



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

30-30 THOMSON AVENUE
LONG ISLAND CITY, NEW YORK 11101-3045
TELEPHONE (718) 391-1000
WEBSITE www.nyc.gov/buildnyc

VOLUME 1 OF 3

LAW

BID BOOKLET

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND REQUIRED FOR:

PROJECT ID: PS-312KR

FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES
IN:

BROOKLYN

IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET
AND RYDER STREET; RALPH AVENUE BETWEEN PRESTON COURT AND
FOSTER AVENUE; AND, RALPH AVENUE BETWEEN AVENUE L AND AVENUE K

STATEN ISLAND

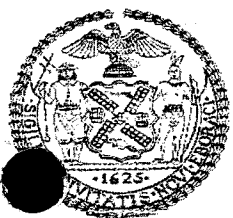
RICHMOND TERRACE BETWEEN MORNINGSTAR ROAD AND NEWARK
AVENUE; RICHMOND TERRACE BETWEEN WINANT STREET AND
MORNINGSTAR ROAD; RICHMOND TERRACE BETWEEN GRANITE AVENUE
AND WINANT STREET; RICHMOND TERRACE BETWEEN VAN NAME AVENUE
AND SIMONSON AVENUE; RICHMOND TERRACE BETWEEN VAN PELT
AVENUE AND VAN NAME AVENUE; RICHMOND TERRACE BETWEEN DE HART
AVENUE AND VAN PELT AVENUE; RICHMOND TERRACE BETWEEN BUSH
AVENUE AND UNION AVENUE; RICHMOND TERRACE BETWEEN HARBOR
ROAD AND BUSH AVENUE; RICHMOND TERRACE AND MAPLE AVENUE;
RICHMOND TERRACE BETWEEN GRANITE AVENUE AND HOUSEMAN
AVENUE; AND, CEDAR GROVE AVENUE AND EBBITS STREET;

Together With All Work Incidental Thereto

**BOROUGHS OF THE BROOKLYN AND STATEN ISLAND
CITY OF NEW YORK**

FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION
PREPARED BY
IN-HOUSE DESIGN

January 2, 2014



4-066



Bid Tab

Description	REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES IN: VARIOUS LOCATIONS. - BOROUGHES OF BROOKLYN AND STATEN ISLAND		
Bid Date	9/18/2014	FMS ID	PS-312KR
Estimated Cost	\$9,031,720.00	Client Agency	DEP
Bid Security	Not less than 2% of Total Bid Price	PLA	No
Time Allowed	365 CCD	Contract Manager	Victoria Ayo-Vaughan
Addendum	8	Project Manager	Goldenberg, Izya
PIN	8502013SE0026C	E-PIN	85014B0099
Selective Bidding	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Consultant	In-House

Bid Rank	Vendor	Bid Amount	Security Type
1	RYAN SMITH DBA LPN CONSTRUCTION	\$7,615,329.00	Bond
2	EN-TECH CORP.	\$18,926,507.60	Bond
3	DELANEY ASSOCIATES, LP	\$21,783,030.00	Bond
4	TULLY ENVIRONMENTAL, INC.	\$24,580,980.00	Bond
5	NORTHEAST REMSCO CONSTRUCTION, INC	\$24,961,160.00	Bond

Recorder: Melanie Sanchez ext. 3430

Approver: 





March 04, 2015

CERTIFIED MAIL - RETURN RECEIPT REQUEST

En-Tech Corp.
91 Ruckman Road
Closter, NJ 07624

RE: FMS ID: PS-312KR
E-PIN: 85014B0099001
DDC PIN: 8502013SE0026C
Rehabilitation of Interceptor Sewers and
Appurtenances in: Various Locations. -
Boroughs of Brooklyn and Staten Island
NOTICE OF AWARD

Dear Contractor:

You are hereby awarded the above referenced contract based upon your bid in the amount of \$18,926,507.60 submitted at the bid opening on September 18, 2014. 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 four copies of the Agreement in the Contracts Unit, 30-30 Thomson Avenue, 1st Floor, Long Island City, New York (IDCNY Building). A Commissioner of Deeds will be available to witness and notarize your signature. The Agreement must be signed by an officer of the corporation or a partner of the firm.
- (2) Submit to the Contracts Unit four 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,

Suzanne Holley
for John Goddard

SPECIAL NOTICE TO BIDDERS

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

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

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

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

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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: PS-312KR

**FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND
APPURTENANCES IN:**

BROOKLYN

**IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET
AND RYDER STREET; RALPH AVENUE BETWEEN PRESTON COURT AND
FOSTER AVENUE; AND, RALPH AVENUE BETWEEN AVENUE L AND AVENUE K**

STATEN ISLAND

**RICHMOND TERRACE BETWEEN MORNINGSTAR ROAD AND NEWARK
AVENUE; RICHMOND TERRACE BETWEEN WINANT STREET AND
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AND SIMONSON AVENUE; RICHMOND TERRACE BETWEEN VAN PELT
AVENUE AND VAN NAME AVENUE; RICHMOND TERRACE BETWEEN DE
HART AVENUE AND VAN PELT AVENUE; RICHMOND TERRACE BETWEEN
BUSH AVENUE AND UNION AVENUE; RICHMOND TERRACE BETWEEN
HARBOR ROAD AND BUSH AVENUE; RICHMOND TERRACE AND MAPLE
AVENUE; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND
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Together With All Work Incidental Thereto

BOROUGHS OF THE BROOKLYN AND STATEN ISLAND

(NO TEXT ON THIS PAGE)

PROJECT ID: PS-312KR

**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. M/WBE Program: M/WBE Utilization Plan.....	5
9. Apprenticeship Program Requirements.....	19
PART B	
10. Safety Questionnaire	21
11. Pre-award Process.....	24
12. Project Reference Form.....	26
13. Contract Certificate.....	29
14. Vendex Compliance	30
15. Iran Divestment Act Compliance Rider	31
16. Construction Employment Report.....	33

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**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. 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:** _____

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

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

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

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

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

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

Qualification Form

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

Name of Contractor: _____

Name of Project: _____

Location of Project: _____

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

Name: _____

Title: _____ Phone Number: _____

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

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

Amount of Contract, Subcontract or Sub-subcontract: _____

Start Date and Completion Date: _____

Name of Contractor: _____

Name of Project: _____

Location of Project: _____

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

Name: _____

Title: _____ Phone Number: _____

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

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

Amount of Contract, Subcontract or Sub-subcontract: _____

Start Date and Completion Date: _____

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ATTACHMENT 1 - BID INFORMATION

PROJECT ID: PS-312KR

PIN: 8502013SE0026C

Description and Location of Work: For The Rehabilitation Of Interceptor Sewers And Appurtenances In: Brooklyn Imlay Street And Verona Street; Avenue T Between 37th Street And Ryder Street; Ralph Avenue Between Preston Court And Foster Avenue; And Ralph Avenue Between Avenue L And Avenue K

Staten Island Richmond Terrace Between Morningstar Road And Newark Avenue; Richmond Terrace Between Winant Street And Morningstar Road; Richmond Terrace Between Granite Avenue And Winant Street; Richmond Terrace Between Van Name Avenue And Simonson Avenue; Richmond Terrace Between Van Pelt Avenue And Van Name Avenue; Richmond Terrace Between De Hart Avenue And Van Pelt Avenue; Richmond Terrace Between Bush Avenue And Union Avenue; Richmond Terrace Between Harbor Road And Bush Avenue; Richmond Terrace And Maple Avenue; Richmond Terrace Between Granite Avenue And Houseman Avenue; And, Cedar Grove Avenue And Ebbits Street; Together With All Work Incidental Thereto, Boroughs Of Brooklyn And Staten Island

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 Wednesday, April 30th, 2013

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 Wednesday, April 30th, 2014

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: 718-391-2615



BID SCHEDULE

NOTICE TO BIDDERS

Items listed in this Bid Schedule which have one (1) digit followed by a decimal (e.g. 4.02 AG), excluding items beginning with the number "8.01", shall comply with the requirements of the corresponding numerical Sections of the NYCDOT Standard Highway Specifications as amended by Addendum No. 1 and Addendum No. 2, herein Volume 3 of 3.

Items listed in this Bid Schedule which have two (2) digits beginning with the number "5" followed by a decimal (e.g. 50.31CC15) shall comply with the requirements of the New York City Department of Environmental Protection (NYCDEP) Standard Sewer Specifications dated August 1, 2009, as amended by Addendum No. 2, herein Volume 3 of 3.

Items listed in this Bid Schedule which have two (2) digits beginning with the number "7" followed by a decimal (e.g. 70.31FN) shall comply with the requirements of the New York City Department of Environmental Protection (NYCDEP) Standard Sewer Specifications dated August 1, 2009, and Standard Water Main Specifications dated August 1, 2009, as amended by Addendum No. 2, herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with the prefix "DSS" are to be done in accordance with the requirements of Addendum No. 2, herein Volume 3 of 3.

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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: PS-312KR

FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES IN:

BROOKLYN

IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET AND RYDER STREET; RALPH AVENUE BETWEEN PRESTON COURT AND FOSTER AVENUE; AND, RALPH AVENUE BETWEEN AVENUE L AND AVENUE K

STATEN ISLAND

RICHMOND TERRACE BETWEEN MORNINGSTAR ROAD AND NEWARK AVENUE; RICHMOND TERRACE BETWEEN WINANT STREET AND MORNINGSTAR ROAD; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND WINANT STREET; RICHMOND TERRACE BETWEEN VAN NAME AVENUE AND SIMONSON AVENUE; RICHMOND TERRACE BETWEEN VAN PELT AVENUE AND VAN NAME AVENUE; RICHMOND TERRACE BETWEEN DE HART AVENUE AND VAN PELT AVENUE; RICHMOND TERRACE BETWEEN BUSH AVENUE AND UNION AVENUE; RICHMOND TERRACE BETWEEN HARBOR ROAD AND BUSH AVENUE; RICHMOND TERRACE AND MAPLE AVENUE; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND HOUSEMAN AVENUE; AND, CEDAR GROVE AVENUE AND EBBITS STREET;

Together With All Work Incidental Thereto

BOROUGHS OF THE BROOKLYN AND STATEN ISLAND

Name of Bidder: EN-TECH CORP

Date of Bid Opening: 9-18-14

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

Place of Business of Bidder: 91 RUCKMAN ROAD, CLOSTER, NJ 07624

Bidder's Telephone Number: (201) 784-1034 Fax Number: (201) 784-0855

Bidder's E-Mail Address: NCAMALI@EN-TECHCORP.COM

Residence of Bidder (If Individual): _____

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

Names of Partners	Residence of Partners
_____	_____
_____	_____
_____	_____

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

Organized under the laws of the State of NEW YORK

Name and Home Address of President: NADA E. CAMALI
1020 GULF BLVD, BELLEAIR SHS, FL 33786

Name and Home Address of Secretary: NADA E. CAMALI
1020 GULF BLVD, BELLEAIR SHS, FL 33786

Name and Home Address of Treasurer: N/A

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 the bid).

AFFIRMATION

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

NONE

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

Full Name of Bidder: EN-TECH CORP.
Address: 91 RUCKMAN ROAD
City CLOSTER State NEW JERSEY Zip Code 07624

CHECK ONE BOX AND INCLUDE APPROPRIATE NUMBER:

A - Individual or Sole Proprietorship*
SOCIAL SECURITY NUMBER

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

C - Corporation
EMPLOYER IDENTIFICATION NUMBER

11-2806461

By: 
Signature NADA E. CAMALI

Title: PRESIDENT / SECRETARY

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.



Qualification Form

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

Name of Contractor: EN-TECH Corp.

Name of Project: AW-1014 Interceptors NI-10, CI-1A, SI-11 & NWPCF Plant Drain Rehab.

Location of Project: Various Locations – Ocean County, NJ

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

Name: Bill Suchodolski, P.E. – Ocean County Utilities Authority

Title: Construction Manager Phone Number: (732) 259-4500

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

Rehabilitation of 4,823 SF Sanitary Sewer Manholes Using Sauereisen Materials

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

Amount of Contract, Subcontract or Sub-subcontract: \$371,979.00

Start Date and Completion Date: Completed April 2013

Name of Contractor: EN-TECH Corp.

Name of Project: AW-0918 SI-11 Interceptor Rehabilitation

Location of Project: Various Locations – Ocean County, NJ

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

Name: Bill Suchodolski, P.E. – Ocean County Utilities Authority

Title: Construction Manager Phone Number: (732) 259-4500

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

Rehabilitation of 8,293 SF Sanitary Sewer Manholes Using Sauereisen Materials

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

Amount of Contract, Subcontract or Sub-subcontract: \$205,252.00

Start Date and Completion Date: Completed March 2013



Qualification Form

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

Name of Contractor: EN-TECH Corp.

Name of Project: AW-0805 NI-16 Interceptor Rehabilitation

Location of Project: Various Locations – Ocean County, NJ

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

Name: Bill Suchodolski, P.E. – Ocean County Utilities Authority

Title: Construction Manager Phone Number: (732) 259-4500

Brief description of the Project completed or the Project in progress: Rehabilitation of 1,616 SF Sanitary Sewer Manholes Using Sauereisen Materials

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

Amount of Contract, Subcontract or Sub-subcontract: \$33,938.00

Start Date and Completion Date: Completed July 2011

Name of Contractor: EN-TECH Corp.

Name of Project: Central Camden Gateway Sewer Rehabilitation

Location of Project: Various Locations – City of Camden, NJ

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

Name: Paul Kelley – Remington & Vernick Engineers

Title: Project Engineer Phone Number: (856) 795-9595

Brief description of the Project completed or the Project in progress: Rehabilitation of (45) Manholes Using Sauereisen Materials

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

Amount of Contract, Subcontract or Sub-subcontract: \$117,000.00

Start Date and Completion Date: Completed September 2010



Qualification Form

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

Name of Contractor: EN-TECH Corp.

Name of Project: AW-IR-07 Area-Wide Interceptor Rehabilitation

Location of Project: Various Locations – Ocean County, NJ

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

Name: Bill Suchodolski, P.E. – Ocean County Utilities Authority

Title: Construction Manager Phone Number: (732) 259-4500

Brief description of the Project completed or the Project in progress: Rehabilitation of (24) Sanitary Sewer Manholes & (7) Chambers Using Sauereisen Materials

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

Amount of Contract, Subcontract or Sub-subcontract: \$314,287.00

Start Date and Completion Date: Completed September 2010

Name of Contractor: EN-TECH Corp.

Name of Project: Sanitary Sewer Rehabilitation

Location of Project: Borough of Westville, NJ

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

Name: Norman Rogers – Consulting Engineering Services

Title: Project Engineer Phone Number: (856) 228-2200

Brief description of the Project completed or the Project in progress: Rehabilitation of 165 VF Sanitary Sewer Manholes Using Sauereisen Materials

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

Amount of Contract, Subcontract or Sub-subcontract: \$43,680.00

Start Date and Completion Date: Completed May 2009



Qualification Form

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

Name of Contractor: EN-TECH Corp.

Name of Project: 2007 Sanitary Sewer Rehabilitation, Phase II & III, C.O. #3

Location of Project: Medford Township, NJ

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

Name: Bill Kirchner, P.E. - Environmental Resolutions

Title: Project Engineer Phone Number: (856) 235-7170

Brief description of the Project completed or the Project in progress: Rehabilitation of (5) Sanitary Sewer Manholes
Using SprayWall® Applied Over Shotcrete

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

Amount of Contract, Subcontract or Sub-subcontract: \$21,394.00

Start Date and Completion Date: Completed March 2009

Name of Contractor: EN-TECH Corp.

Name of Project: Contract 27 - Monroe St. Sanitary Sewer Interceptor Rehabilitation

Location of Project: Rockaway Valley Regional Sewerage Authority, Millburn Township, NJ

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

Name: Nick Valse, P.E. - Hatch Mott MacDonald

Title: Project Engineer Phone Number: (973) 912-2482

Brief description of the Project completed or the Project in progress: Rehabilitation of (5) Sanitary Sewer Manholes
Using SprayWall® Applied Over Shotcrete

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

Amount of Contract, Subcontract or Sub-subcontract: \$27,100.00

Start Date and Completion Date: Completed July 2009



Qualification Form

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

Name of Contractor: EN-TECH Corp.

