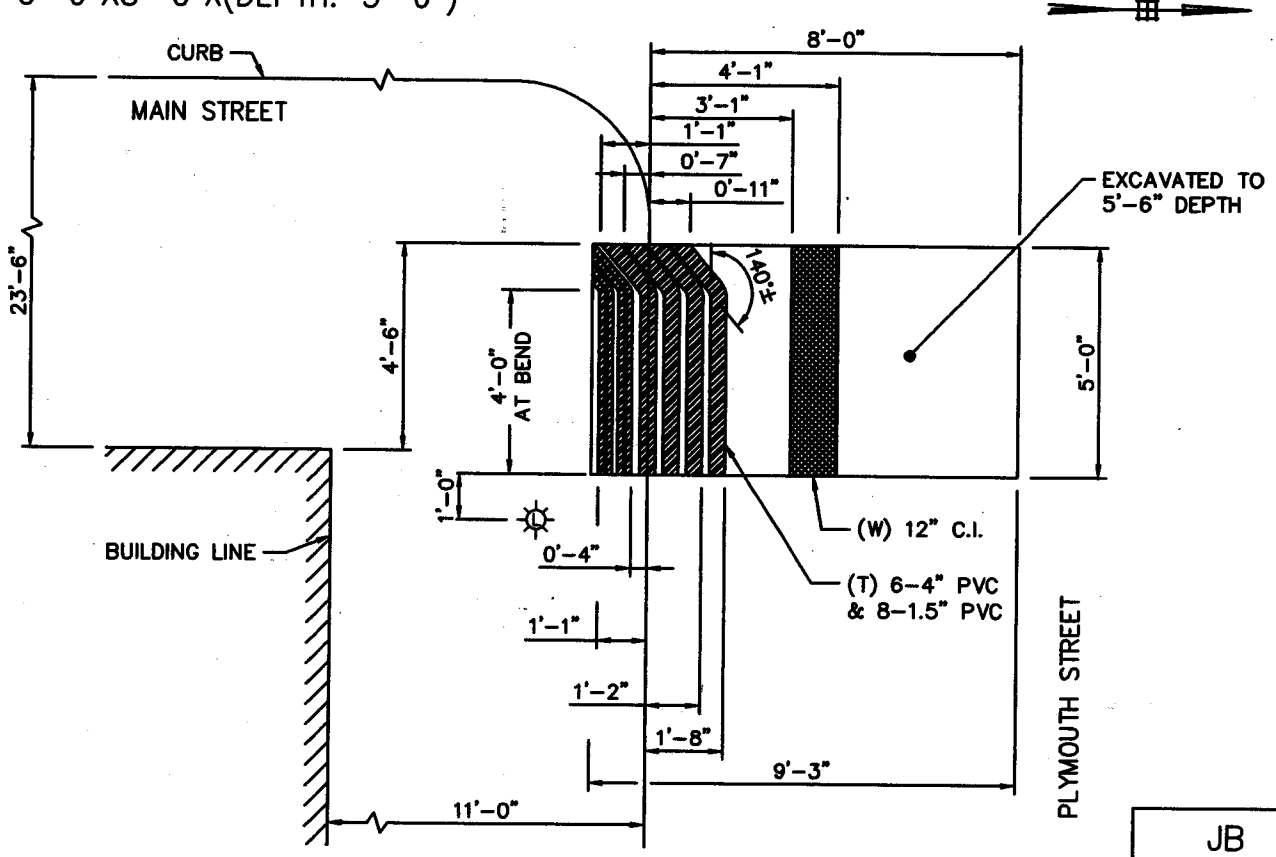
TEST PIT DIMENSION  
5'-0" X 10'-0" X (DEPTH: 5'-4")



JOB: DUMBO/VINEGAR HILL, BROOKLYN PREPARED BY: J.PELAEZ DATE: 01/09/2014  
 JOB NO: HWKKP005 CHECKED BY: G.CASTRO DATE: 01/21/2014

TEST PIT # 8 LOCATION: SE CORNER OF PLYMOUTH ST.  
 PURPOSE: LOCATE FACILITIES AT MAIN ST.

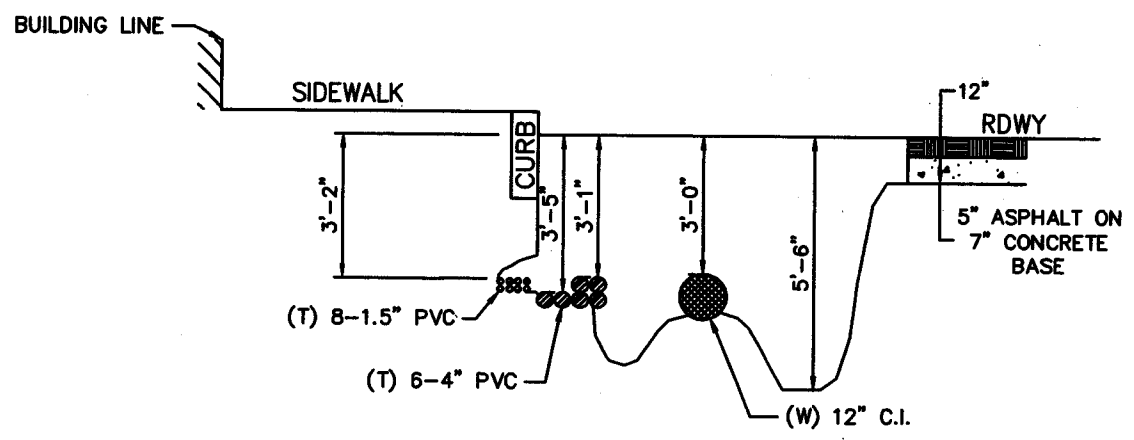
TEST PIT DIMENSION  
 5'-0" X 8'-0" X (DEPTH: 5'-6")



NOTE:  
 1. ALL DRAWINGS SHOWING UTILITY SUPPORT AND PROTECT WORK ARE FOR REFERENCE ONLY.

PLAN

JB  
 ITEMS



SECTION LOOKING WEST



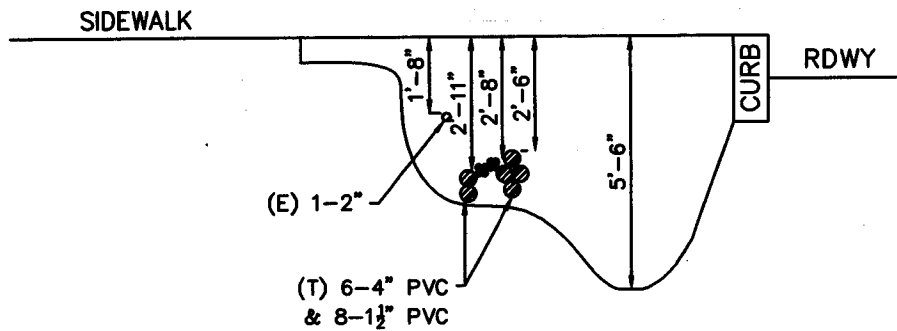
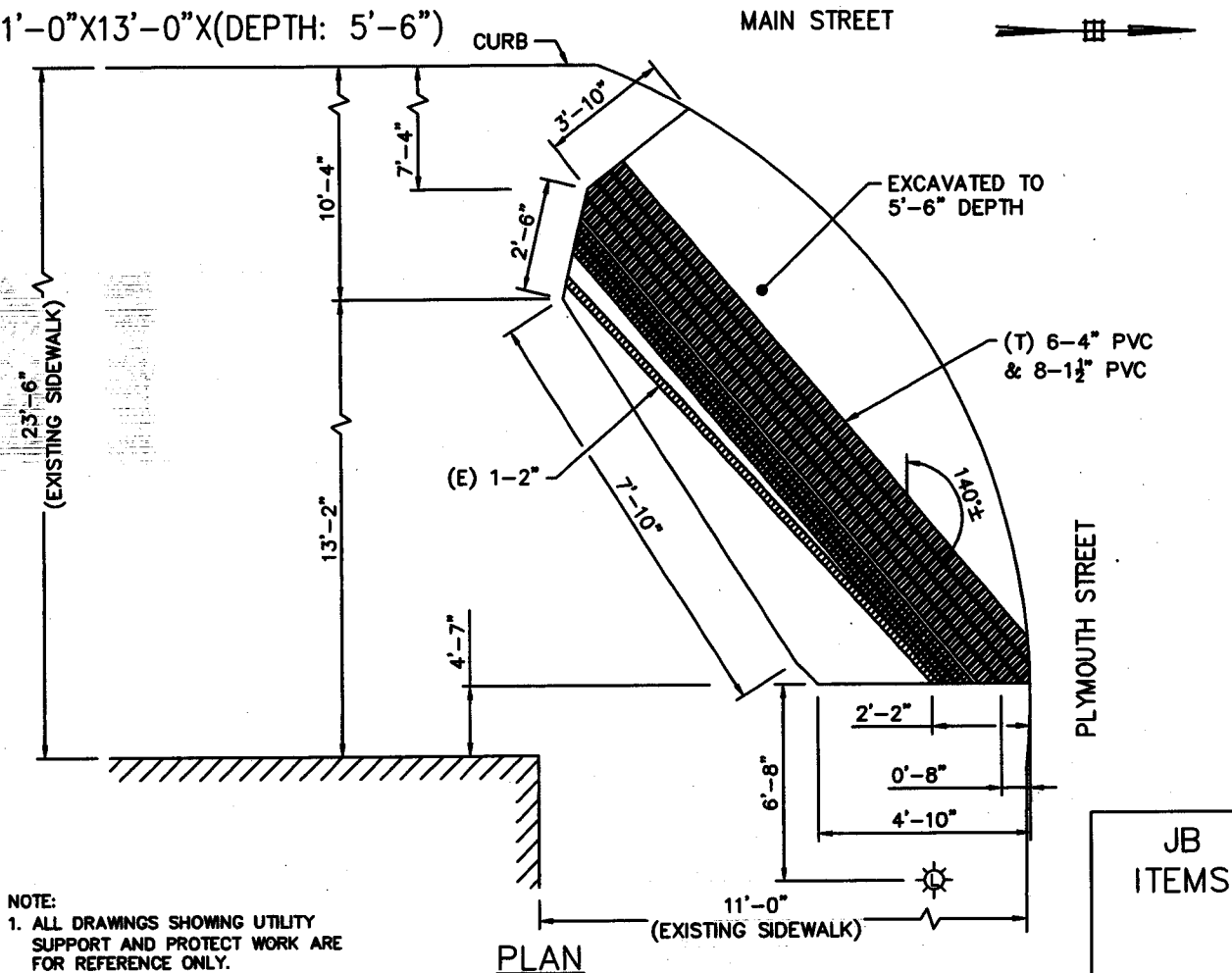


JOB: DUMBO/VINEGAR HILL, BROOKLYN PREPARED BY: J.PELAEZ DATE: 01/10/2014  
JOB NO: HWKKP005 CHECKED BY: G.CASTRO DATE: 01/21/2014

TEST PIT # 9 LOCATION: SOUTHEAST CORNER OF  
PURPOSE: LOCATE FACILITIES PLYMOUTH ST. AND MAIN ST.