Name of Project: Sanitary Sewer Main Lining

Location of Project: Borough of Madison, NJ

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

Name: Robert Vogel, P.E.

Title: Project Engineer Phone Number: (973) 593-3061

Brief description of the Project completed or the Project in progress: Rehabilitation of (20) Sanitary Sewer Manholes
Using SprayWall® Applied Over Shotcrete

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

Amount of Contract, Subcontract or Sub-subcontract: \$90,000.00

Start Date and Completion Date: Completed November 2009

Name of Contractor: EN-TECH Corp.

Name of Project: Centerpoint Project – Lining of Existing Sewers

Location of Project: City of Waltham, MA

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

Name: Kevin Dumont – Dumont Enterprises

Title: _____ Phone Number: (978) 649-7376

Brief description of the Project completed or the Project in progress: Rehabilitation of (6) Sanitary Sewer Manholes
Using SprayWall® Applied Over Shotcrete

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

Amount of Contract, Subcontract or Sub-subcontract: \$15,000.00

Start Date and Completion Date: Completed November 2009



Qualification Form

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

Name of Contractor: EN-TECH Corp.

Name of Project: Construction of Boys Park

Location of Project: City of Newark, NJ

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

Name: Nick Naik – Zenith Construction SVC

Title: _____ Phone Number: (973) 483-7100

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

Rehabilitation of (1) Sanitary Sewer Manhole

Using SprayWall® Applied Over Shotcrete

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

Amount of Contract, Subcontract or Sub-subcontract: \$10,750.00

Start Date and Completion Date: _____ Completed June 2010

Name of Contractor: EN-TECH Corp.

Name of Project: Independence Ave. Interceptor Sewer & Manhole Rehabilitation

Location of Project: Township of Hamilton, NJ

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

Name: Rich Neuner – Malcolm Pirnie Associates

Title: _____ Phone Number: (201) 398-4358

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

Rehabilitation of (19) Sanitary Sewer Manholes & (3) Chambers

Using SprayWall® Applied Over Shotcrete

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

Amount of Contract, Subcontract or Sub-subcontract: \$234,600.00

Start Date and Completion Date: _____ Completed September 2010



Qualification Form

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

Name of Contractor: EN-TECH Corp.

Name of Project: SE-GUN-13

Location of Project: Various Locations – Citywide, NYC

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

Name: Daniel Lefkowitz, P.E.

Title: Deputy Chief Phone Number: (718) 595-4200

Brief description of the Project completed or the Project in progress: Emergency Rehabilitation of Sanitary and Combined Sewers
By Using Shotcrete Method

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

Amount of Contract, Subcontract or Sub-subcontract: \$3,601,234.00

Start Date and Completion Date: December 2013

Name of Contractor: EN-TECH Corp.

Name of Project: SE-GUN-12

Location of Project: Various Locations – Citywide, NYC

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

Name: Daniel Lefkowitz, P.E.

Title: Deputy Chief Phone Number: (718) 595-4200

Brief description of the Project completed or the Project in progress: Emergency Rehabilitation of Sanitary and Combined Sewers
By Using Shotcrete Method

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

Amount of Contract, Subcontract or Sub-subcontract: \$5,512,925.00

Start Date and Completion Date: Completed November 2012



Qualification Form

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

Name of Contractor: EN-TECH Corp.

Name of Project: SE-GUN-11

Location of Project: Various Locations – Citywide, NYC

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

Name: M.A. Abraham, P.E.

Title: Division Chief Phone Number: (718) 595-4200

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

Emergency Rehabilitation of Sanitary and Combined Sewers

By Using Shotcrete Method

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

Amount of Contract, Subcontract or Sub-subcontract: \$5,820,070

Start Date and Completion Date: _____ Completed September 2011

Name of Contractor: EN-TECH Corp.

Name of Project: SE-GUN-10

Location of Project: Various Locations – Citywide, NYC

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

Name: M.A. Abraham, P.E.

Title: Division Chief Phone Number: (718) 595-4200

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

Emergency Rehabilitation of Sanitary and Combined Sewers

By Using Shotcrete Method

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

Amount of Contract, Subcontract or Sub-subcontract: \$5,718,997

Start Date and Completion Date: _____ Completed July 2010



Qualification Form

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

Name of Contractor: EN-TECH Corp.

Name of Project: SE-GUN-09

Location of Project: Various Locations – Citywide, NYC

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

Name: M.A. Abraham, P.E.

Title: Division Chief Phone Number: (718) 595-4200

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

Emergency Rehabilitation of Sanitary and Combined Sewers

By Using Shotcrete Method

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

Amount of Contract, Subcontract or Sub-subcontract: \$5,124,647.00

Start Date and Completion Date: Completed: May 2009

Name of Contractor: EN-TECH Corp.

Name of Project: SE-GUN-08

Location of Project: Various Locations – Citywide, NYC

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

Name: M.A. Abraham, P.E.

Title: Division Chief Phone Number: (718) 595-4200

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

Emergency Rehabilitation of Sanitary and Combined Sewers

By Using Shotcrete Method

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

Amount of Contract, Subcontract or Sub-subcontract: \$4,240,371

Start Date and Completion Date: Completed April 2008



Qualification Form

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

Name of Contractor: EN-TECH Corp.

Name of Project: SE-GUN-07R

Location of Project: Various Locations – Citywide, NYC

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

Name: M.A. Abraham, P.E.

Title: Division Chief Phone Number: (718) 595-4200

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

Emergency Rehabilitation of Sanitary and Combined Sewers

By Using Shotcrete Method

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

Amount of Contract, Subcontract or Sub-subcontract: \$2,797,168

Start Date and Completion Date: Completed: April 2007

Name of Contractor: EN-TECH Corp.

Name of Project: SE-GUN-06

Location of Project: Various Locations – Citywide, NYC

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

Name: M.A. Abraham, P.E.

Title: Division Chief Phone Number: (718) 595-4200

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

Emergency Rehabilitation of Sanitary and Combined Sewers

By Using Shotcrete Method

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

Amount of Contract, Subcontract or Sub-subcontract: \$2,749,450

Start Date and Completion Date: Completed: June 2006



Qualification Form

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

Name of Contractor: EN-TECH Corp.

Name of Project: SE-GUN-05

Location of Project: Various Locations – Citywide, NYC

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

Name: M.A. Abraham, P.E.

Title: Division Chief Phone Number: (718) 595-4200

Brief description of the Project completed or the Project in progress: Emergency Rehabilitation of Sanitary and Combined Sewers
By Using Shotcrete Method

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

Amount of Contract, Subcontract or Sub-subcontract: \$2,625,522

Start Date and Completion Date: Completed: June 2005

Name of Contractor: EN-TECH Corp.

Name of Project: SE-GUN-04

Location of Project: Various Locations – Citywide, NYC

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

Name: M.A. Abraham, P.E.

Title: Division Chief Phone Number: (718) 595-4200

Brief description of the Project completed or the Project in progress: Emergency Rehabilitation of Sanitary and Combined Sewers
By Using Shotcrete Method

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

Amount of Contract, Subcontract or Sub-subcontract: \$2,002,450.80

Start Date and Completion Date: Completed: May 2004



Qualification Form

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

Name of Contractor: EN-TECH Corp.

Name of Project: SE-GUN-03

Location of Project: Various Locations – Citywide, NYC

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

Name: M.A. Abraham, P.E.

Title: Division Chief Phone Number: (718) 595-4200

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

Emergency Rehabilitation of Sanitary and Combined Sewers

By Using Shotcrete Method

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

Amount of Contract, Subcontract or Sub-subcontract: \$1,729,113

Start Date and Completion Date: Completed: July 2003

Name of Contractor: EN-TECH Corp.

Name of Project: SE-GUN-02

Location of Project: Various Locations – Citywide, NYC

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

Name: M.A. Abraham, P.E.

Title: Division Chief Phone Number: (718) 595-4200

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

Emergency Rehabilitation of Sanitary and Combined Sewers

By Using Shotcrete Method

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

Amount of Contract, Subcontract or Sub-subcontract: \$1,716,260

Start Date and Completion Date: Completed: June 2003



Qualification Form

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

Name of Contractor: EN-TECH Corp.

Name of Project: SE-GUN-01

Location of Project: Various Locations – Citywide, NYC

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

Name: M.A. Abraham, P.E.

Title: Division Chief Phone Number: (718) 595-4200

Brief description of the Project completed or the Project in progress: Emergency Rehabilitation of Sanitary and Combined Sewers
By Using Shotcrete Method

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

Amount of Contract, Subcontract or Sub-subcontract: \$1,135,830

Start Date and Completion Date: Completed: February 2002

Name of Contractor: EN-TECH Corp.

Name of Project: Reconstruction of Sewers in Farragut Road

Location of Project: Brooklyn, NY

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

Name: George Joseph, P.E.

Title: Division Engineer Phone Number: (718) 780-8113

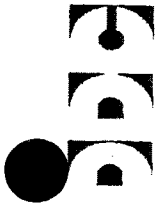
Brief description of the Project completed or the Project in progress: Clean and Shotcrete Existing Brick Sewer

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

Amount of Contract, Subcontract or Sub-subcontract: \$552,882

Start Date and Completion Date: Completed: November 2001





8/28/2014 12:00 AM

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

CONTRACT PIN: 8502013SE0026C
PROJECT ID: PS-312KR

BID SCHEDULE

- NOTE:**
- (1) The Agency may reject a bid if it contains unbalanced bid prices. An unbalanced bid is considered to be one containing lump sum or unit items which do not reflect reasonable actual costs plus a reasonable proportionate share of the Bidder's anticipated profit, overhead costs, and other indirect costs, anticipated for the performance of the items in question.
 - (2) The following bid prices on Unit Price Contracts are to be paid for the actual quantities of the item numbers in the completed work or structure, and they cover the cost of all work, labor, material, tools, plant and appliances of every description necessary to complete the entire work, as specified, and the removal of all debris, temporary work and appliances.
 - (3) **PLEASE BE SURE A LEGIBLE BID IS ENTERED, IN INK, FOR EACH ITEM.**
Alterations must be initialed in ink by the bidder.
 - (4) The Extended Amount entered in Column 6 shall be the product of the Estimated Quantity in Column 3 times the Unit Price Bid in Column 5.
 - (5) Prospective bidders must examine the Bid Schedule carefully and, before bidding, must advise the Commissioner, in writing, if any pages are missing, and must request that such missing pages be furnished them. The pages of this Bid Schedule are numbered consecutively, as follows: B - 3 Through B - 12
[REVISION # 1]

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



8/28/2014 12:00 AM

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

PROJECT ID: PS-312KR

CONTRACT PIN: 8502013SE0026C

BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER AND DESCRIPTION	COL 3 ENGINEER'S QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE	COL 6 TOTAL PRICE	COL 7 TOTAL PRICE
001	50.761060DC000 RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED CCCP LINING METHOD	543.00	L.F.	885.00	480,555.00	
002	50.771054DC000 RECONSTRUCTION OF EXISTING 54" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	366.00	L.F.	1,175.00	430,050.00	
003	50.771120AB000 RECONSTRUCTION OF EXISTING 120"W ARCH-SHAPED BRICK INTERCEPTOR SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	554.00	L.F.	2,100.00	1,163,400.00	
004	50.781120RC120 RECONSTRUCTION OF EXISTING 120"W X 120"H RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	521.00	L.F.	2,900.00	1,510,900.00	
005	50.791060DC000 RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED SCGP LINING METHOD	446.00	L.F.	885.00	394,710.00	



8/28/2014 12:00 AM

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

PROJECT ID: PS-312KR

CONTRACT PIN: 8502013SE0026C

BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER AND DESCRIPTION	COL 3 ENGINEERS ESTIMATE PROBABILITY	COL 4 UNIT	COL 5 QUANTITY	COL 6 UNIT PRICE	COL 7 TOTAL AMOUNT (IN FIGURES) DOLLARS
006	50.89I054DC000 RECONSTRUCTION OF EXISTING 54" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING D.I.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	560.00	L.F.	1,175.00	658,000.00	00
007	50.89I060DC000 RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING D.I.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	1,680.00	L.F.	885.00	1,486,800.00	00
008	51.23RF REPLACEMENT OF EXISTING MANHOLE FRAME AND COVER	10.00	EACH	5,000.00	50,000.00	00
009	51.24CI054DC000 RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 54" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING D.I.E.P. APPROVED CCCP LINING METHOD	5.00	EACH	7,500.00	37,500.00	00
010	51.24CI060DC000 RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING D.I.E.P. APPROVED CCCP LINING METHOD	2.00	EACH	8,000.00	16,000.00	00



8/28/2014 12:00 AM

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

PROJECT ID: PS-312KR

CONTRACT PIN: 8502013SE0026C

BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER AND DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE	COL 6 TOTAL AMOUNT
011	51.24PI054DC000 RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 54" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	1.00	EACH	6,500.00	6,500.00
012	51.24PI120AB000 RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 120"W ARCH-SHAPED BRICK INTERCEPTOR SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	2.00	EACH	6,500.00	13,000.00
013	51.24UI120RC120 RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 120"W X 120"W RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	2.00	L.F.	12,000.00	24,000.00
014	51.28I054DC000 RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 54" DIAMETER CIRCULAR CONCRETE INTERCEPTOR USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	5.00	EACH	6,500.00	32,500.00
015	51.28I060DC000 RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	5.00	EACH	7,000.00	35,000.00



8/28/2014 12:00 AM

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION

PROJECT ID: PS-312KR

DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN

CONTRACT PIN: 8502013SE0026C

BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER AND DESCRIPTION	COL 3 UNIT OF QUANTITY	COL 4 UNIT PRICE (DOLLARS AND CENTS)	COL 5 TOTAL AMOUNT (DOLLARS AND CENTS)
016	53.11DR TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS	6,180.00	L.F. 25.00	154,500.00
017	54.14I054DC000 CLEANING OF EXISTING 54" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER	1,630.00	L.F. 810.00	1,320,300.00
018	54.14I060DC000 CLEANING OF EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER	3,470.00	L.F. 310.00	1,075,700.00
019	54.14I120AB000 CLEANING OF EXISTING 120"W ARCH-SHAPED BRICK INTERCEPTOR SEWER	555.00	L.F. 6,900.00	3,829,500.00
020	54.14I120RC120 CLEANING OF EXISTING 120"W X 120"H RECTANGULAR CONCRETE INTERCEPTOR SEWER	521.00	L.F. 8,100.00	4,220,100.00
021	54.21PC PORTLAND CEMENT (TYPE V) - INJECTION GROUTING	650.00	BAGS 10.00	6,500.00



8/28/2014 12:00 AM

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

PROJECT ID: PS-312KR

CONTRACT PIN: 8502013SE0026C

BID SCHEDULE FORM

SEQ. NO.	ITEM NUMBER AND DESCRIPTION	ESTIMATE	UNIT	QTY.	UNIT PRICE	TOTAL PRICE
022	54.22HP HYDROACTIVE POLYURETHANE - INJECTION GROUTING (FOR POLYMER LINING METHOD)	350.00	C.F.	935	00	327,250 00
023	54.23HP HYDROACTIVE POLYURETHANE - INJECTION GROUTING (FOR POLYURETHANE LINING METHOD)	100.00	C.F.	935	00	93,500 00
024	54.32MR MORTAR FOR SEWER/MANHOLE REPAIR WORK (FOR CCCCP LINING METHOD)	5,400.00	C.F.	35	00	189,000 00
025	54.33MRE MATERIAL FOR SEWER/MANHOLE REPAIR WORK (FOR POLYMER LINING METHOD) - EPOXY FORMULATION	150.00	C.F.	455	00	68,250 00
026	54.33MRP MATERIAL FOR SEWER/MANHOLE REPAIR WORK (FOR POLYMER LINING METHOD) - PORTLAND CEMENT-BASED	370.00	C.F.	35	00	12,950 00
027	54.34MRE MATERIAL FOR SEWER/MANHOLE REPAIR WORK (FOR POLYURETHANE LINING METHOD) - EPOXY FORMULATION	100.00	C.F.	416	00	41,600 00