TEST PIT DIMENSION

11'-0"X13'-0"X(DEPTH: 5'-6")



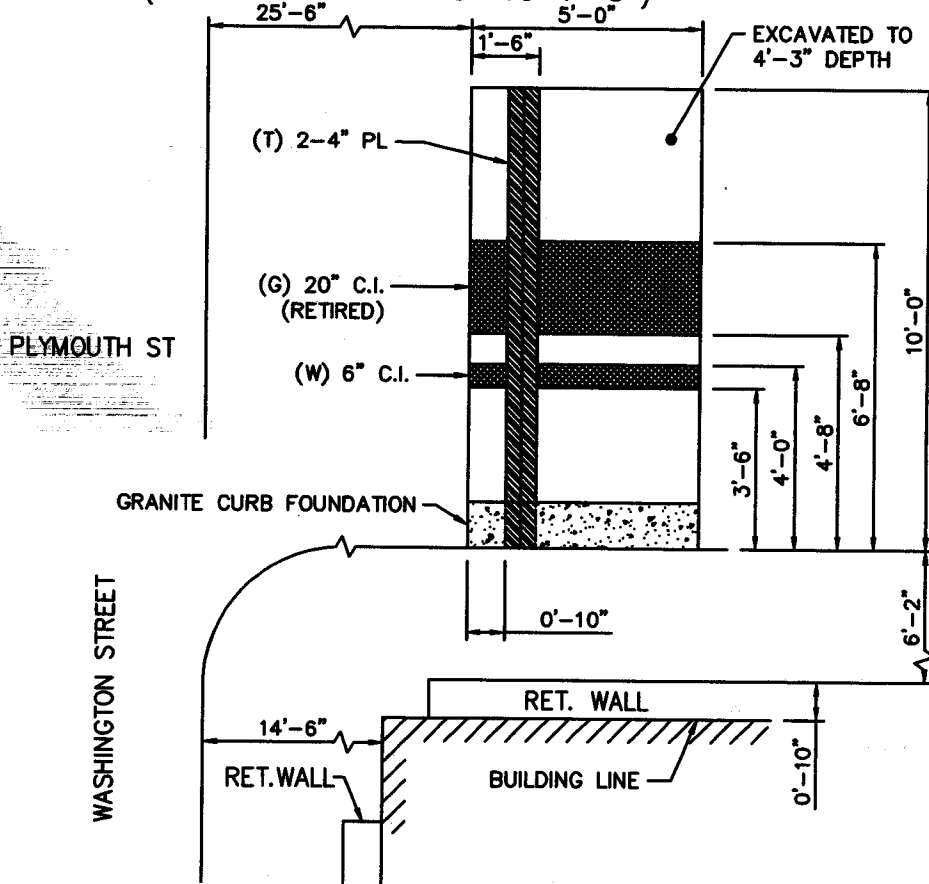


JOB: DUMBO/VINEGAR HILL, BROOKLYN PREPARED BY: J.PELAEZ DATE: 01/10/2014  
JOB NO: HWKPP005 CHECKED BY: G.CASTRO DATE: 01/21/2014

TEST PIT # 10 LOCATION: SE CORNER OF PLYMOUTH  
PURPOSE: LOCATE FACILITIES ST. AND WASHINGTON ST.

TEST PIT DIMENSION

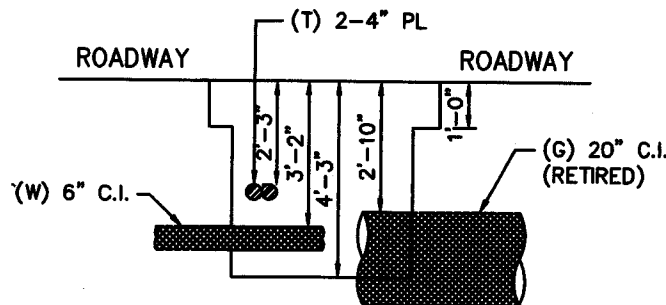
5'-0"X10'-0"X(DEPTH VARIES: 1'-0" TO 4'-3")



NOTE:  
1. ALL DRAWINGS SHOWING UTILITY  
SUPPORT AND PROTECT WORK ARE  
FOR REFERENCE ONLY.

PLAN

JB  
ITEMS



SECTION LOOKING NORTH

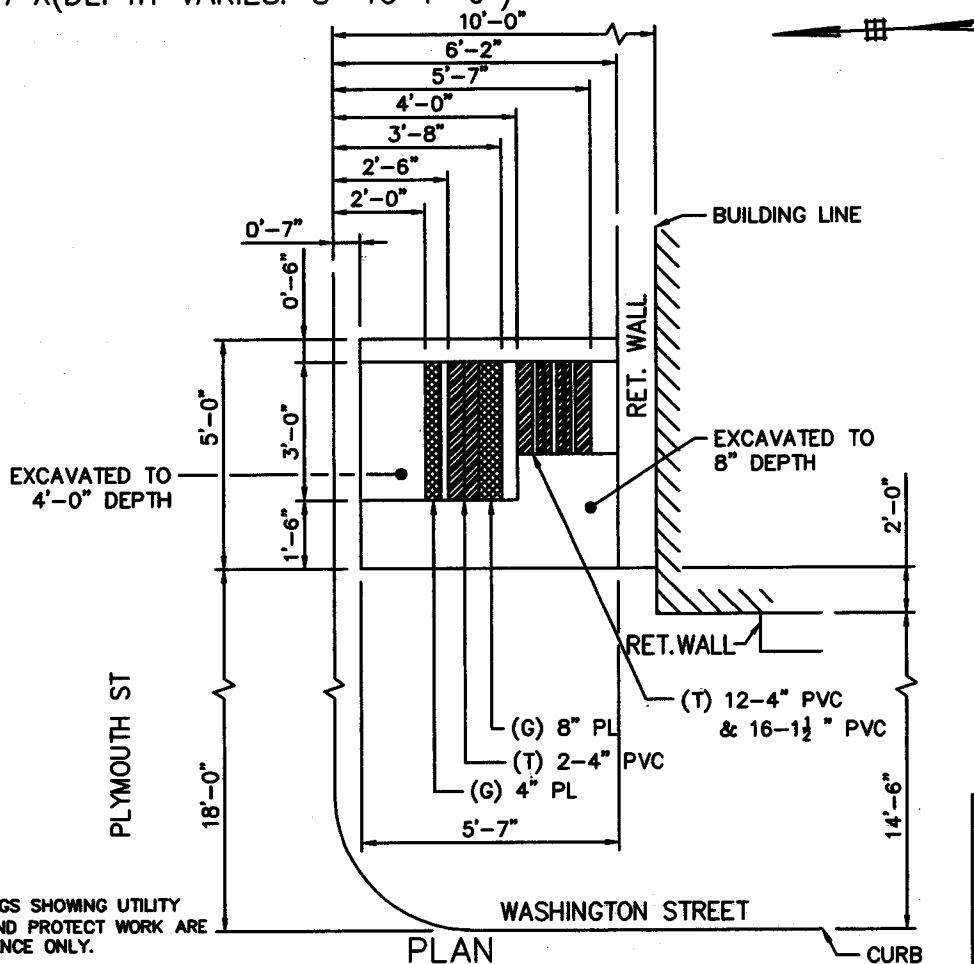


JOB: DUMBO/VINEGAR HILL, BROOKLYN PREPARED BY: J.PELAEZ DATE: 01/10/2014  
JOB NO: HWKKP005 CHECKED BY: G.CASTRO DATE: 01/21/2014

TEST PIT # 11 LOCATION: SE CORNER OF WASHINGTON  
PURPOSE: LOCATE FACILITIES ST. AND PLYMOUTH ST.

TEST PIT DIMENSION

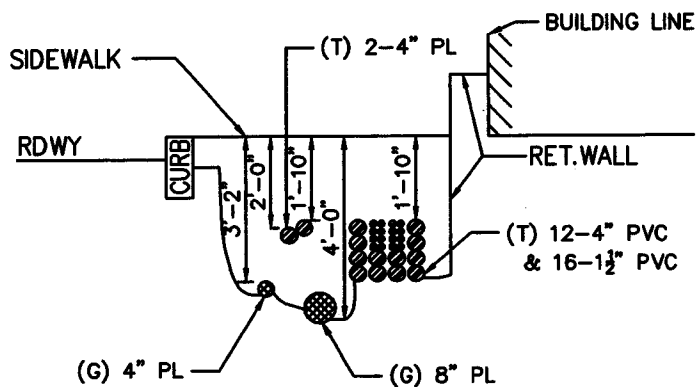
5'-0" X 5'-7" X (DEPTH VARIES: 8" TO 4'-0")



JB  
ITEMS

NOTE:  
1. ALL DRAWINGS SHOWING UTILITY  
SUPPORT AND PROTECT WORK ARE  
FOR REFERENCE ONLY.

PLAN

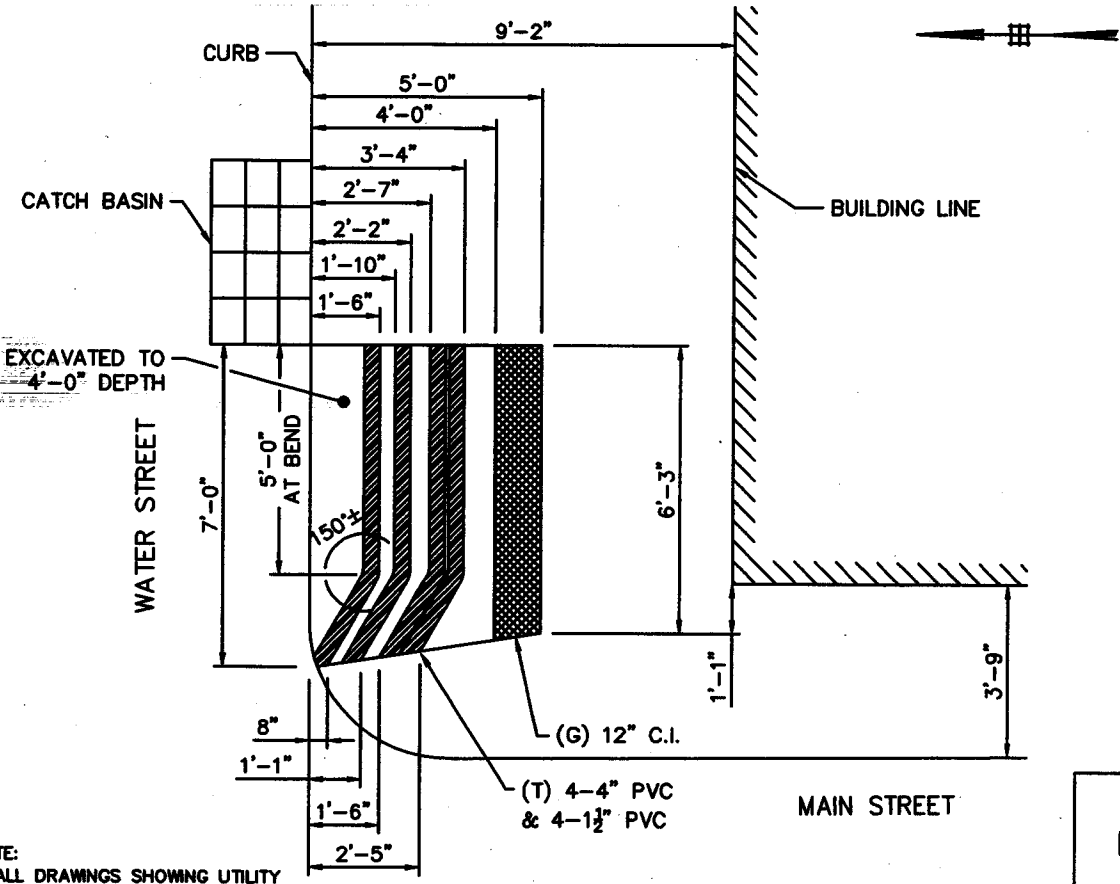


SECTION LOOKING EAST

JOB: DUMBO/VINEGAR HILL, BROOKLYN PREPARED BY: J.PELAEZ DATE: 01/10/2014  
 JOB NO: HWKPP005 CHECKED BY: G.CASTRO DATE: 01/21/2014

TEST PIT # 12 LOCATION: SOUTHEAST CORNER OF  
 PURPOSE: LOCATE FACILITIES MAIN ST. AND WATER ST.