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PROJECT ID: PS-312KR

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BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER AND DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE PER QUANTITY	COL 6 TOTAL AMOUNT IN DOLLARS
028	54.34MRP MATERIAL FOR SEWER/MANHOLE REPAIR WORK (FOR POLYURETHANE LINING METHOD) - PORTLAND CEMENT-BASED	300.00	C.F.	35.00	10,500.00
029	6.22 F ADDITIONAL HARDWARE	1,000.00	LBS.	1.00	1,000.00
030	6.25 RS TEMPORARY SIGNS	5,000.00	S.F.	1.00	5,000.00
031	6.26 TIMBER CURB	8,000.00	L.F.	1.50	12,000.00
032	6.28 AA LIGHTED TIMBER BARRICADES	9,000.00	L.F.	9.00	81,000.00
033	6.40 C ENGINEER'S FIELD OFFICE (TYPE C)	18.00	MONTH	5,000.00	90,000.00



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BID SCHEDULE FORM

COMMIT	SECTION	DESCRIPTION	ESTIMATE	UNIT	QUANTITY	UNIT PRICE	TOTAL
034	6.52 CG	CROSSING GUARD	1,000.00	P/HR	10 00	10,000.00	10,000.00
035	6.87	PLASTIC BARRELS	5,000.00	EACH	2 25	11,250.00	11,250.00
036	7.13 B	MAINTENANCE OF SITE Unit price bid shall not be less than: \$ 7,500.00	12.00	MONTH	7,500.00	90,000.00	90,000.00
037	7.36	PEDESTRIAN STEEL BARRICADES	10,000.00	L.F.	4 40	44,000.00	44,000.00
038	70.31FN	FENCING Unit price bid shall not be less than: \$ 2.00	3,000.00	L.F.	2 00	6,000.00	6,000.00
039	73.11AB	ADDITIONAL BRICK MASONRY Unit price bid shall not be less than: \$ 62.50	50.00	C.Y.	62 50	3,125.00	3,125.00



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 DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN

PROJECT ID: PS-312KR

CONTRACT PIN: 8502013SE0026C

BID SCHEDULE FORM

COL 1 SEQ. NO.	COL 2 ITEM NUMBER AND DESCRIPTION	COL 3 ENGINEER'S ESTIMATE OF QUANTITY	COL 4 UNIT	COL 5 UNIT PRICE (UNITS/DOZ)	COL 6 EXTENDED AMOUNT (IN FIGURES)	COL 7 TOTALS
040	73.21AC ADDITIONAL CONCRETE Unit price bid shall not be less than: \$ 62.50	50.00	C.Y.	62.50	3,125.00	
041	73.51AS ADDITIONAL STEEL REINFORCING BARS Unit price bid shall not be less than: \$ 1.00	3,500.00	LBS.	1.00	3,500.00	
042	DSS014C ALLOWANCE FOR EXTRA WORK ON ARTERIAL HIGHWAYS PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 150,000.00	1.00	F.S.	150,000.00	150,000.00	

SUB-TOTAL: \$ 18,198,565.00

043	6.39 A MOBILIZATION BID PRICE OF MOBILIZATION SHALL NOT EXCEED 4% OF THE ABOVE SUB-TOTAL PRICE.	1.00	L.S.		727,942.60	
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8/28/2014 12:00 AM

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

PROJECT ID: PS-312KR

CONTRACT PIN: 8502013SE0026C

BID SCHEDULE FORM

COL 1	COL 2	COL 3	COL 4	COL 5	COL 6	COL 7	COL 8
SEQ. NO.	ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE	TOTAL PRICE

TOTAL BID PRICE: \$ 18,926,507.60

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



BID FORM

PROJECT ID: PS-312KR

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

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

\$ 18,926,507.00

Ⓢ 9/18/14

BIDDER'S SIGNATURE AND AFFIDAVIT

Bidder: EN-TECH CORP.

By: *Nada E. Camali*

(Signature of Partner or corporate officer) NADA E. CAMALI

Attest:
(Corporate Seal)

Secretary of Corporate Bidder

NADA E. CAMALI

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

BID FORM (TO BE NOTARIZED)

AFFIDAVIT WHERE BIDDER IS AN INDIVIDUAL

STATE OF NEW YORK, COUNTY OF _____ ss:

being duly sworn says:

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

(Signature of the person who signed the Bid)

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

Notary Public

AFFIDAVIT WHERE BIDDER IS A PARTNERSHIP

STATE OF NEW YORK, COUNTY OF _____ ss:

being duly sworn says:

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

(Signature of Partner who signed the Bid)

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

Notary Public

AFFIDAVIT WHERE BIDDER IS A CORPORATION


STATE OF NEW YORK, COUNTY OF ROCKLAND ss:

NADA E. CAMALI

being duly sworn says:

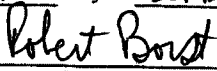
I am the PRESIDENT/SECRETARY of the above named corporation whose name is subscribed to and which executed the foregoing bid. I reside at 21 BIRCHWOOD ROAD, OLD TAPPAN, NJ 07625

I have knowledge of the several matters therein stated, and they are in all respects true.



(Signature of Partner who signed the Bid)

Subscribed and sworn to before me this 17TH day of SEPTEMBER, 2014



Notary Public

ROBERT BORST
NOTARY PUBLIC
REG. NO. 01BO6003533
QUALIFIED IN QUEENS COUNTY
TERM EXPIRES MARCH 9 2018



BID BOND 1
FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENTS. That we, En-Tech Corp.

hereinafter referred to as the "Principal", and Liberty Mutual Insurance Company

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 Bid Amount

(\$ _____), 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: PS-312KR, Pin: 8502013SE0026C, Rehabilitation of Interceptor Sewers and Appurtenances in Brooklyn - Imlay Street and

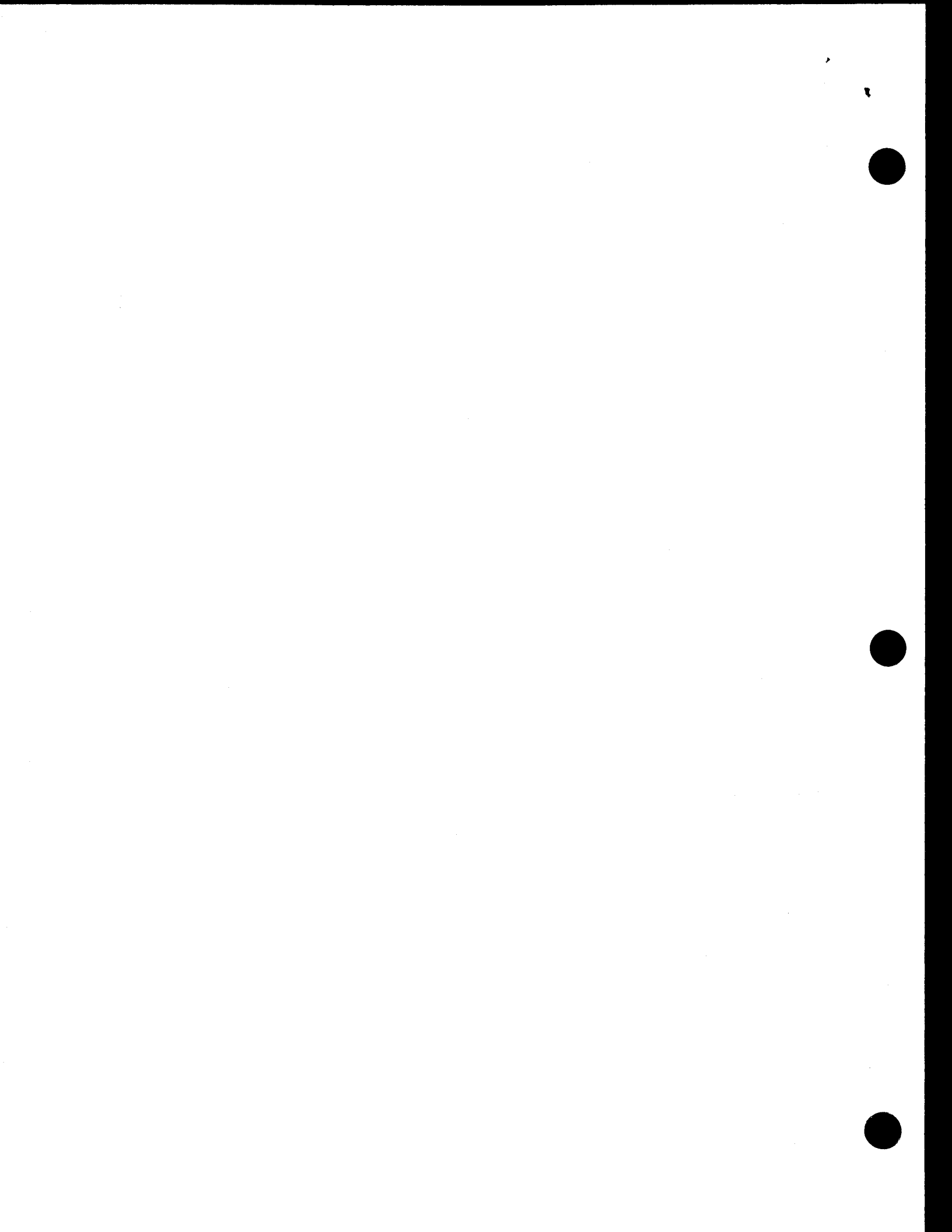
Verona Street, etc. and Staten Island - Richmond Terrace between Morningstar Road and Newark Avenue, etc., Boroughs of Brooklyn and Staten Island

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 4th day of September, 2014.

(Seal)

En-Tech Corp.

(L.S.)

Principal

By:

Nada Camali, President

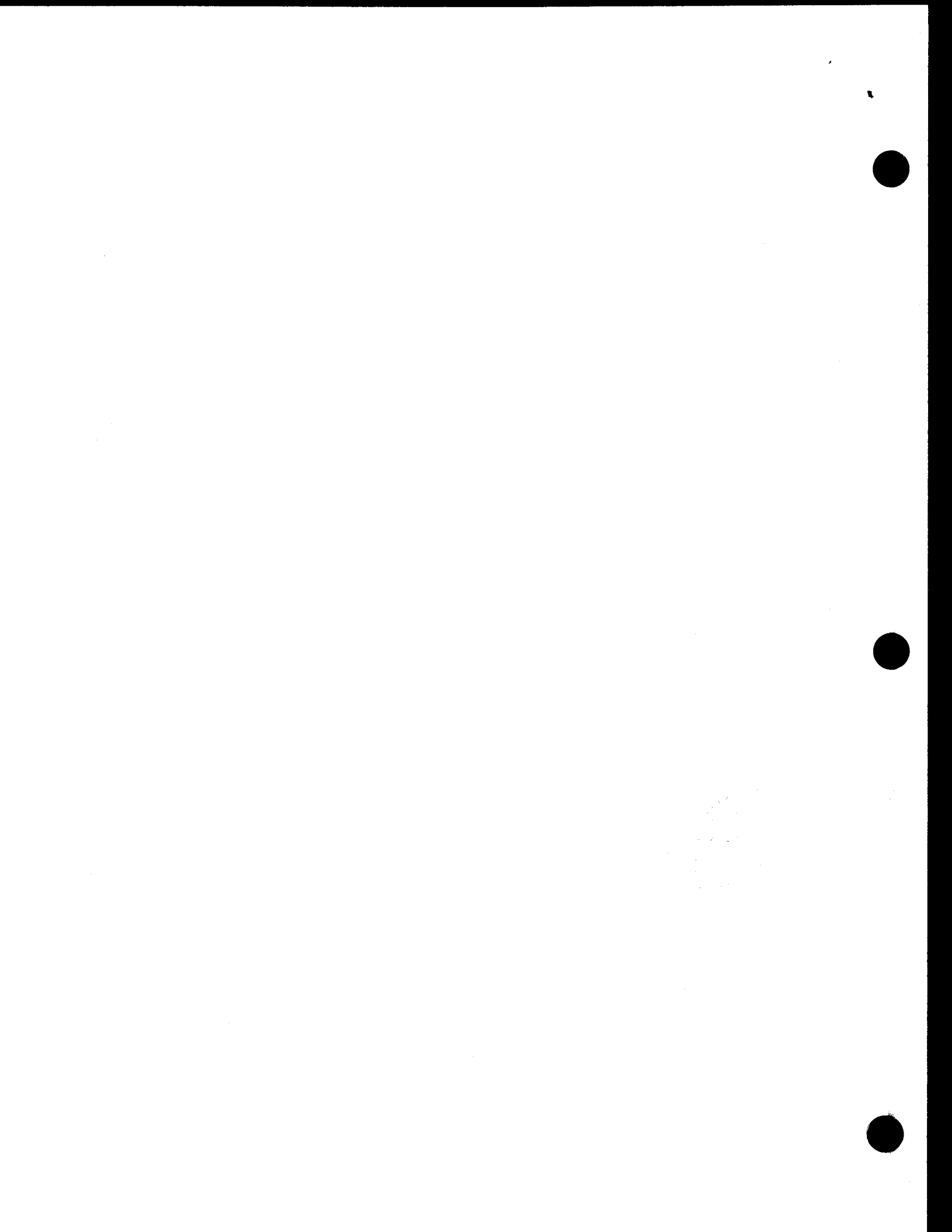
(Seal)

Liberty Mutual Insurance Company

Surety

By:

Lisa Nosal, Atty-In-Fact



BID BOND 3

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of NEW YORK County of ROCKLAND ss:
On this 4th day of SEPTEMBER, 2014, before me personally came
NADA CAMALI to me known, who, being by me duly sworn, did depose and say
that he resides at 1020 GULF BLVD BULLOCK SHS, FL.
that he is the PRESIDENT of EN-TECH CORP
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.

ROBERT BORST
NOTARY PUBLIC
REG. NO. 01BO6003533
QUALIFIED IN QUEENS COUNTY
TERM EXPIRES MARCH 9 2018

Robert Borst
Notary Public

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

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

Notary Public

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

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

Notary Public

AFFIX ACKNOWLEDGMENTS AND JUSTIFICATION OF SURETIES





THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 6644762

American Fire and Casualty Company
The Ohio Casualty Insurance Company

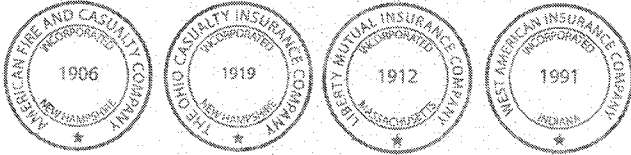
Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Joseph W. Mallory; Lisa Nosal; Louis A. Vlahakes; Pamela J. Boyle; Robert E. Culnen

all of the city of Totowa, state of NJ each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 15th day of July, 2014.



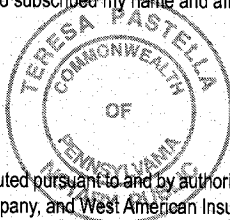
American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: David M. Carey
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 15th day of July, 2014, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.



Notarial Seal
Teresa Pastella, Notary Public
Plymouth Twp., Montgomery County
My Commission Expires March 28, 2017
Member, Pennsylvania Association of Notaries

By: Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Gregory W. Davenport, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 4th day of September, 20 14.



By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

Not valid for mortgage, no span, letter of credit, currency rate, interest rate, residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.





LIBERTY MUTUAL INSURANCE COMPANY
 FINANCIAL STATEMENT — DECEMBER 31, 2013

Assets		Liabilities	
Cash and Bank Deposits.....	\$1,118,180,550	Unearned Premiums.....	\$5,940,431,054
*Bonds — U.S Government.....	1,888,225,943	Reserve for Claims and Claims Expense.....	17,305,063,560
*Other Bonds.....	12,039,490,815	Funds Held Under Reinsurance Treaties.....	212,659,311
*Stocks.....	9,030,962,112	Reserve for Dividends to Policyholders.....	1,226,236
Real Estate.....	251,301,907	Additional Statutory Reserve.....	63,348,980
Agents' Balances or Uncollected Premiums.....	4,781,042,931	Reserve for Commissions, Taxes and	
Accrued Interest and Rents.....	149,855,386	Other Liabilities.....	<u>5,826,683,629</u>
Other Admitted Assets.....	<u>15,216,749,451</u>	Total	\$29,349,412,770
		Special Surplus Funds.....	\$55,686,852
		Capital Stock.....	11,250,000
		Paid in Surplus.....	7,898,288,167
		Unassigned Surplus.....	7,161,171,306
Total Admitted Assets.....	<u>\$44,475,809,095</u>	Surplus to Policyholders	<u>15,126,396,325</u>
		Total Liabilities and Surplus.....	<u>\$44,475,809,095</u>



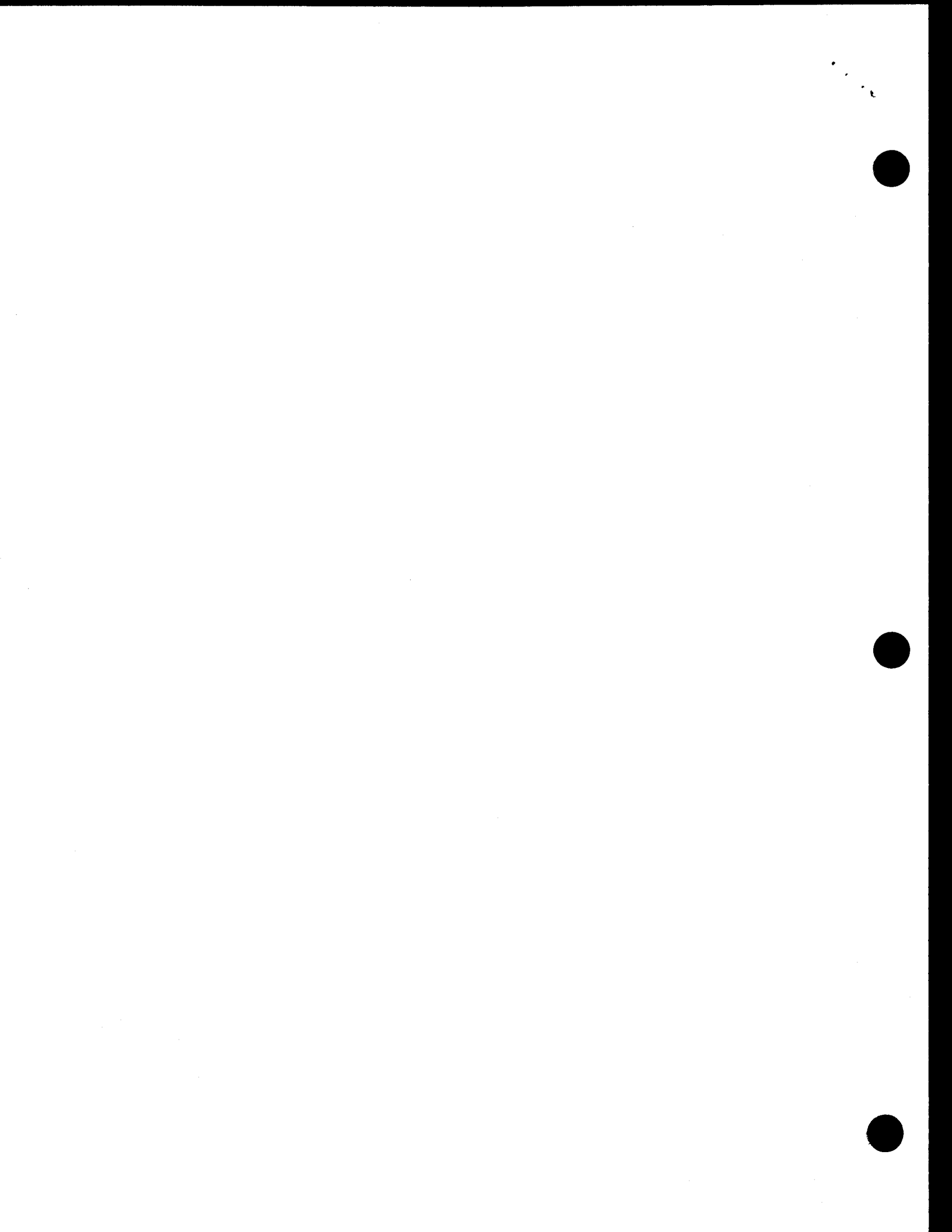
* Bonds are stated at amortized or investment value; Stocks at Association Market Values.
 The foregoing financial information is taken from Liberty Mutual Insurance Company's financial statement filed with the state of Massachusetts Department of Insurance.

I, TIM MIKOLAJEWSKI, Assistant Secretary of Liberty Mutual Insurance Company, do hereby certify that the foregoing is a true and correct statement of the Assets and Liabilities of said Corporation, as of December 31, 2013, to the best of my knowledge and belief.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation at Seattle, Washington, this 20th day of March, 2014.

T. Mikolajewski

Assistant Secretary



M/WBE PROGRAM

M/WBE UTILIZATION PLAN

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

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

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

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

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

NOTICE TO ALL PROSPECTIVE CONTRACTORS

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

ARTICLE I. M/WBE PROGRAM

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

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

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

PART A

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(b) To apply for a full or partial waiver of the **Participation Goals**, a bidder, proposer, or contractor, as applicable, must complete Part III (Page 5) of Schedule B and submit such request no later than seven (7) calendar days prior to the date and time the bids, proposals, or Task Orders are due, in writing to the Agency by email at 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.

Tax ID #: 11-2806461

APT E-
PIN #: 85014B0099

**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 # 85014B0099 FMS Project ID#: PS-312KR

Project Title/ Agency
PIN # REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES/8502013SE0026C

Bid/Proposal
Response Date WEDNESDAY, APRIL 30, 2014

Contracting Agency Department of Design and Construction

Agency Address 30-30 Thomson Avenue City Long Island City State NY Zip Code 11101

Contact Person Diana A. Benjamin Title MWBE Liaison & Compliance Analyst

Telephone # (718) 391-3470 Email BenjamiDi@ddc.nyc.gov

Project Description (attach additional pages if necessary)

PROJECT ID: PS-312KR

FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES IN:

BROOKLYN
IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET AND RYDER STREET; RALPH AVENUE BETWEEN PRESTON COURT AND FOSTER AVENUE; AND, RALPH AVENUE BETWEEN AVENUE L AND AVENUE K

STATEN ISLAND
RICHMOND TERRACE BETWEEN MORNINGSTAR ROAD AND NEWARK AVENUE; RICHMOND TERRACE BETWEEN WINANT STREET AND MORNINGSTAR ROAD; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND WINANT STREET; RICHMOND TERRACE BETWEEN VAN NAME AVENUE AND SIMONSON AVENUE; RICHMOND TERRACE BETWEEN VAN PELT AVENUE AND VAN NAME AVENUE; RICHMOND TERRACE BETWEEN DE HART AVENUE AND VAN PELT AVENUE; RICHMOND TERRACE BETWEEN BUSH AVENUE AND UNION AVENUE; RICHMOND TERRACE BETWEEN HARBOR ROAD AND BUSH AVENUE; RICHMOND TERRACE AND MAPLE AVENUE; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND HOUSEMAN AVENUE; AND, CEDAR GROVE AVENUE AND EBBITS STREET;

Together With All Work Incidental Thereto
BOROUGHES OF THE BROOKLYN AND STATEN ISLAND

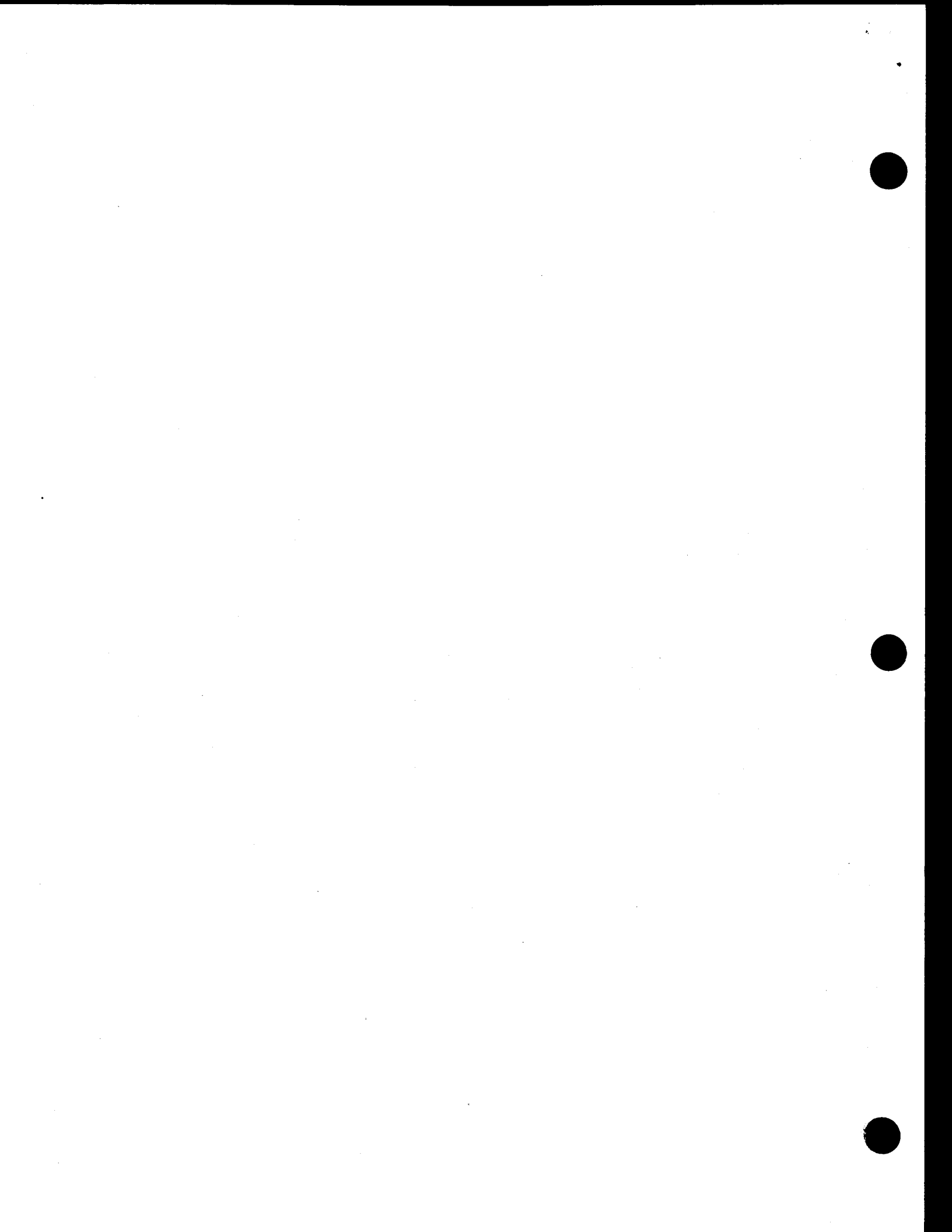
M/WBE Participation Goals for Services

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

Prime Contract Industry: Construction

Group	Percentage
<u>Unspecified*</u>	<u>2%</u>
or	
<u>Black American</u>	<u>UNSPECIFIED*</u>
<u>Hispanic American</u>	<u>UNSPECIFIED*</u>
<u>Asian American</u>	<u>UNSPECIFIED*</u>
<u>Women</u>	<u>UNSPECIFIED*</u>
Total Participation Goals	2% Line 1

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



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 # 11-2806461 FMS Vendor ID # 00005375851
 Business Name EN-TECH CORP. Contact Person NADA E. CAMALI
 Address 91 RUCKMAN ROAD, CLUSTER, NJ 07624
 Telephone # (201) 784-1034 Email NCAMALI@EN-TECHCORP.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.	\$ 18,926,507.60	270	= \$ 378530.16 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



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? % 0

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

Scopes of Subcontract Work



Tax ID #: 11-2806461

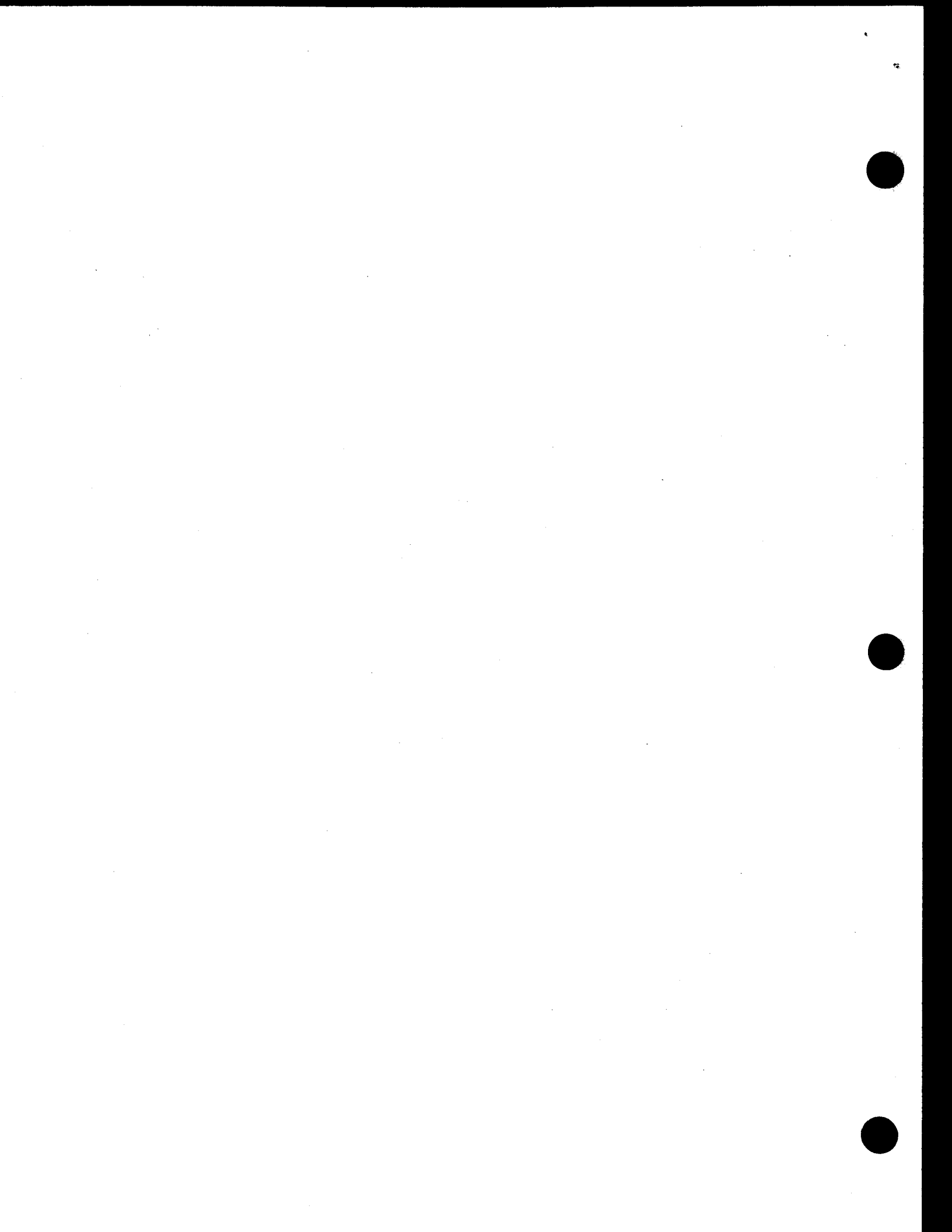
APT E-
PIN #: 85014B0099

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	<u><i>Nada E. Camali</i></u>	Date	<u>9/17/14</u>
Print Name	<u>NADA E. CAMALI</u>	Title	<u>PRESIDENT / SECRETARY</u>



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

Contract Overview

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

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

_____ % Agency M/WBE Participation Goal

Proposed M/WBE Participation Goal as anticipated by vendor seeking waiver

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

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

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

References

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

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



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

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

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

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

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

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

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

Shaded area below is for agency completion only

AGENCY CHIEF CONTRACTING OFFICER APPROVAL
 Signature: _____ Date: _____

CITY CHIEF PROCUREMENT OFFICER APPROVAL
 Signature: _____ Date: _____

Waiver Determination

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





APPRENTICESHIP PROGRAM QUESTIONNAIRE

PROJECT ID: PS-312KR

The bidder must submit a completed and signed Apprenticeship Program Questionnaire.