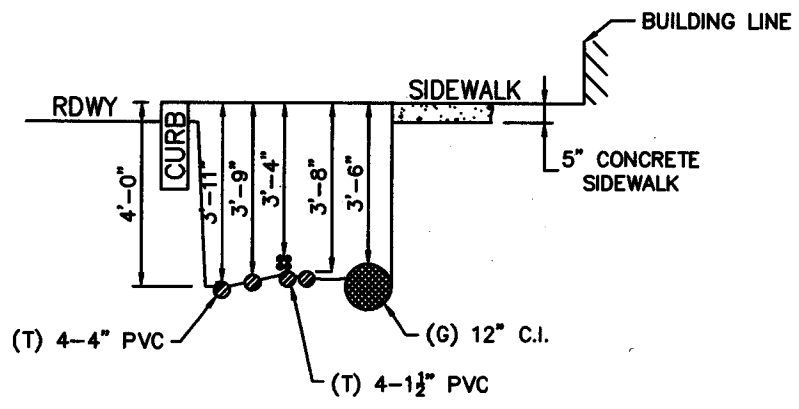
TEST PIT DIMENSION  
 5'-0"X7'-0"X(DEPTH: 4'-0")



NOTE:  
 1. ALL DRAWINGS SHOWING UTILITY  
 SUPPORT AND PROTECT WORK ARE  
 FOR REFERENCE ONLY.

JB  
 ITEMS

PLAN



SECTION LOOKING EAST

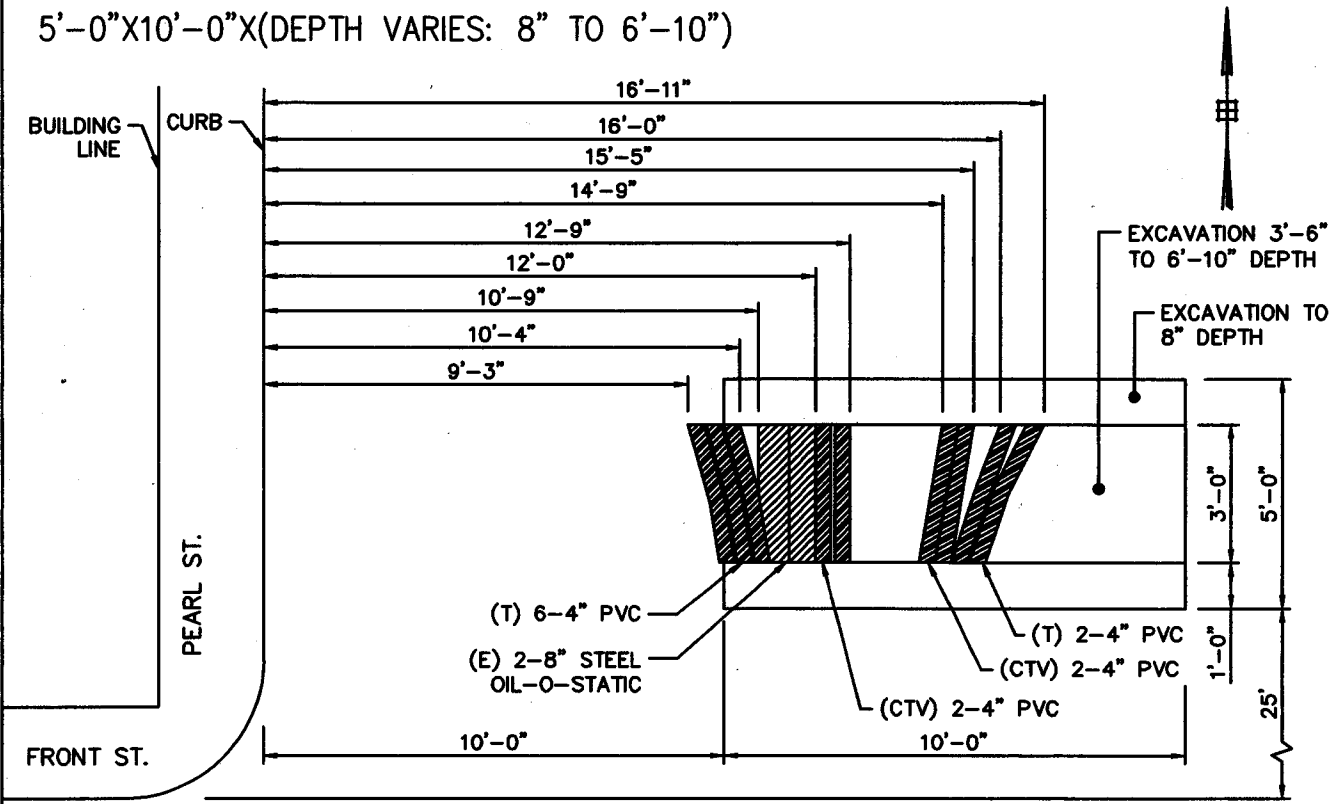


JOB: DUMBO/VINEGAR HILL, BROOKLYN PREPARED BY: J.PELAEZ DATE: 01/14/2014  
JOB NO: HWKKP005 CHECKED BY: G.CASTRO DATE: 01/21/2014

TEST PIT # 13 LOCATION: ROADWAY OF PEARL ST. 25 FT.  
PURPOSE: LOCATE FACILITIES NORTH OF FRONT ST.

TEST PIT DIMENSION

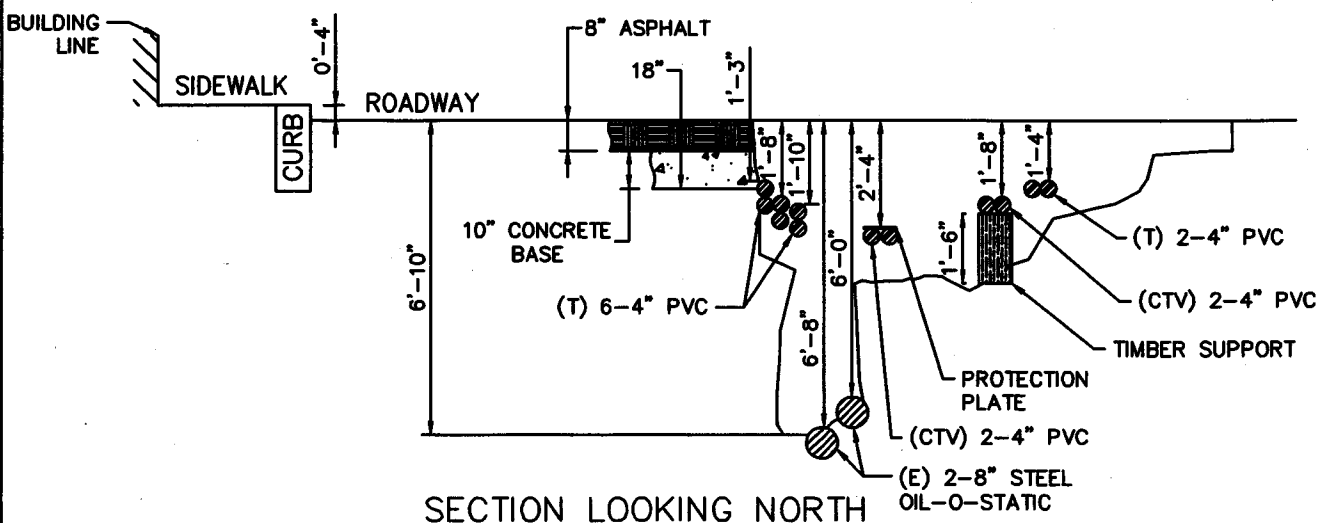
5'-0"X10'-0"X(DEPTH VARIES: 8" TO 6'-10")



NOTE:  
1. ALL DRAWINGS SHOWING UTILITY SUPPORT AND PROTECT WORK ARE FOR REFERENCE ONLY.

PLAN

JB  
ITEMS



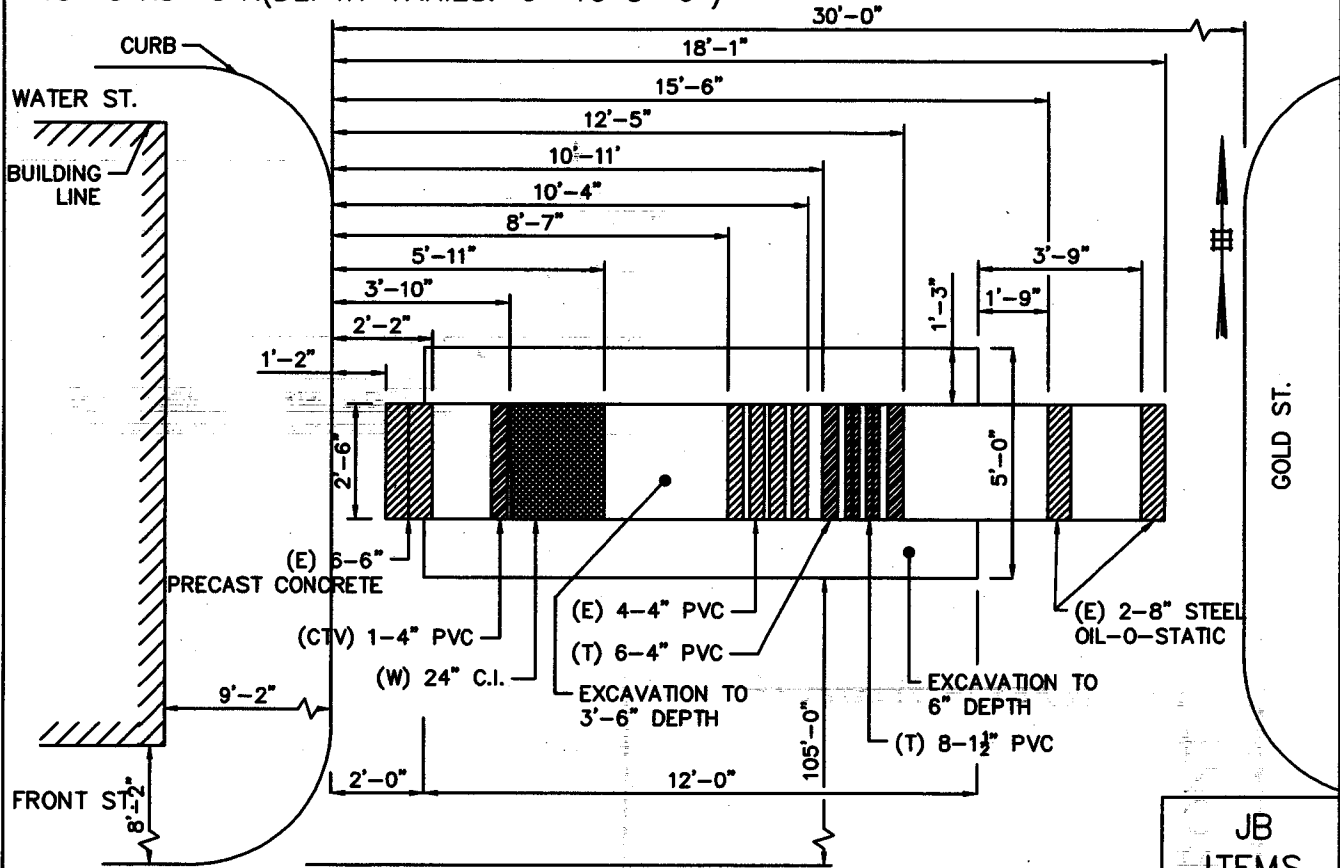
SECTION LOOKING NORTH



JOB: DUMBO/VINEGAR HILL, BROOKLYN PREPARED BY: J.PELAEZ DATE: 01/15/2014  
JOB NO: HWKPP005 CHECKED BY: G.CASTRO DATE: 01/21/2014

TEST PIT # 14 LOCATION: GOLD ST. BETWEEN WATER ST.  
PURPOSE: LOCATE FACILITIES AND FRONT ST.