1. Does the bidder have an Apprenticeship Program 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 the bidder's Apprenticeship Program been registered with, and approved by, the New York State Commissioner of Labor?

YES NO

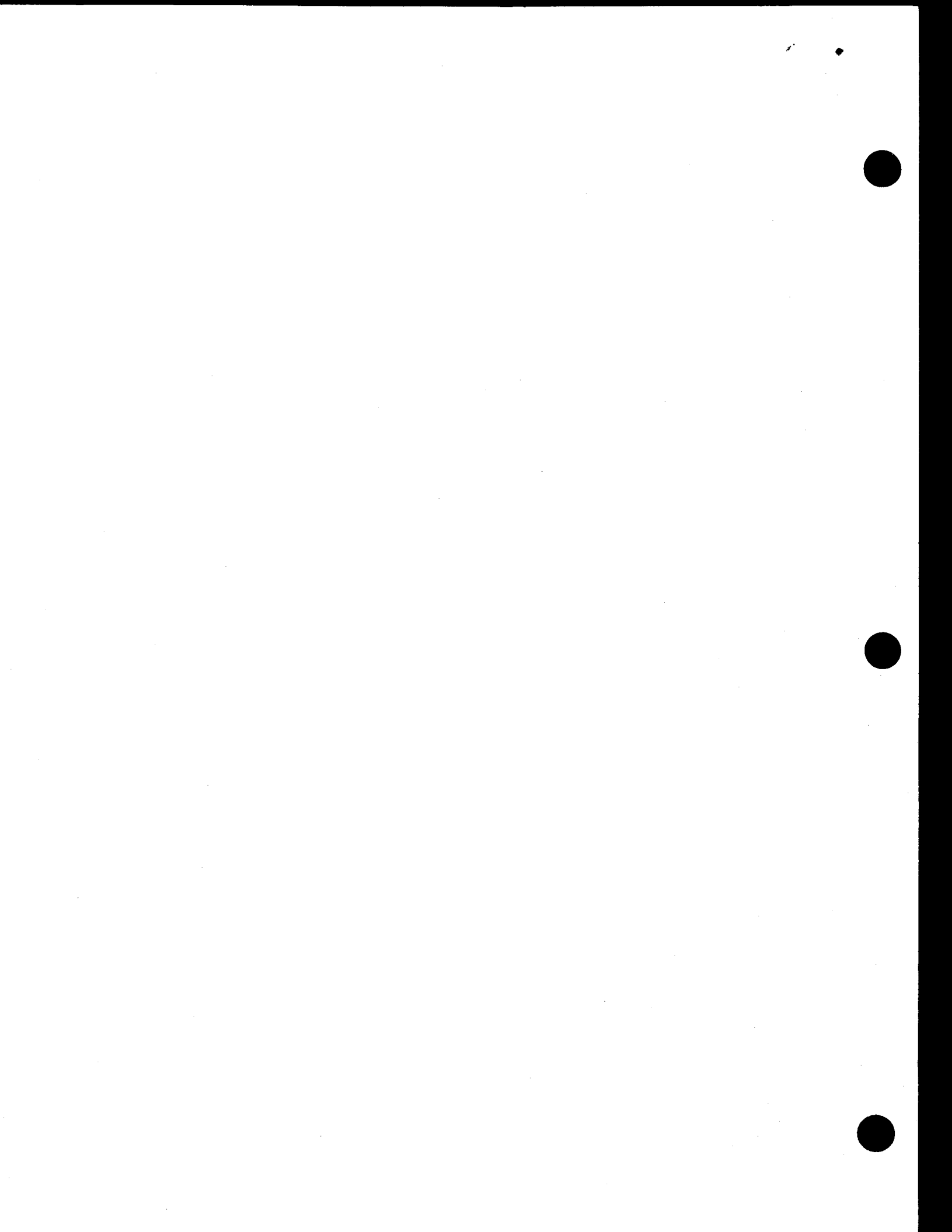
3. Has the bidder's Apprenticeship Program had three years of successful experience in providing career opportunities?

YES NO

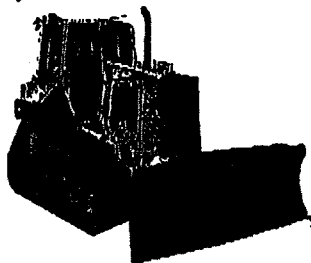
If the answer to Question #3 is "Yes", the bidder shall, in the space below, provide information regarding the experience the Apprenticeship Program has had in providing career opportunities. The bidder may attach additional pages if necessary.

EN-TECH Corp. is signed to the collective bargaining agreements of Local 15 – Operating Engineers and Local 731 – Laborers Unions. These Unions have apprenticeship programs approved by the State of New York and available to Union members.

Bidder: EN-TECH CORP.
By: *Nada E. Camali* Title: PRESIDENT/SECRETARY
(Signature of Partner or Corporate Officer) NADA E. CAMALI
Date: 9/17/14



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
FRANK DIMENNA
JOHN BRUNETTI

September 16, 2014

Re: EN-TECH CORP.

To Whom It May Concern:

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 IUOE 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.

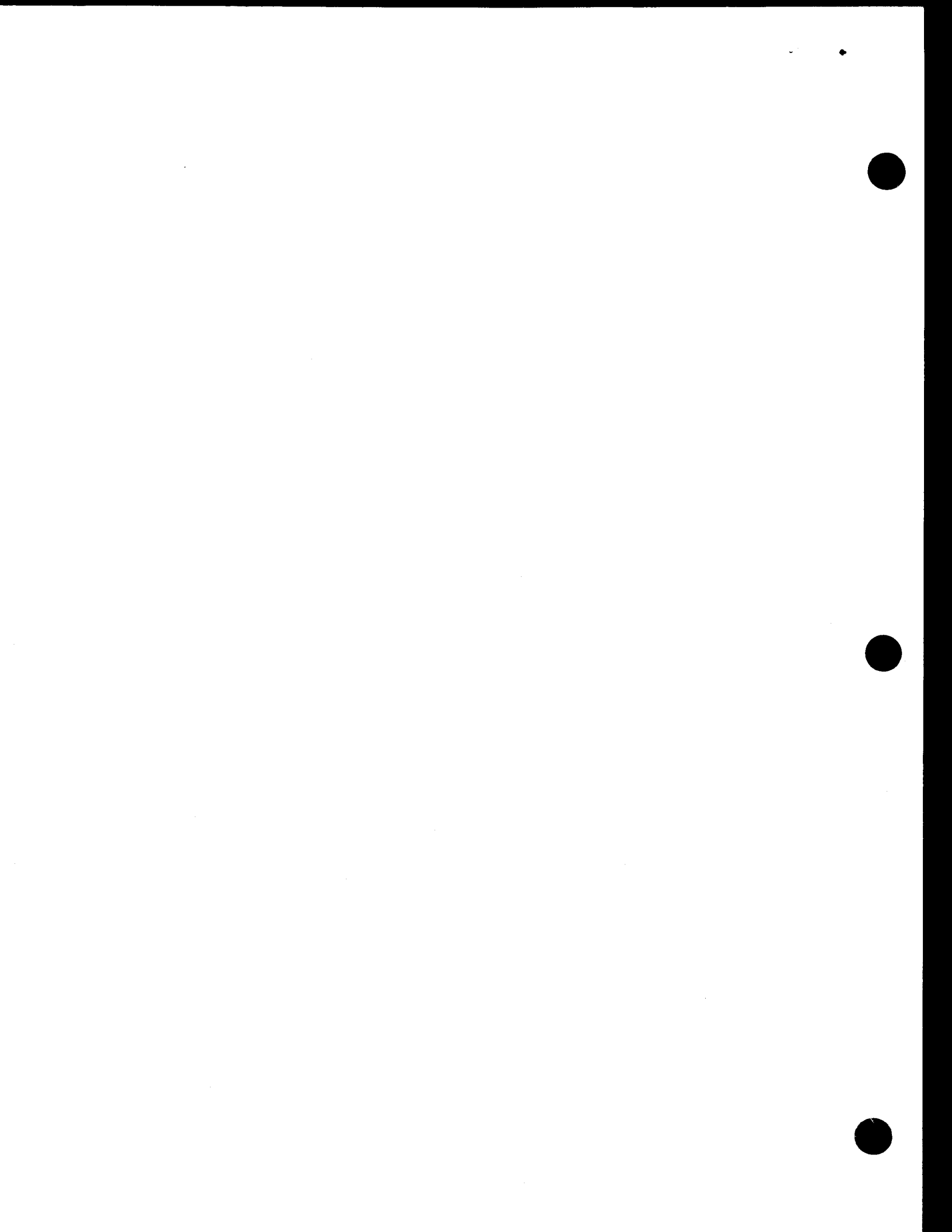
Since the above-mentioned employers are signatory to our agreements, they are therefore participants in our apprenticeship training program.

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

Very truly yours

Patrick J. Peterson
Director of Training

PPP/ev



LIUNA

LOCAL 731 Training Fund

3411 35th Avenue
Astoria, NY 11106

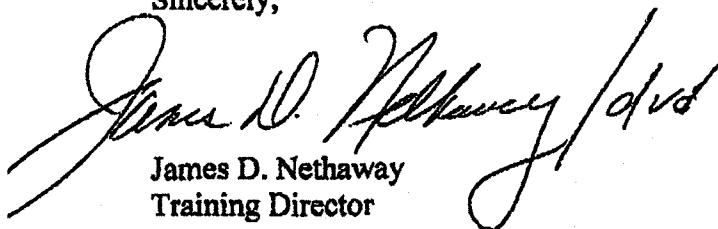
Tel: 718-752-9860 • Fax: 718-752-9880

September 16, 2014

To Whom It May Concern:

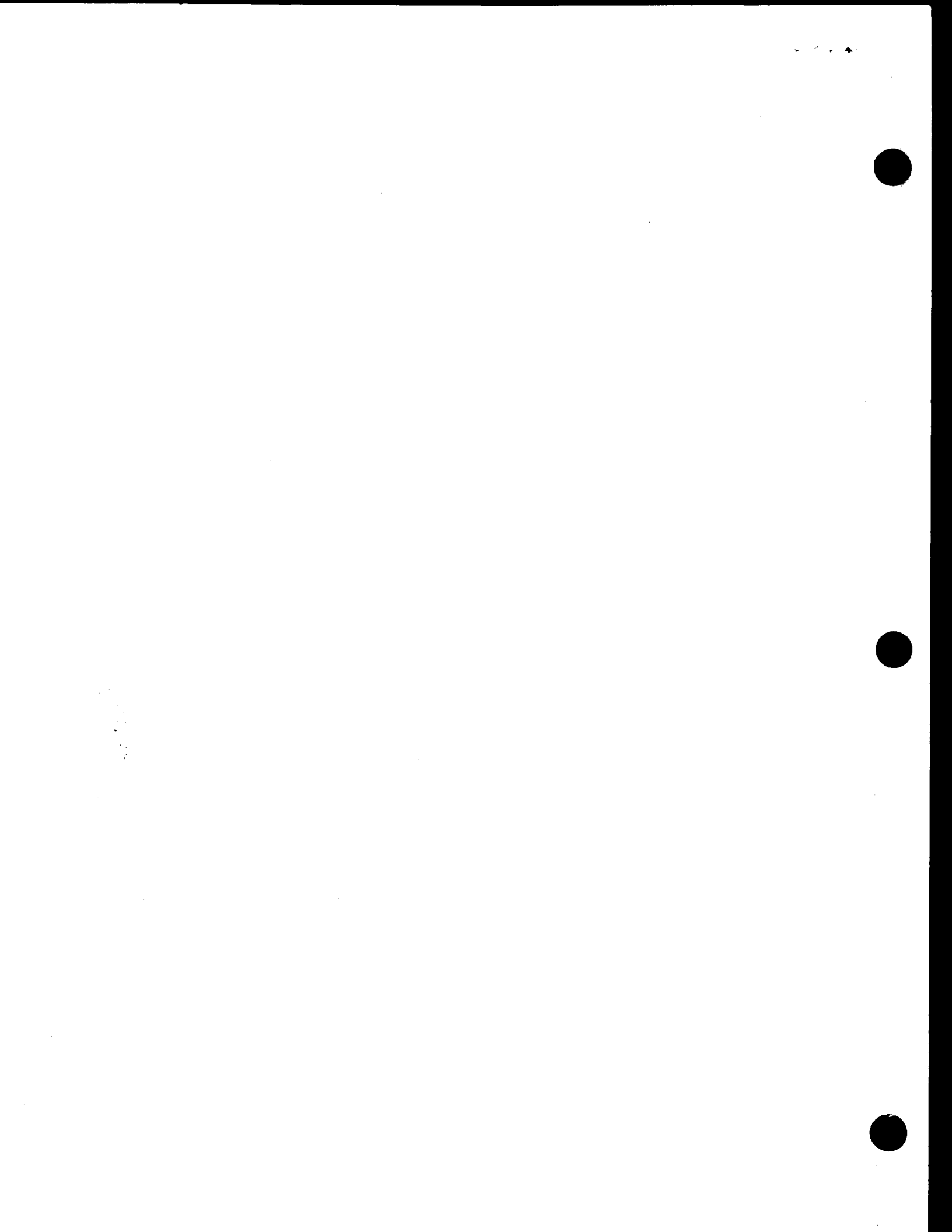
This letter is to confirm En-Tech Corp. has a signed agreement with Union Local 731. Union Local 731 has an Apprenticeship Program Approved by the New York State Department of Labor.

Sincerely,



James D. Nethaway
Training Director

JDN/nc



SAFETY QUESTIONNAIRE

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

1. Bidder Information:

Company Name: EN-TECH CORP.

DDC Project Number: PS-312KR

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

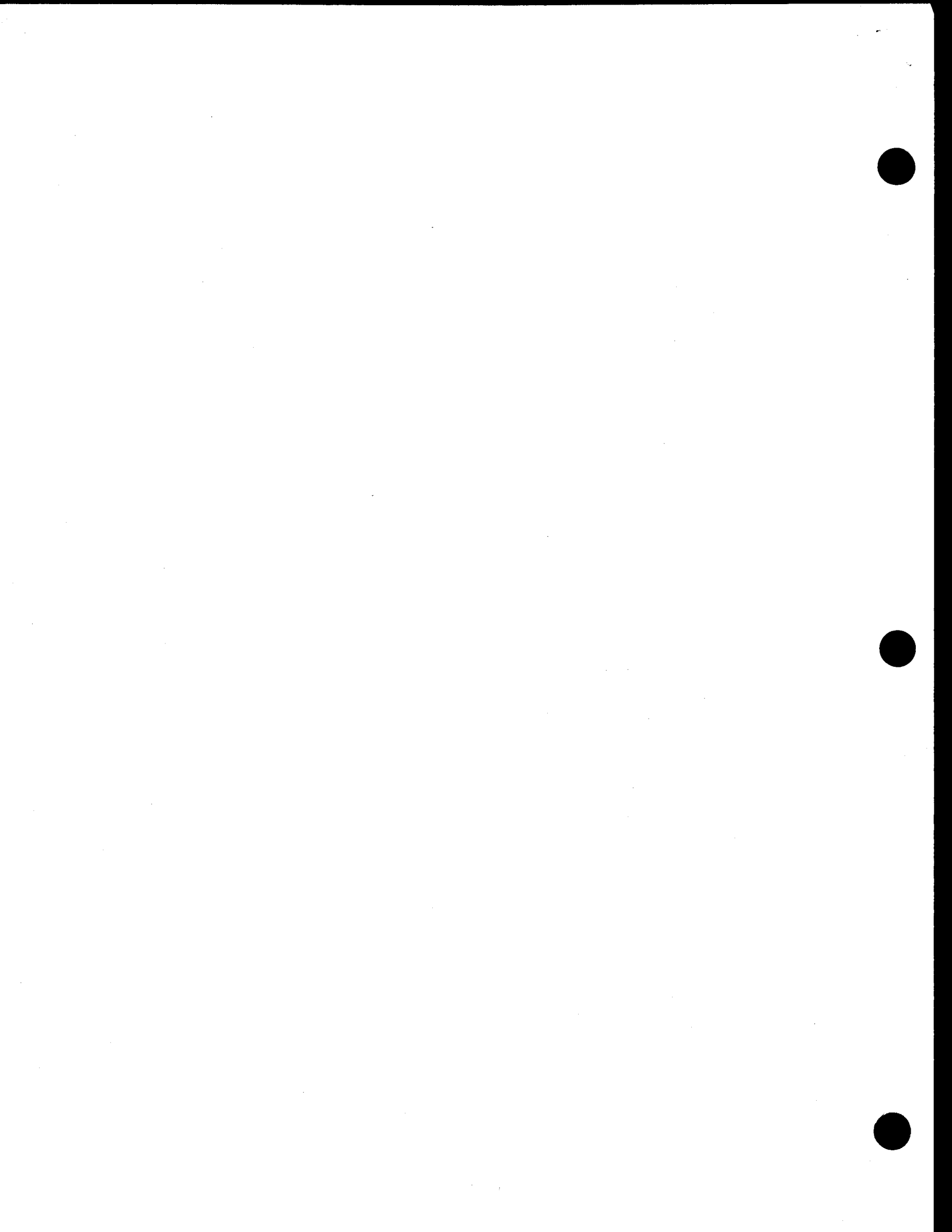
Company has previously worked for DDC ✓ YES NO

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	_____	_____
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.