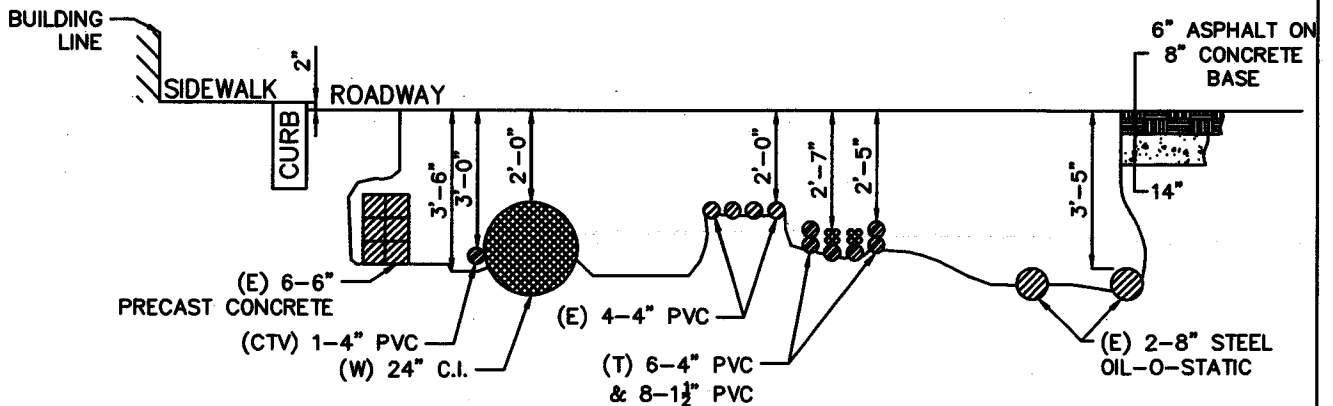
TEST PIT DIMENSION  
15'-9"X5'-0"X(DEPTH VARIES: 6" TO 3'-6")



NOTE:  
1. ALL DRAWINGS SHOWING UTILITY  
SUPPORT AND PROTECT WORK ARE  
FOR REFERENCE ONLY.

PLAN

JB  
ITEMS



SECTION LOOKING NORTH

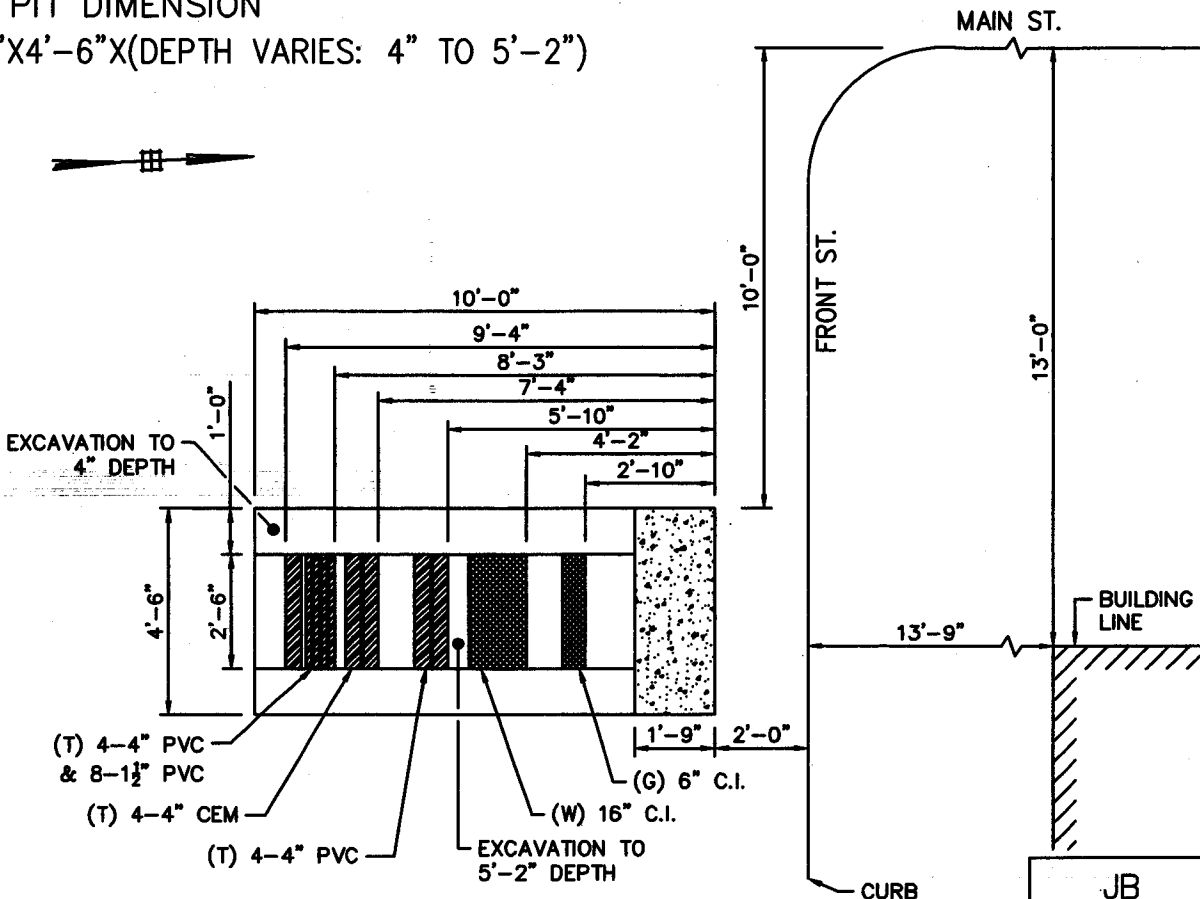


JOB: DUMBO/VINEGAR HILL, BROOKLYN PREPARED BY: J.PELAEZ DATE: 01/09/2014  
JOB NO: HWKKP005 CHECKED BY: G.CASTRO DATE: 01/21/2014

TEST PIT # 15 LOCATION: NE CORNER OF FRONT ST.  
PURPOSE: LOCATE FACILITIES AND MAIN ST.

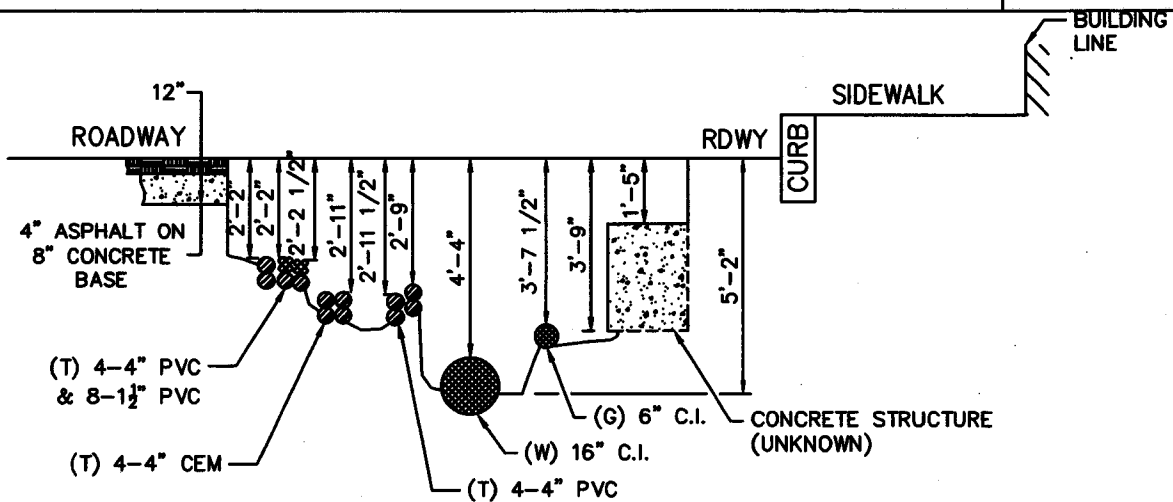
TEST PIT DIMENSION

10'-0" X 4'-6" X (DEPTH VARIES: 4" TO 5'-2")



NOTE:  
1. ALL DRAWINGS SHOWING UTILITY SUPPORT AND PROTECT WORK ARE FOR REFERENCE ONLY.

PLAN



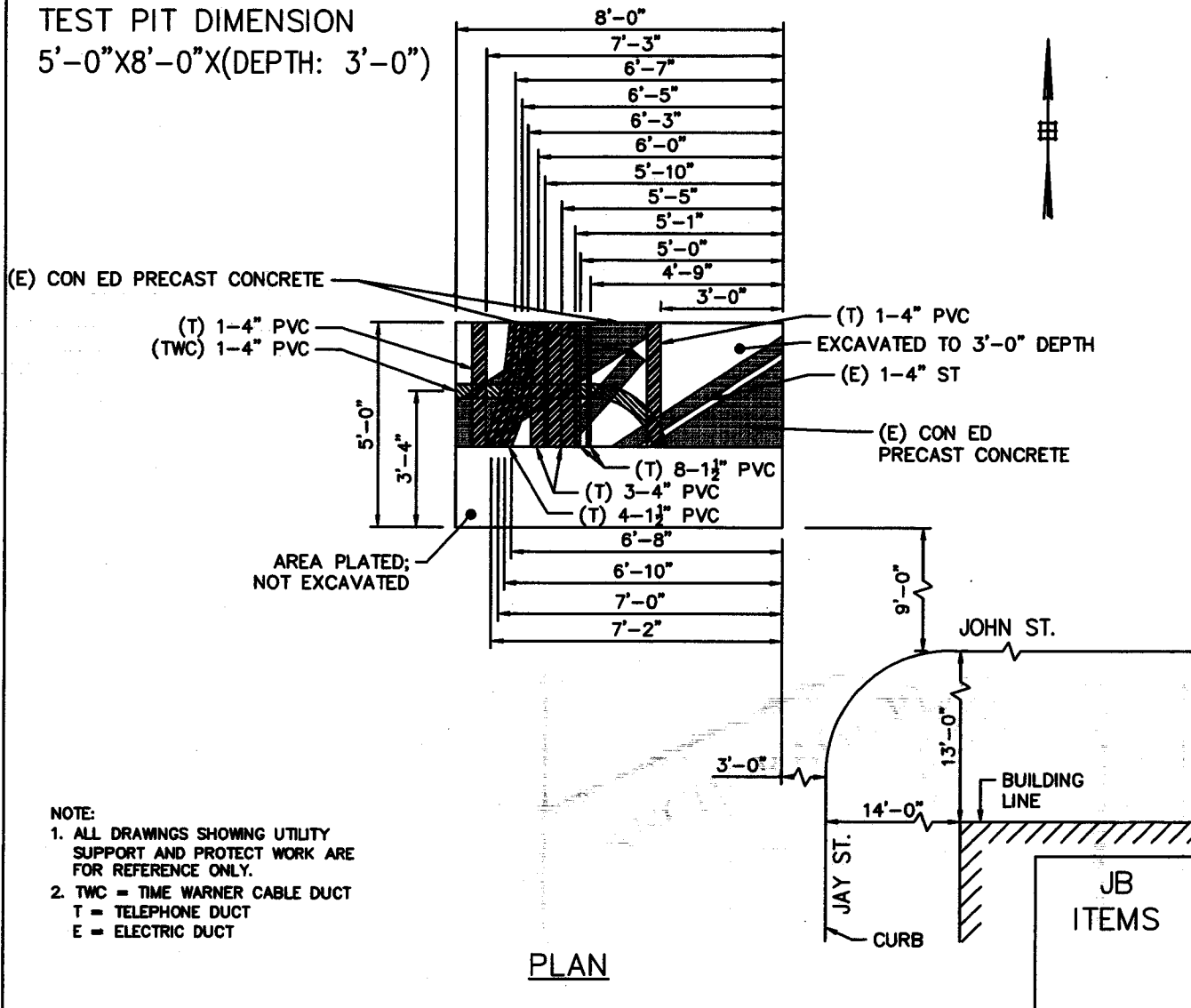
SECTION LOOKING WEST

JB-144

JOB: DUMBO/VINEGAR HILL, BROOKLYN PREPARED BY: J.LOWE DATE: 07/27/2015  
 JOB NO: HWKKP005 CHECKED BY: G.CASTRO DATE: 08/12/2015

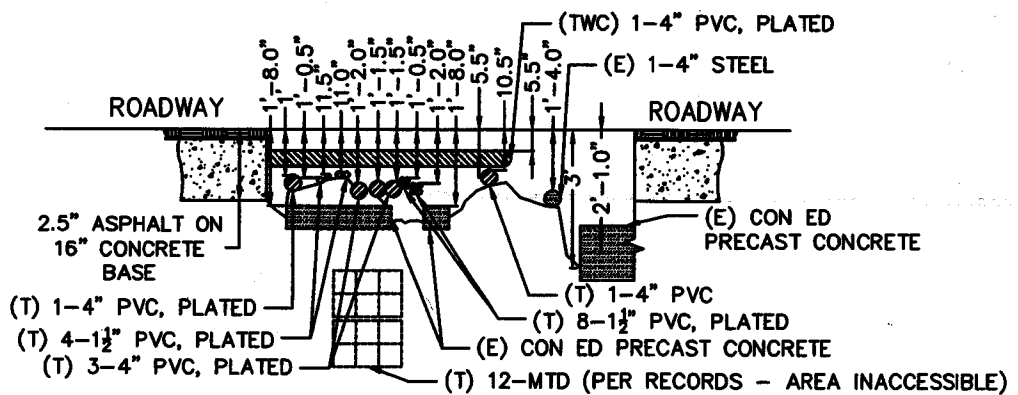
TEST PIT # 16 LOCATION: INTERSECTION OF JOHN ST.  
 PURPOSE: LOCATE FACILITIES AND JAY ST.

TEST PIT DIMENSION  
 5'-0" X 8'-0" X (DEPTH: 3'-0")



- NOTE:
1. ALL DRAWINGS SHOWING UTILITY SUPPORT AND PROTECT WORK ARE FOR REFERENCE ONLY.
  2. TWC = TIME WARNER CABLE DUCT  
 T = TELEPHONE DUCT  
 E = ELECTRIC DUCT

PLAN



SECTION LOOKING NORTH

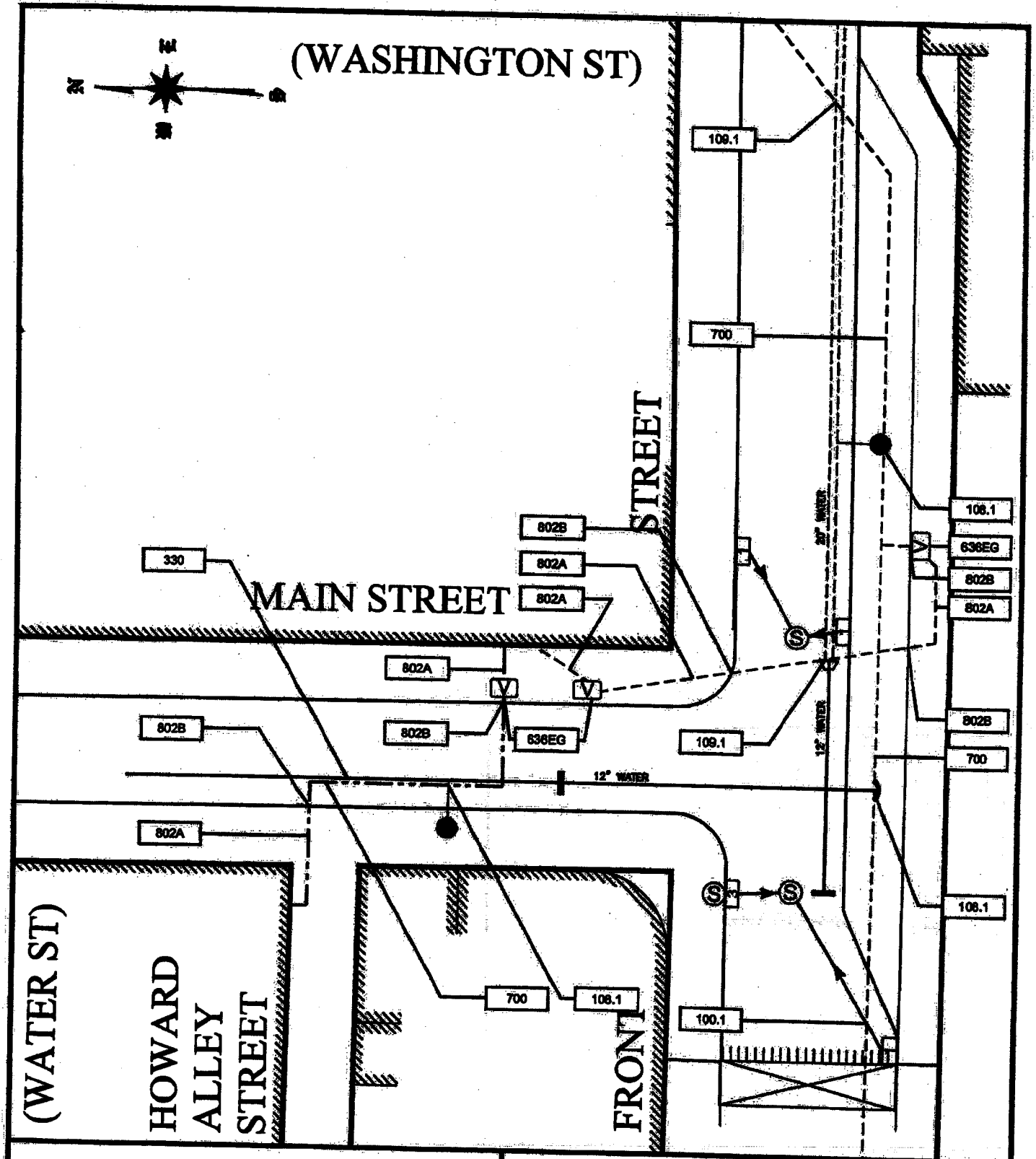


**SKETCHES**

**(NO TEXT IN THIS SECTION)**



(WASHINGTON ST)



Charter  
**Spectrum**

PROJECT NO. / NAME

HWKKP005 - RECONSTRUCTION OF DUMBO / VINEGAR HILL  
Main Street between Front Street & Water Street

DATE

11.25.17

12.19.17 rev 1

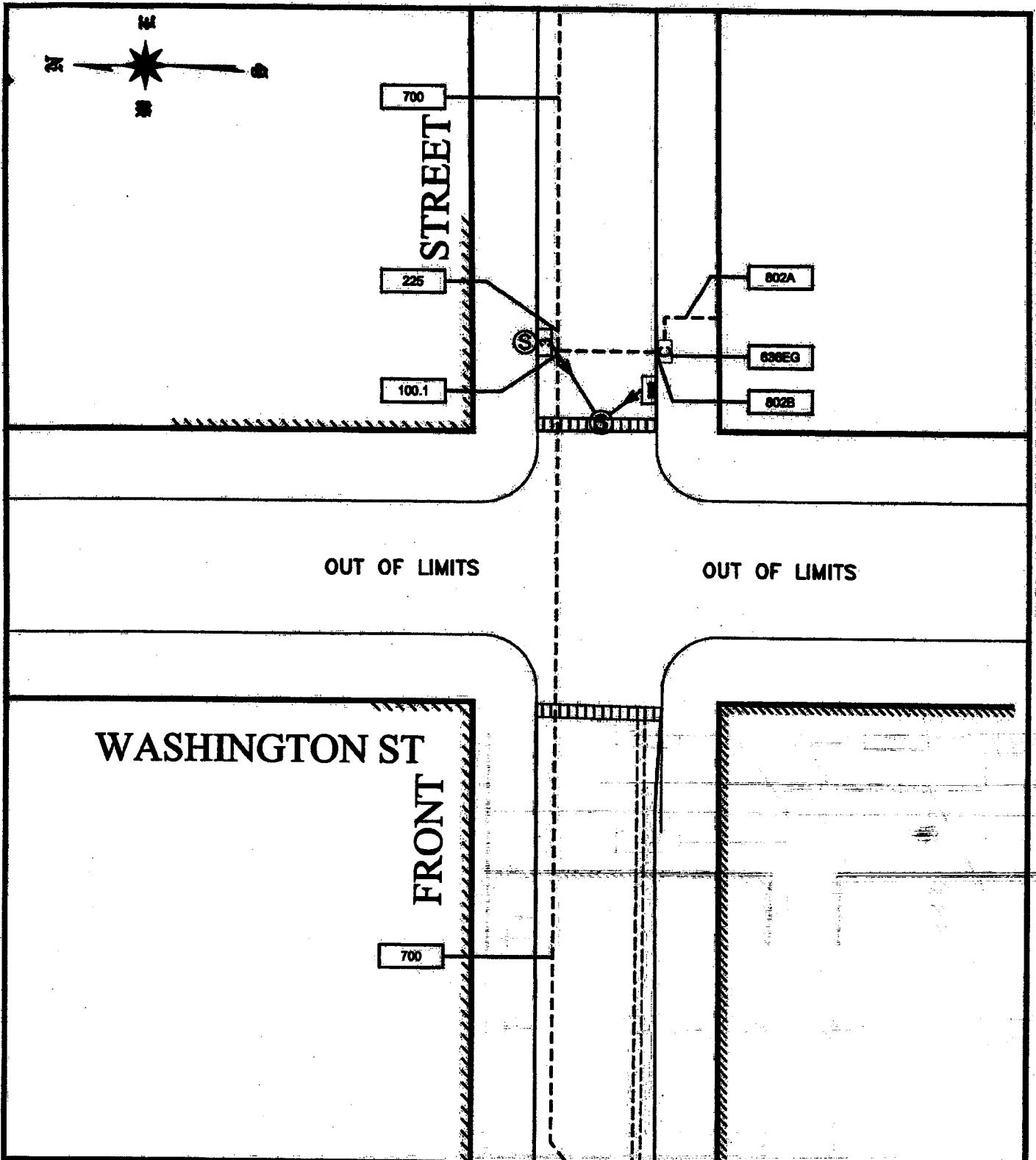
SCALE

1:30

01

13

JB-147



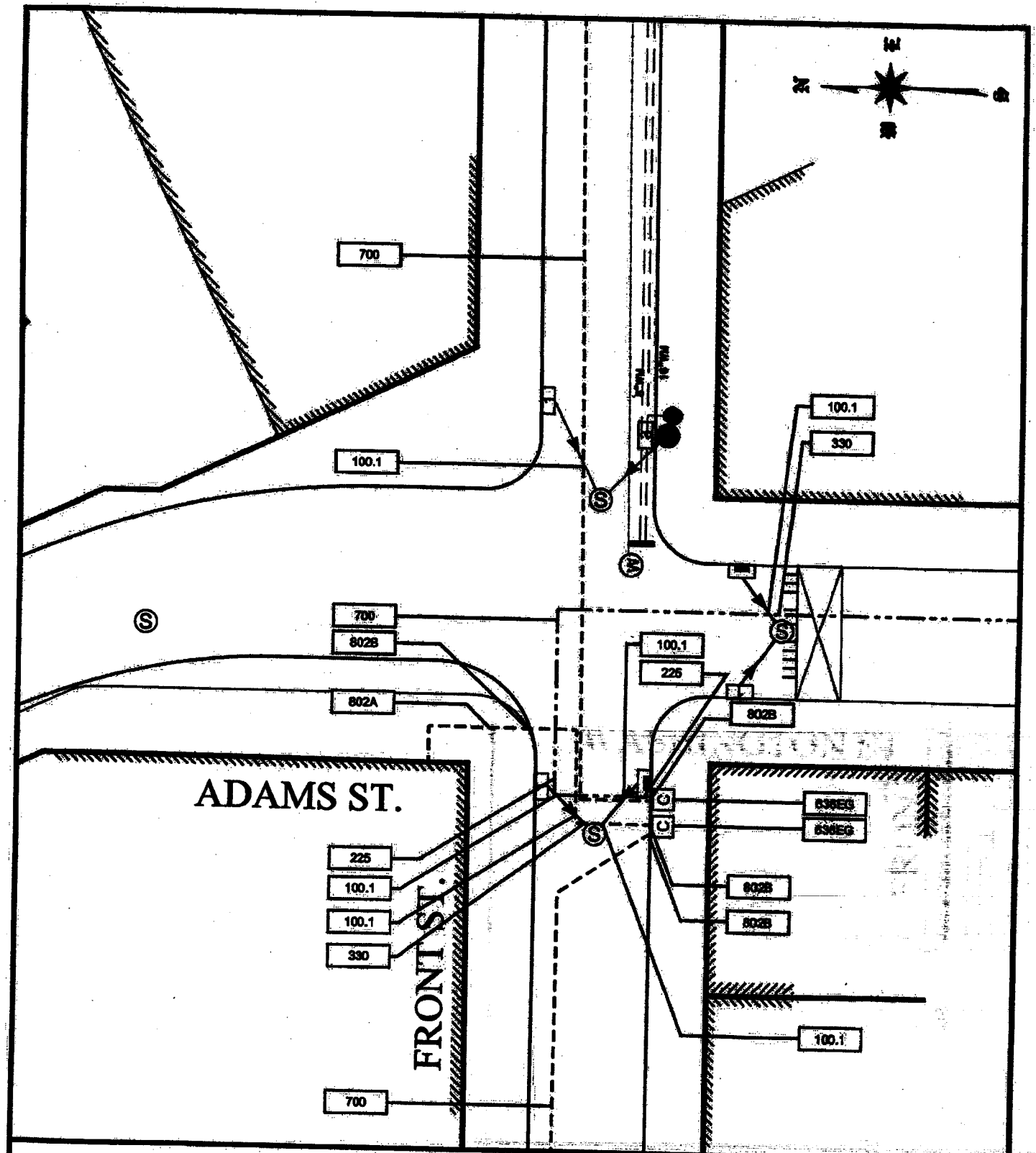
**Charter Spectrum**

PROJECT NAME  
**HWKKP005 - RECONSTRUCTION OF DUMBO / VINEGAR HILL**  
 Main Street between Front Street & Water Street