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>2013</u>	<u>.98</u>	<u>.698</u>
<u>2012</u>	<u>.93</u>	<u>.886</u>
<u>2011</u>	<u>.98</u>	<u>.966</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 (i.e., fatality, or hospitalization of three or more employees).

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

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

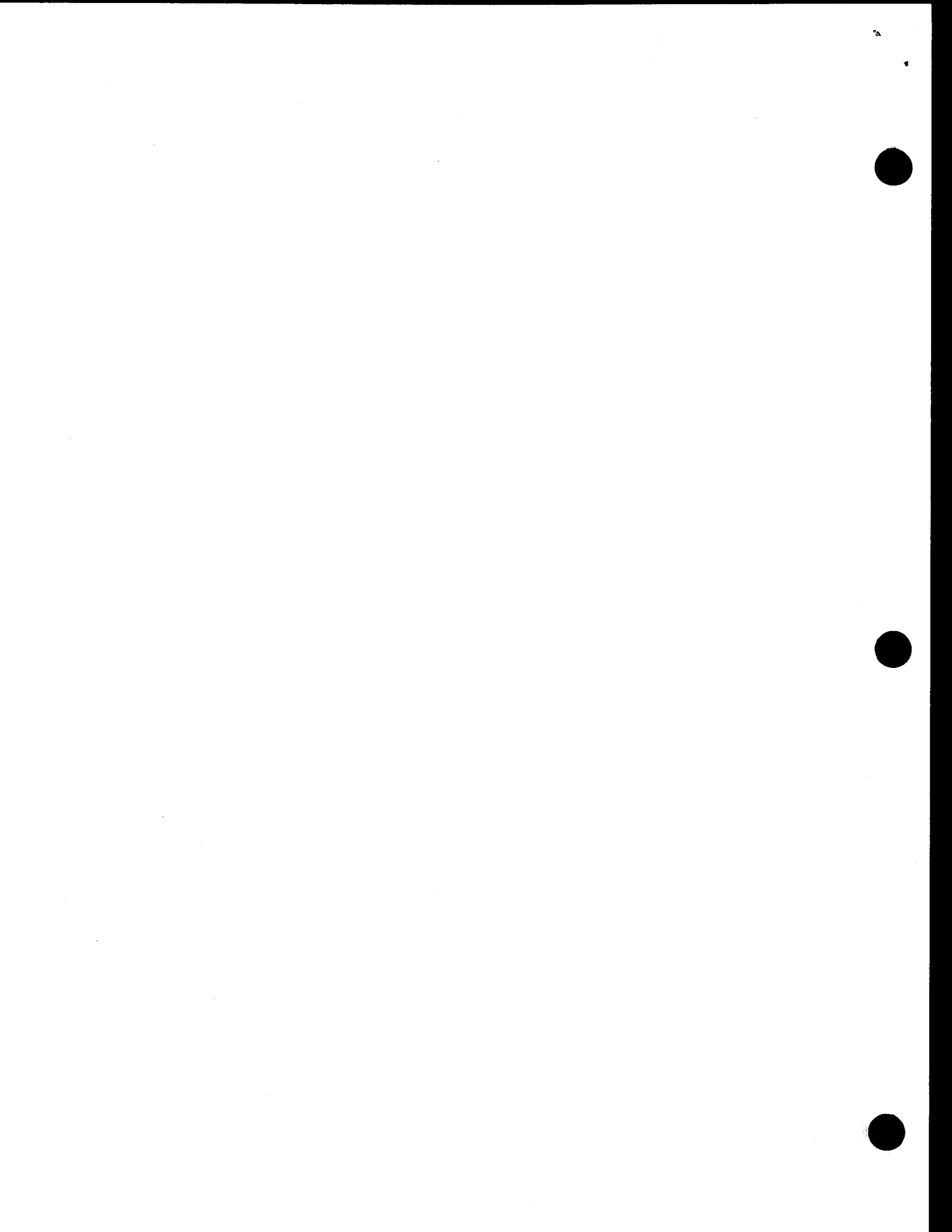
The Contractor must indicate the total number of hours worked by its employees, as reflected in payroll records for the past three years.

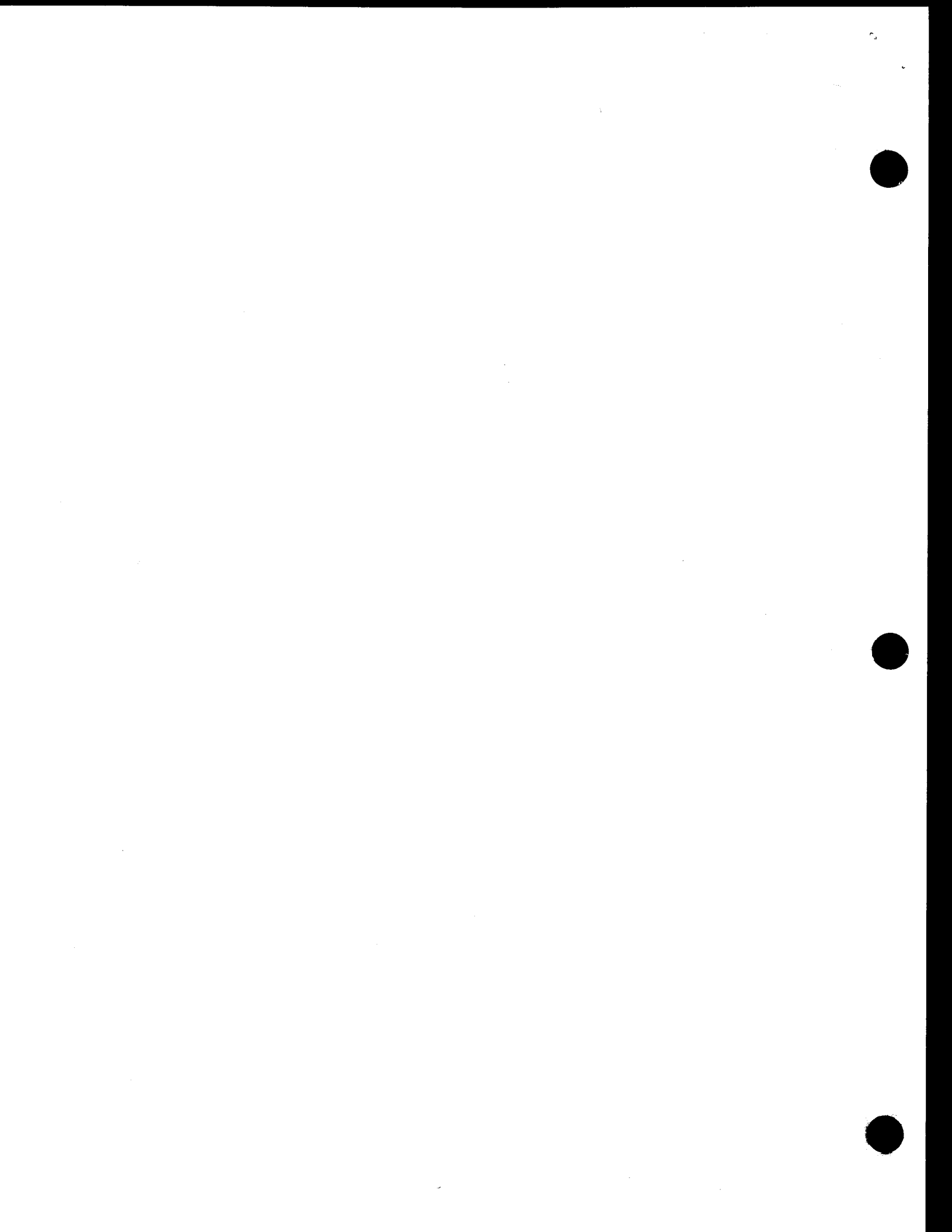
The contractor must submit the Incident Rate for Lost Time Injuries (the Incident Rate) for the past three years. The Incident Rate is calculated in accordance with the formula set forth below. For each given year, the total number of incidents is the total number of non-fatal injuries and illnesses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

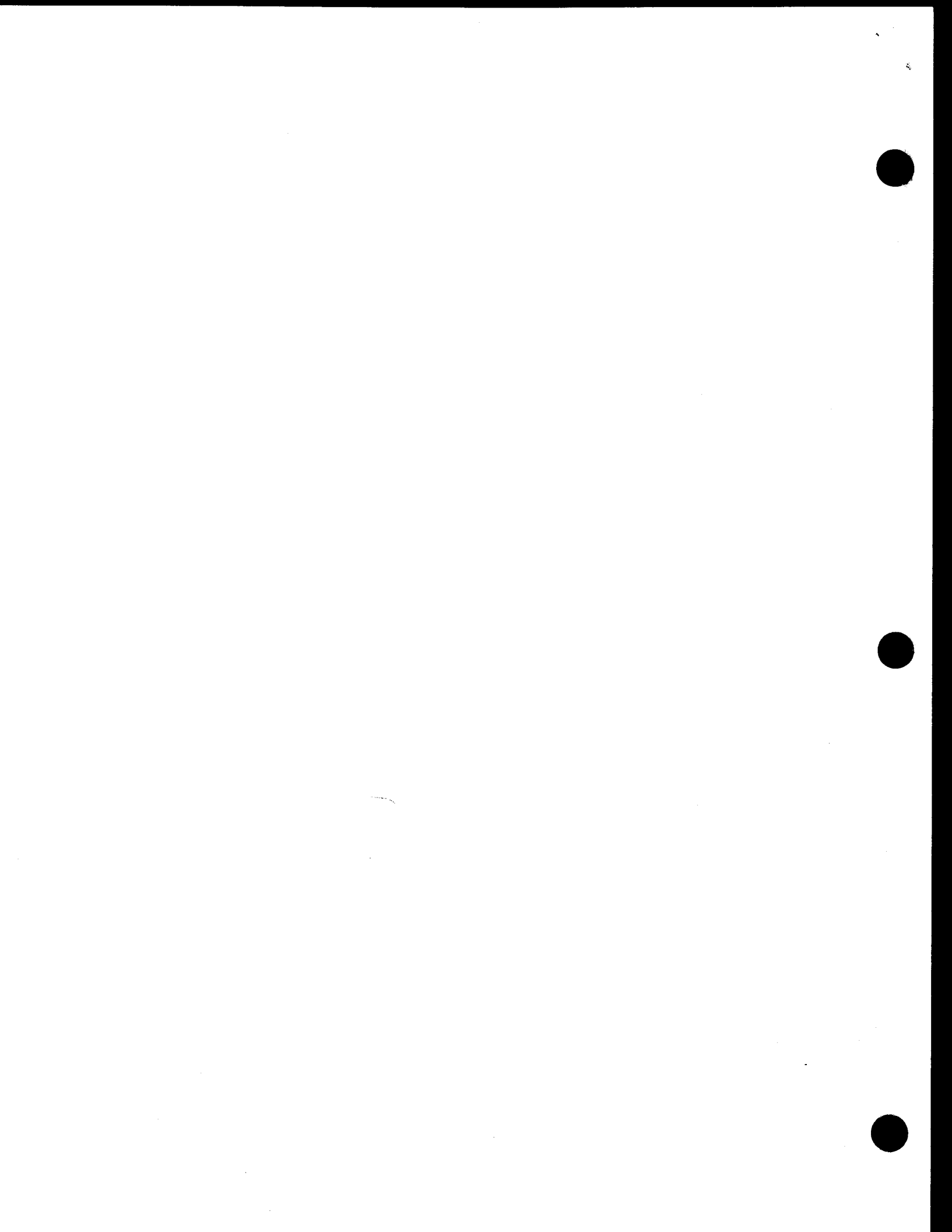
$$\text{Incident Rate} = \frac{\text{Total Number of Incidents} \times 200,000}{\text{Total Number of Hours Worked by Employees}}$$

YEAR	TOTAL NUMBERS OF HOURS WORKED BY EMPLOYEES	INCIDENT RATE
<u>2013</u>	<u>109902.50</u>	<u>3.64</u>
<u>2012</u>	<u>122300.5</u>	<u>8.18</u>
<u>2011</u>	<u>130408.25</u>	<u>7.67</u>









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

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


5. Safety Performance on Previous DDC Project(s)

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

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

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

Date: 9/17/14

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

NADA E. CAMALI

Title: PRESIDENT / SECRETARY



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 26 through 28 of this Bid Booklet. The Project Reference Form consists of 3 parts: (1) Similar 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 – SIMILAR CONTRACTS COMPLETED BY THE BIDDER

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

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

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

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

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

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

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

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

(NO TEXT ON THIS PAGE)

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

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

Contractor: _____

Address: _____

Telephone Number: _____

Name and Title of Signatory: _____

Contracting Agency or Owner: _____

Project Number: _____

Proposed Contract Amount: _____

Description and Address of Proposed Contract: _____

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

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

Date

Signature

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

(NO TEXT ON THIS PAGE)

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:

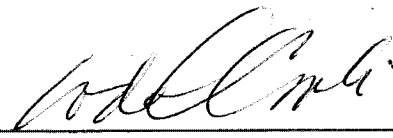
[Please Check One]

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.

Dated: _____, New York
SEPT. 17, 2014



SIGNATURE

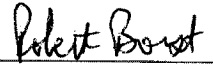
NADA E. CAMALI

PRINTED NAME

PRESIDENT / SECRETARY

TITLE

Sworn to before me this
17th day of SEPT., 2014



Notary Public

Dated: 9/17/14 ROBERT BORST
NOTARY PUBLIC
REG. NO. 01BO6003533
QUALIFIED IN QUEENS COUNTY
TERM EXPIRES MARCH 9 2018



Certificate of No Change Form



Please fill in all the fields and DO NOT leave any field blank.

Please submit two completed forms. Copies will not be accepted.

- Please send both copies to the agency that requested it, unless you are advised to send it directly to the Mayor's Office of Contract Services (MOCS).
- A materially false statement willfully or fraudulently made in connection with this certification, and/or the failure to conduct appropriate due diligence in verifying the information that is the subject of this certification, may result in rendering the submitting entity non-responsible for the purpose of contract award.
- A materially false statement willfully or fraudulently made in connection with this certification may subject the person making the false statement to criminal charges

I, Nada E. Camali, 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 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: EN-TECH CORP

Vendor's Address: 91 RUCKMAN ROAD, CLOSTER, NJ 07624

Vendor's EIN or TIN: 11-2806461 Requesting Agency: NYC DDC

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

Signature date on the last full vendor questionnaire signed by the submitting vendor: 8/8/2012

Signature date on changed submission, if applicable, for the submitting vendor: 9/15/2014



Principal Questionnaire

This section refers to the most recent principal questionnaire submissions.