DATE  
 11.28.17  
 12.19.17 rev 1

SCALE  
 1:30

02  
 13



**Charter  
Spectrum**

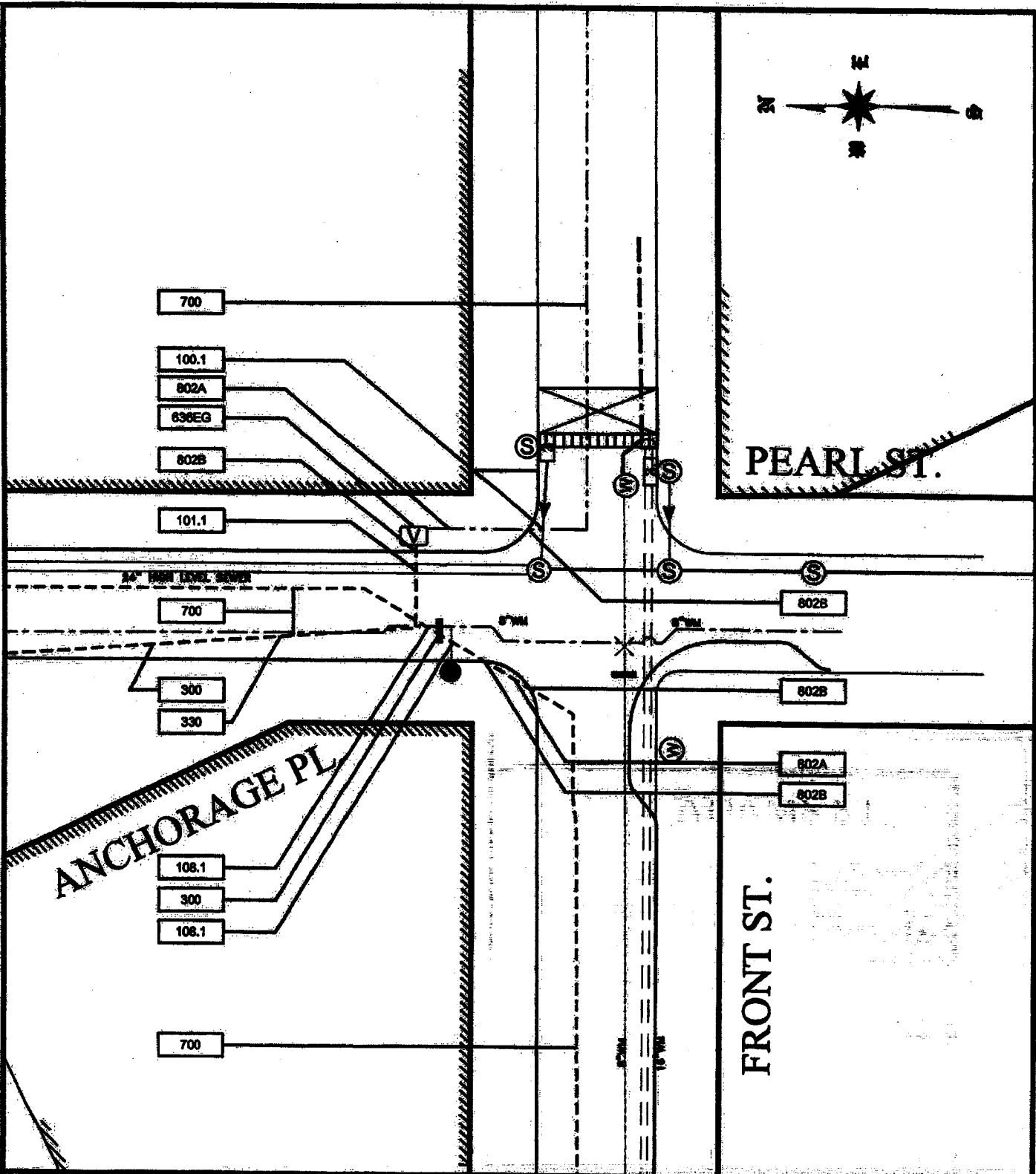
PROJECT ID: NAME  
**HWKKP005 - RECONSTRUCTION OF DUMBO / VINEGAR HILL**  
 Main Street between Front Street & Water Street

DATE  
 11.25.17  
 12.19.17 rev.1

SCALE  
 1:30

03  
 13

JB-149



Charter  
**Spectrum**

PROJECT ID: HWK

HWKPP005 - RECONSTRUCTION OF DUMBO / VINEGAR HILL  
Main Street between Front Street & Water Street

DATE:

11.25.17

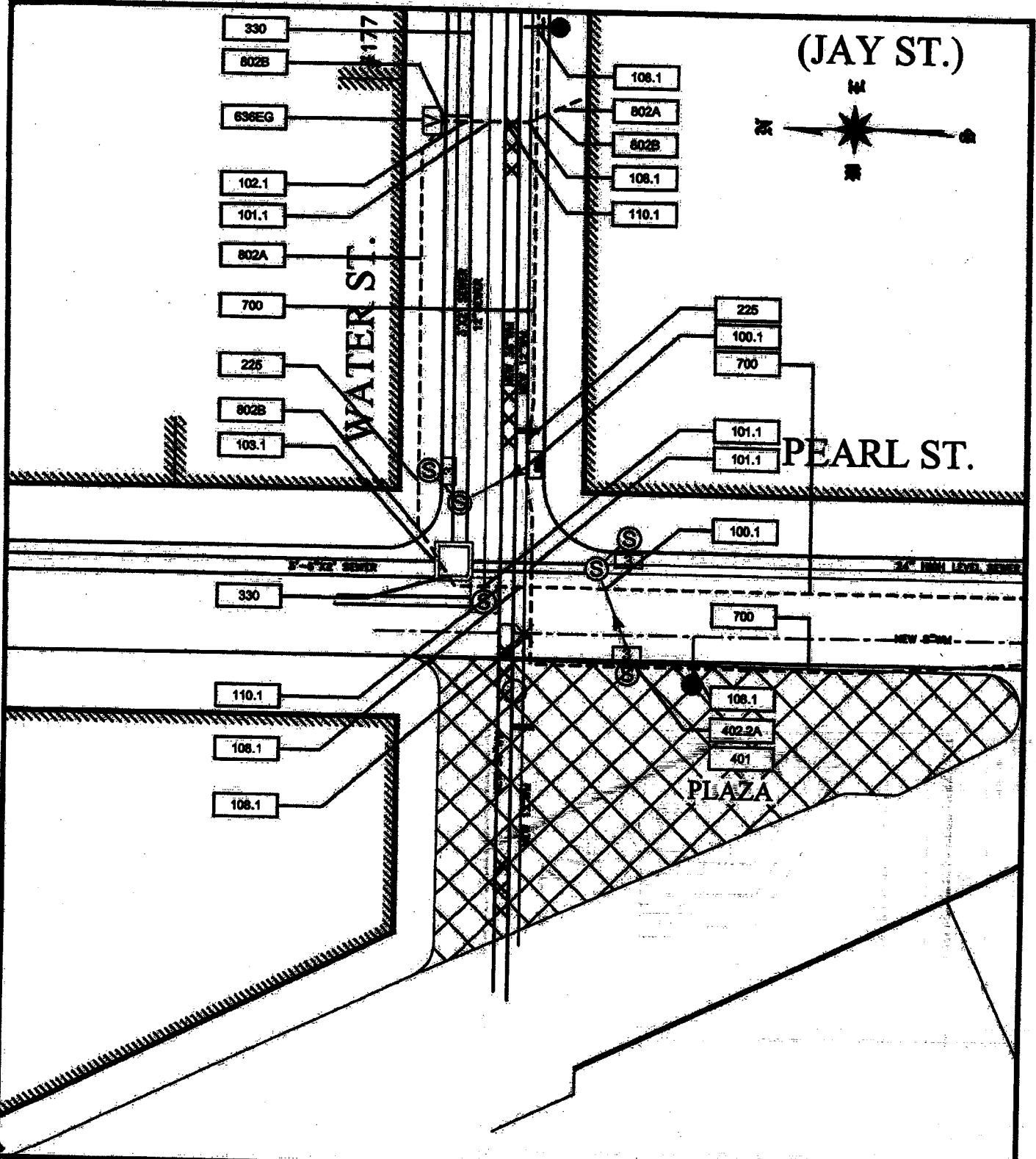
12.19.17 rev 1

SCALE:

1:30

04

13



(JAY ST.)



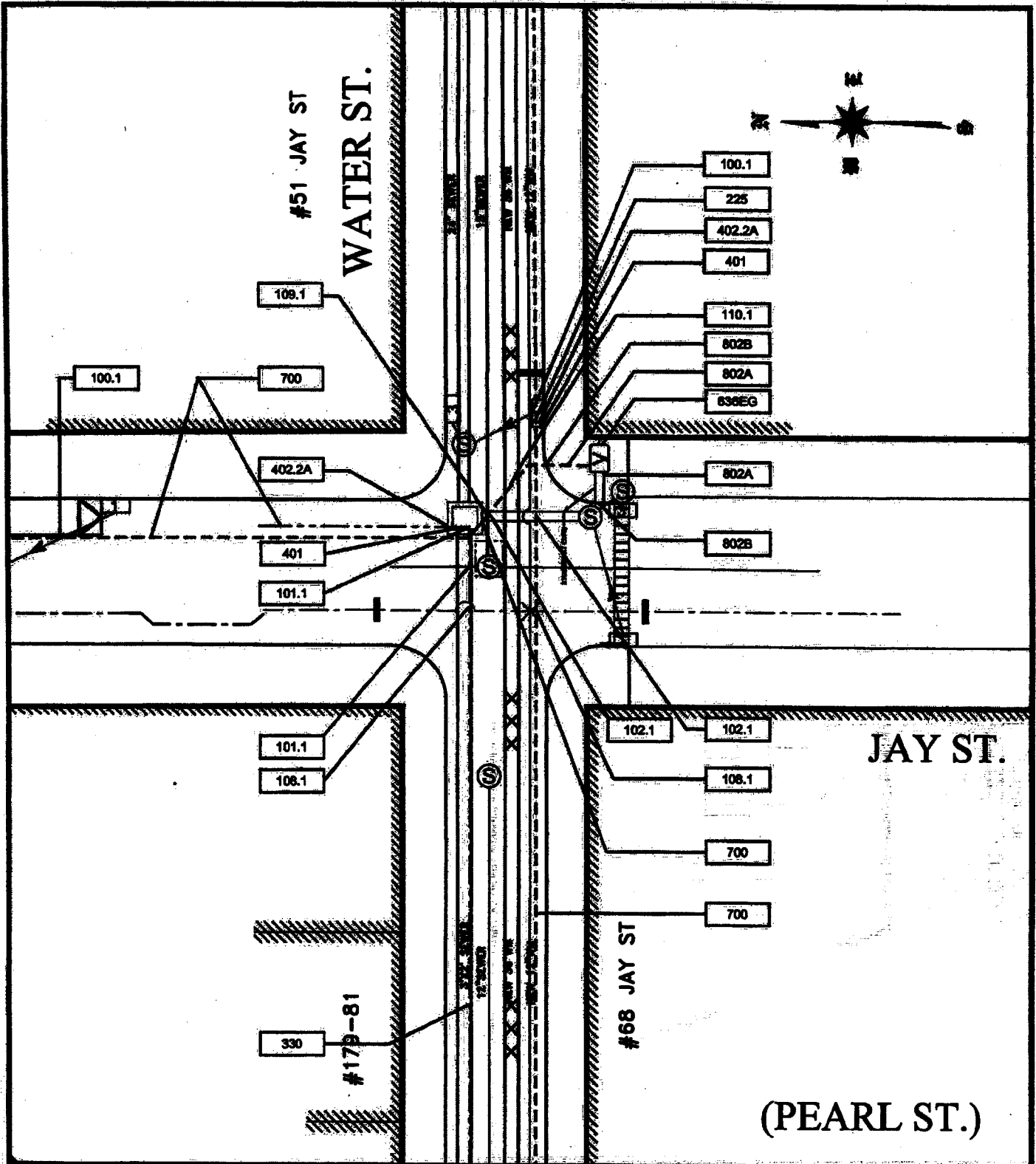
WATER ST.

PEARL ST.

PLAZA

**Charter Spectrum**

PROJECT ID. NAME		HWKPP005 - RECONSTRUCTION OF DUMBO / VINEGAR HILL Main Street between Front Street & Water Street	
DATE		SCALE	05 13
11.25.17 12.19.17 rev 1		1:30	



PROJECT ID, NAME  
 HWKKP005 - RECONSTRUCTION OF DUMBO / VINEGAR HILL  
 Main Street between Front Street & Water Street

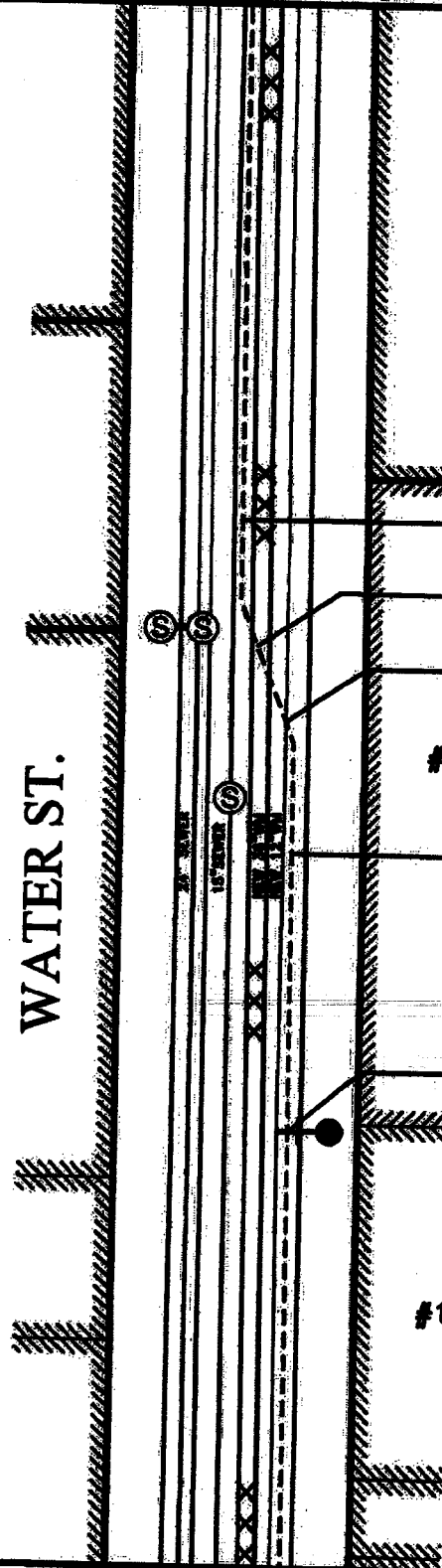
DATE	SCALE
11.25.17	1:30
12.19.17 rev.1	

06
13

(BRIDGE ST.)



WATER ST.



599

110.1

108.1

#200

700

108.1

#192

(JAY ST.)

Charter Spectrum

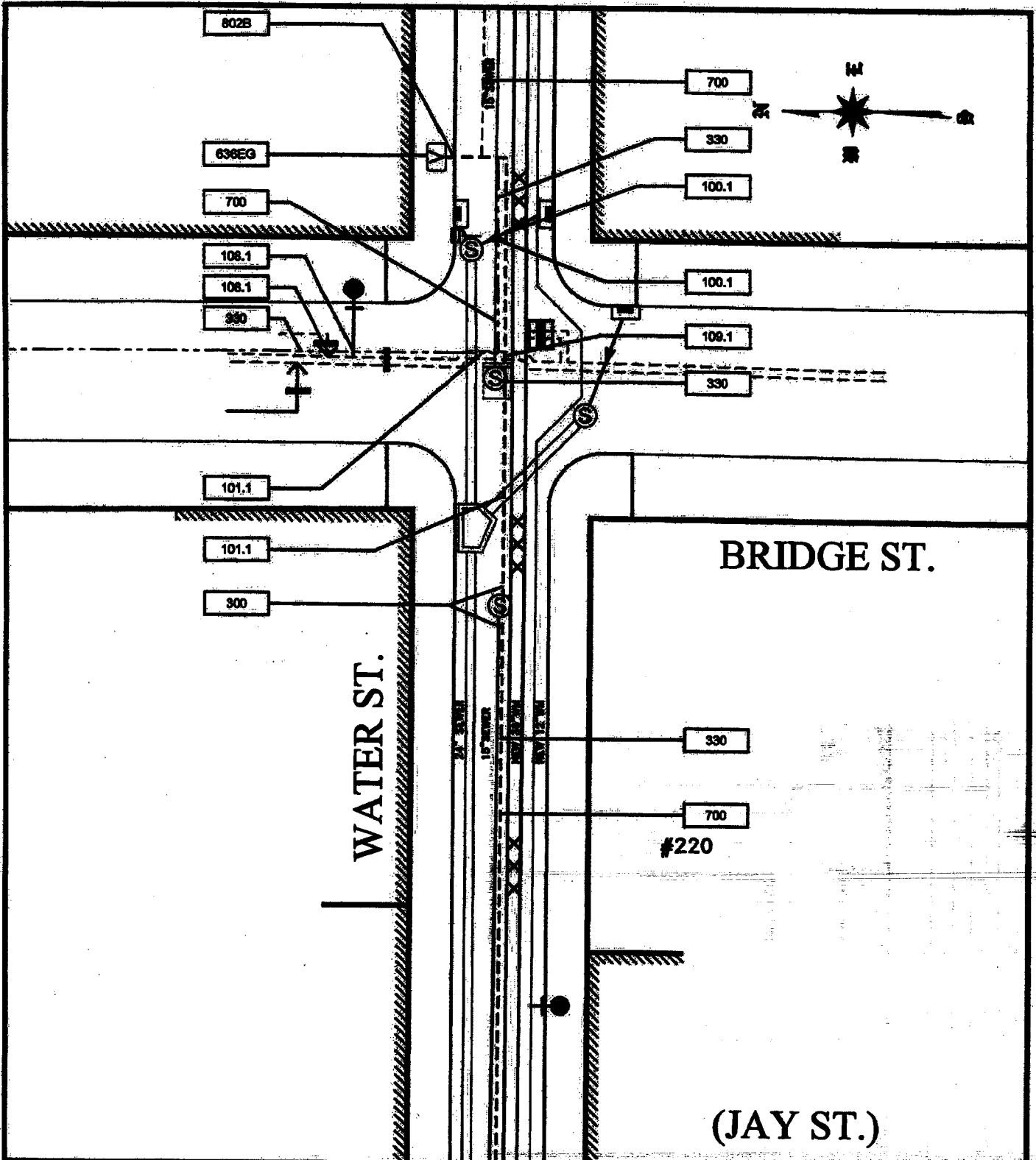
PROJECT ID: HWKKP005 - RECONSTRUCTION OF DUMBO / VINEGAR HILL  
Main Street between Front Street & Water Street

DATE: 11.25.17  
12.19.17 rev 1

SCALE: 1:30

07  
13





**Charter Spectrum**

PROJECT ID: NAME  
**HWKKP005 - RECONSTRUCTION OF DUMBO / VINEGAR HILL**  
**Main Street between Front Street & Water Street**

DATE	SCALE:	08
11.25.17	1:30	13
12.19.17 rev 1		

JB154

(GOLD ST.)



330 #261

WATER ST.

#247

700

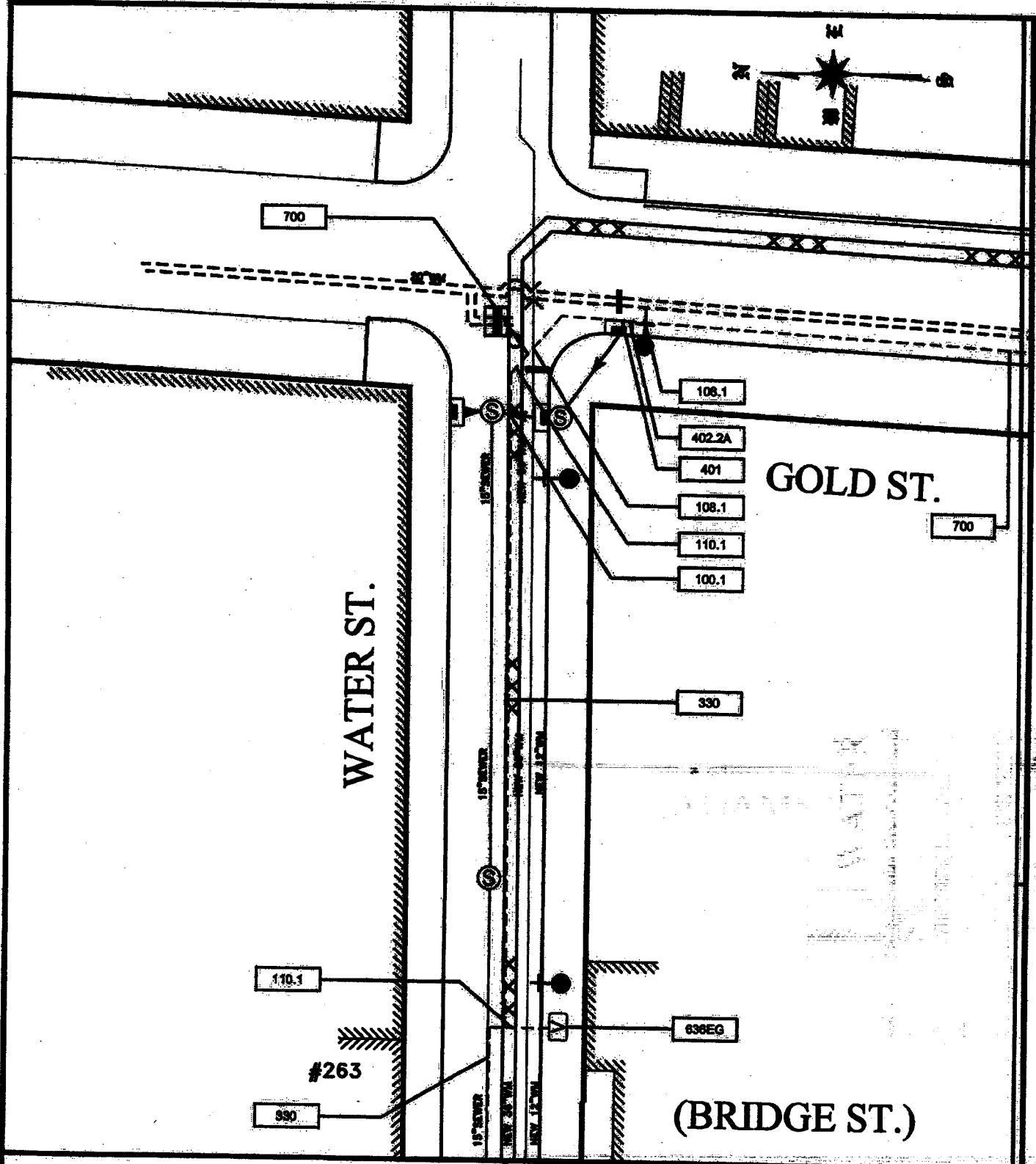
900

#244

(BRIDGE ST.)