	Principal Name	Date of signature on last full Principal Questionnaire	Date(s) of signature on Changed Submission (if applicable)
1	NADA E. CAMALI	8/8/2012	9/15/2014
2	EUGENE J. CAMALI	8/8/2012	9/15/2014
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:

NADA E. CAMALI

Name (Print)

PRESIDENT

Title

EN-TECH CORP

Name of Submitting Entity

[Handwritten Signature]

Signature

12/2/14

Date

Notarized By:

Robert Borst

Notary Public

Queens

County License Issued

01806003533

License Number

Sworn to before me on:

12-2-14

Date

ROBERT BORST
NOTARY PUBLIC
REG. NO. 01806003533
QUALIFIED IN QUEENS COUNTY
TERM EXPIRES MARCH 9 2018



**Small Business
Services**

Maria Torres-Springer
Commissioner

#214CY289

October 7, 2014

Ms. Nada Camali
President
EN-TECH Corporation
91 Ruckman Road
Closter, NJ 07624

RE: Department of Design & Construction Contract (**DDC**); PIN #8502013SE0026C, Rehabilitation of interceptor sewers and appurtenances in various locations; Boroughs of Brooklyn and Staten Island; Contract Value: \$18,926,507.60;
Continued Certificate of Approval.

Dear Ms. Camali:

Please be advised that EN-TECH Corporation has already received notice of its approval status for the three (3) year period indicated in the Department of Small Business Services/Division of Labor Services' (DLS') Certificate of Approval dated August 7, 2012 for File # 211CY126.

As your organization continues to meet the equal employment opportunity requirements of the City of New York, DLS approves the awarding of the above-referenced contract. This approval does not extend the initial 3 year approval (July 31, 2012 – July 30, 2015) referred to above.

If you have any questions, please call Mr. Jacques St. Cloud at (212) 513-9233 or by email JSt.Cloud@sbs.nyc.gov.

Very truly yours,

Kim Muldrow-Maxwell
Director
Division of Labor Services

cc: Victoria Ayo-Vaughan (DDC)
Jacques St. Cloud
File



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
 Women Owned Business Enterprise
 Disadvantaged Business Enterprise
 Locally Based Business Enterprise
 Emerging Business Enterprise
- 2a. If you are certified as an MBE, WBE, LBE, EBE or DBE, what city/state agency are you certified with? NYC SBS 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 15 - OPERATORS, 731 LABORERS
6. Are you a Veteran owned company? Yes No

PART I: CONTRACTOR/SUBCONTRACTOR INFORMATION

7. 11-2806461 NCAMALI@EN-TECHCORP.COM
Employer Identification Number or Federal Tax I.D. Email Address
8. EN-TECH CORP.
Company Name
9. 91 RUCKMAN ROAD, CLOSTER, NJ 07624
Company Address and Zip Code
10. NADA E. CAMALI (201) 784-1034
Chief Operating Officer Telephone Number
11. SAME
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")





Small Business
Services

Robert W. Walsh
Commissioner

August 7, 2012

Ms. Nada E. Camali
President
En-Tech Corp.
91 Ruckman Road
Closter, NJ 07624

RE: Department of Design and Construction Contracts; (1) Subcontractor to Waterworks (JV); Judlau & OHL USA (Partners in the JV); #8502010WM0004C; Reconstruction of Sewers using CIPP Method, TV Inspection, Sewer Cleaning; Borough of Manhattan; Contract Value: \$1,792,053.60; **File #211CY223;**

(2) Subcontractor to ADC Construction, LLC; #HWK-1129; Reconstruction of Nostrand Avenue; Borough of Brooklyn; Contract Value: \$1,980,000.00; **File #211CY126; Certificate of Approval.**

Dear Ms. Camali:

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

Contingent upon En-Tech Corp.'s ongoing compliance with E.O. 50 and Chapter 56, this approval shall be effective for the three (3) year period commencing on July 31, 2012, and terminating on July 30, 2015. **The determination for a three year approval only exempts contractors from completing the policy and procedure section of the Employment Report on future contracts within this three year period.** However, En-Tech Corp., Employment Report workforce information must be submitted for each new project as explained during the pre-award conference on July 31, 2012.

RECEIVED

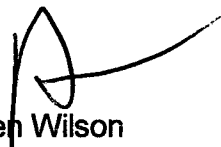
110 William Street, New York, NY 10038
Tel 212-513.6300 Fax 212.618.8879 www.nyc.gov/sbs

PAGE TWO

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

Please direct all correspondence to Ms. Kim Muldrow-Maxwell, Project Manager. Should you have any questions regarding this letter, you may call Ms. Muldrow-Maxwell at (212) 513-6433 or by email kmuldrow@sbs.nyc.gov.

Very truly yours,



Helen Wilson
Executive Director
Division of Labor Services

c: Lorraine Holley
Elsie Ross
Kim Muldrow-Maxwell
File

13. Number of employees in your company: 48

14. Contract information:

(a) NYC DDC Contracting Agency (City Agency) (b) 18,929,507.60 Contract Amount

(c) 8502013SE0026C Procurement Identification Number (PIN) (d) _____ Contract Registration Number (CT#)

(e) JANUARY 2015 Projected Commencement Date (f) JANUARY 2016 Projected Completion Date

(g) Description and location of proposed contract:

REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES
IN BROOKLYN AND STATEN ISLAND

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 IN EACH EMPLOYEE'S PERSONNEL FOLDER

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.

UNION EMPLOYEES

24. Do you have a written equal employment opportunity (EEO) policy? Yes No

If yes, list the document(s) and page number(s) where these written policies are located.

25. Does the company have a current affirmative action plan(s) (AAP)

- Minorities and Women
- Individuals with handicaps
- Other. Please specify _____

26. Does your firm or collective bargaining agreement(s) have an internal grievance procedure with respect to EEO complaints? Yes No

If yes, please attach a copy of this policy.

If no, attach a report detailing your firm's unwritten procedure for handling EEO complaints.



27. Has any employee, within the past three years, filed a complaint pursuant to an internal grievance procedure or with any official of your firm with respect to equal employment opportunity? Yes ___ No

If yes, attach an internal complaint log. See instructions.

28. Has your firm, within the past three years, been named as a defendant (or respondent) in any administrative or judicial action where the complainant (plaintiff) alleged violation of any anti-discrimination or affirmative action laws? Yes ___ No

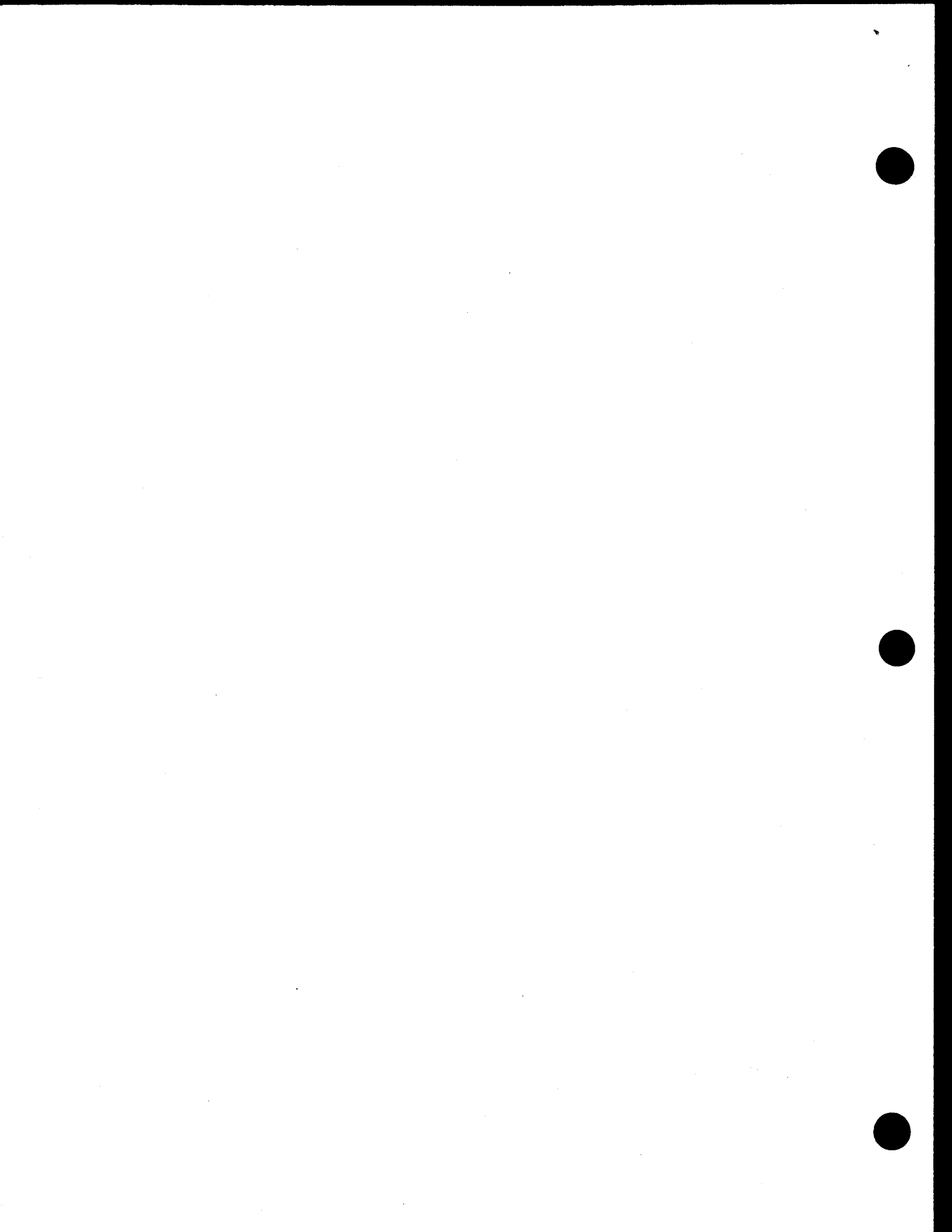
If yes, attach a log. See instructions.

29. Are there any jobs for which there are physical qualifications? Yes ___ No

If yes, list the job(s), submit a job description and state the reason(s) for the qualification(s).

30. Are there any jobs for which there are age, race, color, national origin, sex, creed, disability, marital status, sexual orientation, or citizenship qualifications? Yes ___ No

If yes, list the job(s), submit a job description and state the reason(s) for the qualification(s).



SIGNATURE PAGE

I, (print name of authorized official signing) NADA E. CAMALI 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.

EN-TECH CORP.
Contractor's Name

NADA E. CAMALI PRESIDENT/SECRETARY
Name of person who prepared this Employment Report Title

NADA E. CAMALI PRESIDENT/SECRETARY
Name of official authorized to sign on behalf of the contractor Title

(201) 784-1034
Telephone Number

[Signature] 9/17/14
Signature of authorized official Date

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

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

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

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

Only original signatures accepted.

Sworn to before me this 17TH day of SEPT. 2014

Robert Borst 9/17/14
Notary Public Authorized Signature Date

ROBERT BORST
NOTARY PUBLIC
REG. NO. 01BO6003533
QUALIFIED IN QUEENS COUNTY
TERM EXPIRES MARCH 9 2018



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

W. D. L. M. D.



FORM B: PROJECTED WORKFORCE

TRADE CLASSIFICATION CODES

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

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

Trade:

OPERATORS

Union Affiliation, if applicable

LOCAL 15

Total (Col. #1-10):

10

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

1

Total Female (Col. #6 - 10):

0

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

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

LOCAL UNIONS



FORM B: PROJECTED WORKFORCE

Trade: LABORERS

Union Affiliation, if applicable
LOCAL 731

Total (Col. #1-10):
15

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

Total Female
(Col. #6 - 10):
0

	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	7	1	7	0	0	0	0	0	0	0
H										
A										
TRN										
TOT	7	1	7	0	0	0	0	0	0	0

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

LOCAL UNIONS



FORM 3: 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:

OPERATORS

Union Affiliation, if applicable

LOCAL 15

Total (Col. #1-10):

11

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

1

Total Female
(Col. #6 - 10):

0

	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	0	1	0	0	0	0	0	0	0
H										
A										
TRN										
TOT	10	0	1	0	0	0	0	0	0	0

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

LOCAL UNIONS



FORM C: CURRENT WORKFORCE

Trade: LABORERS

Union Affiliation, if applicable
LOCAL 731

Total (Col. #1-10):
21

Total Minority, Male & Female
(Col. #2,3,4,5,7,8,9, & 10):
12

Total Female
(Col. #6 - 10):
0

	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	9	4	8	0	0	0	0	0	0	0
H										
A										
TRN										
TOT	9	4	8	0	0	0	0	0	0	0

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

LOCAL UNIONS



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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

**INFRASTRUCTURE DIVISION
BUREAU OF DESIGN**

VOLUME 1 OF 3

PROJECT ID: PS-312KR

FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES IN:

BROOKLYN

IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET AND RYDER STREET; RALPH AVENUE BETWEEN PRESTON COURT AND FOSTER AVENUE; AND, RALPH AVENUE BETWEEN AVENUE L AND AVENUE K

STATEN ISLAND

RICHMOND TERRACE BETWEEN MORNINGSTAR ROAD AND NEWARK AVENUE; RICHMOND TERRACE BETWEEN WINANT STREET AND MORNINGSTAR ROAD; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND WINANT STREET; RICHMOND TERRACE BETWEEN VAN NAME AVENUE AND SIMONSON AVENUE; RICHMOND TERRACE BETWEEN VAN PELT AVENUE AND VAN NAME AVENUE; RICHMOND TERRACE BETWEEN DE HART AVENUE AND VAN PELT AVENUE; RICHMOND TERRACE BETWEEN BUSH AVENUE AND UNION AVENUE; RICHMOND TERRACE BETWEEN HARBOR ROAD AND BUSH AVENUE; RICHMOND TERRACE AND MAPLE AVENUE; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND HOUSEMAN AVENUE; AND, CEDAR GROVE AVENUE AND EBBITS STREET;

Together With All Work Incidental Thereto

BOROUGHS OF THE BROOKLYN AND STATEN ISLAND
CITY OF NEW YORK

Contractor

Dated _____, 20__



**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

LAW

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: PS-312KR

FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES
IN:

BROOKLYN

IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET
AND RYDER STREET; RALPH AVENUE BETWEEN PRESTON COURT AND
FOSTER AVENUE; AND, RALPH AVENUE BETWEEN AVENUE L AND AVENUE K

STATEN ISLAND

RICHMOND TERRACE BETWEEN MORNINGSTAR ROAD AND NEWARK
AVENUE; RICHMOND TERRACE BETWEEN WINANT STREET AND
MORNINGSTAR ROAD; RICHMOND TERRACE BETWEEN GRANITE AVENUE
AND WINANT STREET; RICHMOND TERRACE BETWEEN VAN NAME AVENUE
AND SIMONSON AVENUE; RICHMOND TERRACE BETWEEN VAN PELT
AVENUE AND VAN NAME AVENUE; RICHMOND TERRACE BETWEEN DE HART
AVENUE AND VAN PELT AVENUE; RICHMOND TERRACE BETWEEN BUSH
AVENUE AND UNION AVENUE; RICHMOND TERRACE BETWEEN HARBOR
ROAD AND BUSH AVENUE; RICHMOND TERRACE AND MAPLE AVENUE;
RICHMOND TERRACE BETWEEN GRANITE AVENUE AND HOUSEMAN
AVENUE; AND, CEDAR GROVE AVENUE AND EBBITS STREET;

Together With All Work Incidental Thereto

**BOROUGHS OF THE BROOKLYN AND STATEN ISLAND
CITY OF NEW YORK**

FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION
PREPARED BY
IN-HOUSE DESIGN

January 2, 2014



W 4-066





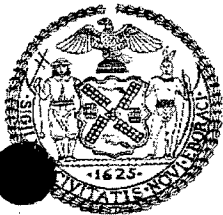
**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

30-30 THOMSON AVENUE
LONG ISLAND CITY, NEW YORK 11101-3045
TELEPHONE (718) 391-1000
WEBSITE www.nyc.gov/buildnyc

VOLUME 2 OF 3

**INFORMATION FOR BIDDERS
CONTRACT
PERFORMANCE AND PAYMENT BONDS
PREVAILING WAGE SCHEDULE**

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND REQUIRED FOR:



FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION
PREPARED BY
IN-HOUSE DESIGN

January 2, 2014



NOTICE TO BIDDERS

Please be advised that the City of New York has issued a new Standard Construction Contract. The new Contract, which is incorporated in this bid, is significantly different from the 2008 version previously used by the City. A listing of some of the significant changes is provided below. This notice is only a partial listing. Please refer to the Contract itself for a full understanding of the changes and the actual text of the changes that were made. The text of the revised Standard Construction Contract is the controlling document should there be any discrepancies between this notice and the Standard Construction Contract.