PROJECT ID / NAME		SCALE	09
HWKKP005 - RECONSTRUCTION OF DUMBO / VINEGAR HILL Main Street between Front Street & Water Street			
DATE	11.25.17	1:30	13
	12.19.17 rev 1		



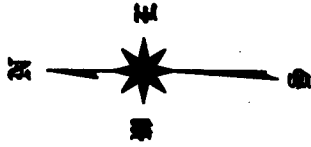
PROJECT ID, NAME  
 HWKKP005 - RECONSTRUCTION OF DUMBO / VINEGAR HILL  
 Main Street between Front Street & Water Street

DATE:  
 11.25.17  
 12.19.17 rev 1

SCALE:  
 1:30

10  
 13

(WATER ST.)



#25

700

401

100.1

402.2A

700

636EG

700

802A

802B

JAY ST.

100.1

330

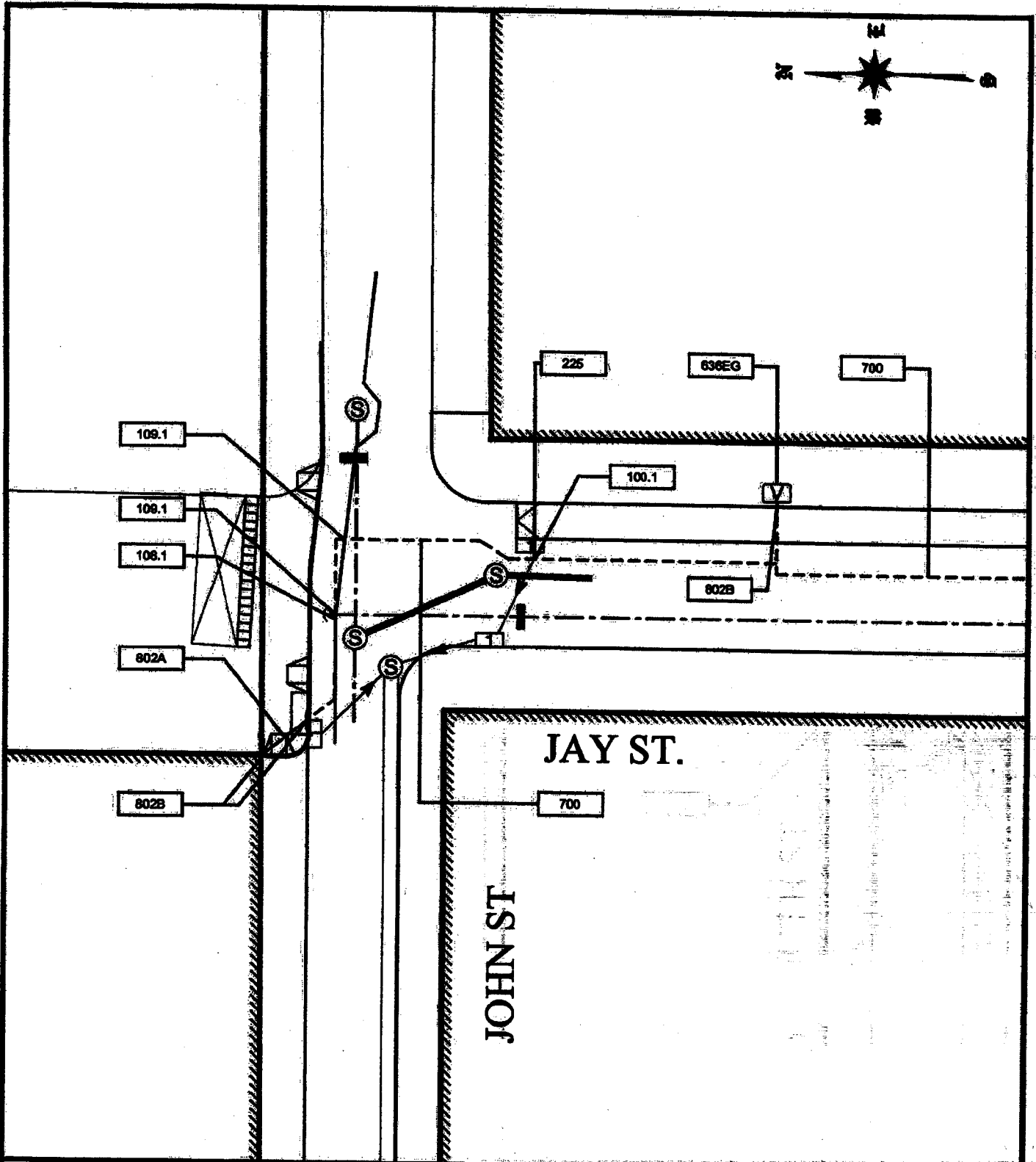
PLYMOUTH ST



PROJECT ID / NAME  
HWKKP005 - RECONSTRUCTION OF DUMBO / VINEGAR HILL  
Main Street between Front Street & Water Street

DATE:  
11.25.17  
12.19.17 rev 1

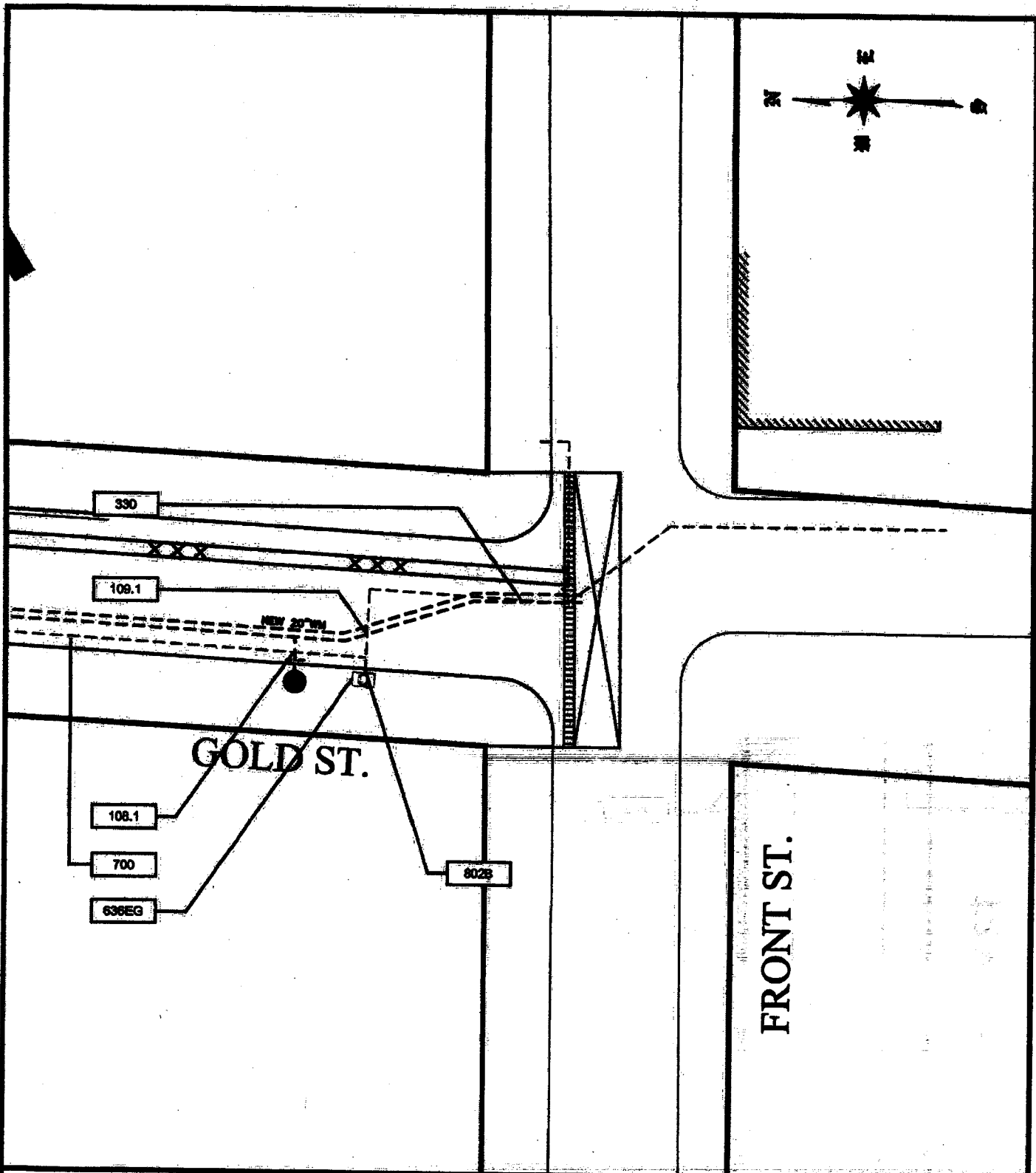
SCALE:  
1:30  
11 / 13



**Charter Spectrum**

**PROJECT NAME**  
 HWKKP005 - RECONSTRUCTION OF DUMBO / VINEGAR HILL  
 Main Street between Front Street & Water Street

<b>DATE</b>	<b>SCALE</b>	<b>12</b>
11.25.17	1:30	
12.19.17 rev 1		<b>13</b>



**Charter Spectrum**

PROJECT ID: HWKKP005 - RECONSTRUCTION OF DUMBO / VINEGAR HILL  
Main Street between Front Street & Water Street

DATE  
11.25.17  
12.19.17 rev 1

SCALE  
1:30

13  
13

38-159

**END OF JB-PAGES**

**THE JB-PAGES CONSIST OF ONE HUNDRED AND SIXTYTWO (162)  
PAGES AND  
THIRTYEIGHT (38) SHEETS OF PRIVATE UTILITY DRAWINGS ARE  
ATTACHED TO THE CONTRACT PLANS**







**Department of  
Design and  
Construction**

**INFRASTRUCTURE DIVISION  
BUREAU OF DESIGN**

**VOLUME 3 OF 3**

**PROJECT ID: HWKKP005**

**RECONSTRUCTION OF  
DUMBO D.M.A. / VINEGAR HILL AREA**

**MAIN STREET FROM FRONT STREET TO PLYMOUTH STREET  
ADAMS STREET FROM FRONT STREET TO JOHN STREET  
PEARL STREET FROM FRONT STREET TO JOHN STREET  
JAY STREET FROM WATER STREET TO JOHN STREET  
GOLD STREET FROM FRONT STREET TO WATER STREET  
FRONT STREET FROM MAIN STREET TO PEARL STREET  
WATER STREET FROM PEARL STREET TO HUDSON AVENUE  
PLYMOUTH STREET FROM MAIN STREET TO JAY STREET  
JOHN STREET FROM ADAMS STREET TO JAY STREET  
ANCHORAGE PLACE FROM FRONT STREET TO PLYMOUTH STREET**

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

**Together With All Work Incidental Thereto**

**BOROUGH OF BROOKLYN  
CITY OF NEW YORK**

\_\_\_\_\_  
*Contractor.*

Dated \_\_\_\_\_, 20\_\_\_\_