Significant changes include the following:

ARTICLE 11 DAMAGES CAUSED BY DELAYS

In 2008, the City embarked on a pilot project to test the use of new construction contract language altering the allocation of the risk of project delays, as between the City and the contractor. The City has determined to make the pilot project language the standard language for all City construction contracts. Accordingly, there is now one Standard City Construction Contract that it to be used by all agencies for all bids released after the release of the new contract. The damages for delay language is Article 11. Please note that changes have been made to the damages for delay provisions from the pilot to the adopted version.

ARTICLE 22 INSURANCE

Changes have been made to the insurance provisions, including incorporating requirements that the insurance provided comply with recent NYC Department of Buildings regulations specifying required dollar limits for CGL insurance for certain projects and requiring proof of builder's risk insurance prior to Work commencing rather than within 10 days of award.

ARTICLE 26 EXTRA WORK

The percentage paid for overhead for Extra Work pursuant to Section 26.1.11 is increased from 10% to 12% and the calculation of Worker's Compensation insurance costs reimbursed for Extra Work has been clarified.

ARTICLE 37 LABOR LAW REQUIREMENTS
ARTICLE 38 PAYROLL REPORTS

The provisions governing Labor Law provisions have been tightened, including requirements the employee identification cards include a photo (unless the requirement is waived), a prohibition on cash payments to employees and subcontractors, and clear enforcement authority requirements.

ARTICLE 70 ELECTRONIC FILING

A provision is added to make mandatory the electronic filing of certain alteration permits with the Department of Buildings.

Other significant changes include the following:

ARTICLE 7 INDEMNIFICATION

Changes have been made to the indemnification provisions.

ARTICLE 14 FINAL ACCEPTANCE OF WORK
ARTICLE 44 SUBSTANTIAL COMPLETION PAYMENT

The Commissioner is no longer required to issue a substantial completion determination in addition to the already existing requirement that the Engineer issue a substantial completion determination and reach an agreement on a punch list of remaining work. Now, the Engineer, when issuing the punch list to the Contractor, must also include a proposed schedule for the completion of the punch list. The Contractor may propose an alternative schedule that is subject to the approval of the Engineer. If the Contractor fails to respond to the Engineer's proposed schedule, the Engineer's schedule is deemed accepted.

ARTICLE 15 LIQUIDATED DAMAGES

The contract is revised to match Schedule A to provide that liquidated damages are available only until substantial completion.

ARTICLE 17 SUBCONTRACTS

The requirements for prior approval of subcontractors, and for contractors to be responsible for the actions of their subcontractors, have been tightened. The requirement that the Contractor list subcontractors in the City's Payee Information Portal has been added; the provision was previously attached as a rider.

ARTICLE 19 SECURITY DEPOSIT

The provisions governing the return of bid deposits are clarified.

ARTICLE 20 PAYMENT GUARANTEE

The Payment Guaranty provisions, which apply when the City does not require the Contractor to obtain payment bonds, has been significantly revised to track the requirements of State Finance law 137.

ARTICLE 28 RECORDKEEPING FOR EXTRA OR DISPUTED WORK

The recordkeeping requirement that currently apply to payments for Time & Materials for extra work are expressly made applicable to regular work that is paid for on a T & M basis.

ARTICLE 35 EMPLOYEES

The whistleblower provisions of local law are added to the construction contract. They previously have been attached as a rider.

ARTICLE 38 PAYROLL REPORTS
ARTICLE 77 RECORDS RETENTION

Requirements that records be maintained for six years and directions on how such records must be made available.

ARTICLE 42 PARTIAL PAYMENTS

Increased flexibility has been provided for when contractors may submit invoices.

ARTICLE 62 TAX EXEMPTION

The provisions identifying the State tax exemption for municipalities are revised to more clearly describe State law.

(NO TEXT ON THIS PAGE)

CITY OF NEW YORK

**DEPARTMENT OF
DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURES**

INFORMATION FOR BIDDERS

SEPTEMBER 2008

(NO TEXT ON THIS PAGE)

*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

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INFORMATION FOR BIDDERS

1. Description and Location of Work

The description and location of the work for which bids are requested are specified in Attachment 1, "Bid Information". Attachment 1 is included as page A-1 of the Bid Booklet.

2. Time and Place for Receipt of Bids

Sealed bids shall be received on or before the date and hour specified in Attachment 1, at which time they will be publicly opened and read aloud in the presence of the Commissioner or his or her representative, and any bidders who may desire to be present.

3. Definitions

The definitions set forth in the Procurement Policy Board Rules shall apply to this Invitation For Bids.

4. Invitation For Bids and Contract Documents

(A) Except for titles, sub-titles, headings, running headlines, tables of contents and indices (all of which are printed herein merely for convenience) the following, except for such portions thereof as may be specifically excluded, shall be deemed to be part of the Contract and the Invitation for Bids.

- (1) All provisions required by law to be inserted in this Contract, whether actually inserted or not
- (2) The Contract Drawings and Specifications
- (3) The General Conditions, the General Requirements and the Special Conditions, if any
- (4) The Contract
- (5) The Information for Bidders; Request for Proposals; Notice of Solicitation and Proposal For Bids; Bid or Proposal, and, if used, the Bid Booklet
- (6) The Budget Director's Certificate; all Addenda issued prior to the receipt of the bids; the Notice of Award; Performance and Payment Bonds, if required; and the Notice to Proceed with the Work.

(B) For particulars as to this procurement, including quantity and quality of the purchase, extent of the work or labor to be performed, delivery and performance schedule, and any other special instructions, prospective bidders are referred to the Invitation For Bids Documents. A copy of such documents can be obtained at the location set forth in Attachment 1.

(C) Deposit for Copy of Invitation For Bids Documents: Prospective bidders may obtain a copy of the Invitation For Bids Documents by complying with the conditions set forth in the Notice of Solicitation. The deposit must be in the form of a check or money order made payable to the City of New York, and drawn upon a state or national bank or trust company, or a check of such bank or trust company signed by a duly authorized officer thereof.

(D) Return of Invitation For Bids Documents: All Invitation For Bids Documents must be returned to the Department upon request. If the bidder elects not to submit a bid thereunder, the

Invitation For Bids Documents shall be returned to the Department, along with a statement that no bid will be submitted.

(E) Return of Deposit: Such deposit will be returned within 30 days after the award of the contract or the rejection of all bids as set forth in the advertisement, provided the Invitation For Bids Documents are returned to the location specified in Attachment 1, in physical condition satisfactory to the Commissioner.

(F) Additional Copies: Additional copies of the Invitation For Bids Documents may be obtained, subject to the conditions set forth in the advertisement for bids.

5. Pre-Bid Conference

A pre-bid conference shall be held as set forth in Attachment 1. Nothing stated at the pre-bid conference shall change the terms or conditions of the Invitation For Bids Documents, unless a change is made by written amendment as provided in Section 9 below. Failure to attend a mandatory pre-bid conference shall constitute grounds for the rejection of the bid.

6. Agency Contact

Any questions or correspondence relating to this bid solicitation shall be addressed to the Agency Contact person specified in Attachment 1.

7. Bidder's Oath

(A) The bid shall be properly signed by an authorized representative of the bidder and the bid shall be verified by the written oath of the authorized representative who signed the bid, that the several matters stated and information furnished therein are in all aspects true.

(B) A materially false statement willfully or fraudulently made in connection with the bid or any of the forms completed and submitted with the bid may result in the termination of any Contract between the City and the Bidder. As a result, the Bidder may be barred from participating in future City contracts as well as be subject to possible criminal prosecution.

8. Examination and Viewing of Site, Consideration of Other Sources of Information and Changed Conditions

(A) Pre-Bidding (Investigation) Viewing of Site -Bidders must carefully view and examine the site of the proposed work, as well as its adjacent area, and seek other usual sources of information, for they will be conclusively presumed to have full knowledge of any and all conditions on, about or above the site relating to or affecting in any way the performance of the work to be done under the Contract which were or should have been indicated to a reasonably prudent bidder. To arrange a date for visiting the work site, bidders are to contact the Agency Contact person specified in Attachment 1.

(B) Should the contractor encounter during the progress of the work subsurface conditions at the site materially differing from any shown on the Contract Drawings or indicated in the Specifications or such subsurface conditions as could not reasonably have been anticipated by the contractor and were not anticipated by the City, which conditions will materially affect the cost of the work to be done under the

Contract, the attention of the Commissioner must be called immediately to such conditions before they are disturbed. The Commissioner shall thereupon promptly investigate the conditions. If he finds that they do so materially differ, or that they could not have been reasonably anticipated by the contractor and were not anticipated by the City, the Contract may be modified with his written approval.

9. Examination of Proposed Contract

(A) Request for Interpretation or Correction: Prospective bidders must examine the Contract Documents carefully and before bidding must request the Commissioner in writing for an interpretation or correction of every patent ambiguity, inconsistency or error therein which should have been discovered by a reasonably prudent bidder. Such interpretation or correction, as well as any additional contract provisions the Commissioner may decide to include, will be issued in writing by the Commissioner as an addendum to the Contract, which will be transmitted to each person recorded as having received a copy of the Contract Documents from the Department. Transmission of such addendum will be by mail, e-mail, facsimile or hand delivery. Such addendum will also be posted at the place where the Contract Documents are available for the inspection of prospective bidders. Upon transmission as provided for herein, such addendum shall become a part of the Contract Documents, and binding on all bidders, whether or not actual notice of such addendum is shown.

(B) Only Commissioner's Interpretation or Correction Binding: Only the written interpretation or correction so given by the Commissioner shall be binding, and prospective bidders are warned that no other officer, agent or employee of the City is authorized to give information concerning, or to explain or interpret, the Contract.

(C) Documents given to a subcontractor for the purpose of soliciting the subcontractor's bid shall include either a copy of the bid cover sheet or a separate information sheet setting forth the project name, the Contract number (if available), the contracting agency and the Project's location.

10. Form of Bid

Each bid must be submitted upon the prescribed form and must contain: a) the name, residence and place of business of the person or persons making the same; b) the names of all persons interested therein, and if no other person is so interested, such fact must be distinctly stated; c) a statement to the effect that it is made without any connection with any other person making a bid for the same purpose and that it is in all respects fair and without collusion or fraud; d) a statement that no Council member or other officer or employee or person whose salary is payable in whole or part from the City Treasury is directly or indirectly interested therein or in the supplies, materials or equipment and work or labor to which it relates, or in any portion of the profits thereof; e) a statement that the bidder is not in arrears to the City or to any agency upon a debt or contract or taxes, and is not a defaulter as surety or otherwise upon any obligation to the City to any agency thereof, except as set forth in the bid.

THE BID SHALL BE TYPEWRITTEN OR WRITTEN LEGIBLY IN INK. THE BID SHALL BE SIGNED IN INK. ERASURES OR ALTERATIONS SHALL BE INITIALED BY THE SIGNER IN INK. FAILURE TO CONFORM TO THE REQUIREMENTS OF THIS SECTION 10 SHALL RESULT IN THE REJECTION OF THE BID.

11. Irrevocability of Bid

The prices set forth in the bid cannot be revoked and shall be effective until the award of the Contract, unless the bid is withdrawn as provided for in Sections 15 and 18 below.

12. Acknowledgment of Amendments

The receipt of any amendment to the Contract Documents shall be acknowledged by the bidder in its bid submission.

13. Bid Samples and Descriptive Literature

Bid samples and descriptive literature shall not be submitted by the bidder, unless expressly requested elsewhere in the Contract or Contract Documents. Any unsolicited bid samples or descriptive literature which are submitted shall not be examined or tested and shall not be deemed to vary any of the provisions of this Contract.

14. Proprietary Information/Trade Secrets

(A) The bidder shall identify those portions of the bid which it deems to be confidential, proprietary information or trade secrets, and provide justification why such materials shall not be disclosed by the City. All such materials shall be clearly indicated by stamping the pages on which such information appears, at the top and bottom thereof with the word "Confidential". Such materials stamped "Confidential" must be easily separable from the non-confidential sections of the bid.

(B) All such materials so indicated shall be reviewed by the Agency and any decision not to honor a request for confidentiality shall be communicated in writing to the bidder. For those bids which are unsuccessful, all such confidential materials shall be returned to the bidder. Prices, makes and model or catalog numbers of the items offered, deliveries, and terms of payment shall be publicly available after bid opening, regardless of any designation of confidentiality made by the bidder.

15. Pre-Opening Modification or Withdrawal of Bids

Bids may be modified or withdrawn by written notice received in the office designated in Attachment 1, before the time and date set for the bid opening. If a bid is withdrawn in accordance with this Section, the bid security, if any, shall be returned to the bidder.

16. Bid Evaluation and Award

In accordance with the New York City Charter, the Procurement Policy Board Rules and the terms and conditions of this Invitation For Bids, this Contract shall be awarded, if at all, to the responsible bidder whose bid meets the requirements and evaluation criteria set forth in the Invitation For Bids, and whose bid price is either the most favorable bid price or, if the Invitation For Bids so states, the most favorable evaluated bid price. A bid may not be evaluated for any requirement or criterion that is not disclosed in the Invitation For Bids.

Restriction: No negotiations with any bidder shall be allowed to take place except under the circumstances and in the manner set forth in Section 21. Nothing in this Section shall be deemed to permit a contract award to a bidder submitting a higher quality item than that designated in the Invitation For Bids, if that bid is not also the most favorable bid.

17. Late Bids, Late Withdrawals and Late Modifications

Any bid received at the place designated in the solicitation after the time and date set for receipt of bids is late and shall not be considered. Any request for withdrawal or modification received at the place designated in the solicitation after the time and date set for receipt of bids is late and shall not be considered. The exception to this provision is that a late modification of a successful bid that makes the bid terms more favorable to the City shall be considered at any time it is received.

18. Withdrawal of Bids.

Except as provided for in Section 15, above, a bidder may not withdraw its bid before the expiration of forty-five (45) days after the date of the opening of bids; thereafter, a bidder may withdraw its bid only in writing and in advance of an actual award. If within sixty (60) days after the execution of the Contract, the Commissioner fails to fix the date for commencement of work by written notice to the bidder, the bidder, at his option, may ask to be relieved of his obligation to perform the work called for by written notice to the Commissioner. If such notice is given to the Commissioner, and the request to withdraw is granted, the bidder waives all claims in connection with this Contract.

19. Mistake in Bids

(A) Mistake Discovered Before Bid Opening: A bidder may correct mistakes discovered before the time and date set for bid opening by withdrawing or correcting the bid as provided in Section 15 above.

(B) Mistakes Discovered Before Award

(1) In accordance with General Municipal Law (Section 103, subdivision 11), where a unilateral error or mistake is discovered in a bid, such bid may be withdrawn upon written approval of the Agency Chief Contracting Officer if the following conditions are met:

- (a) The mistake is known or made known to the agency prior to the awarding of the Contract or within 3 days after the opening of the bid, whichever period is shorter; and
- (b) The price bid was based upon an error of such magnitude that enforcement would be unconscionable; and
- (c) The bid was submitted in good faith and the bidder submits credible evidence that the mistake was a clerical error as opposed to a judgment error; and
- (d) The error in the bid is actually due to an unintentional and substantial arithmetic error or an unintentional omission of a substantial quantity of work, labor, material or services made directly in the compilation of the bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of the original work paper, documents, or materials used in the preparation of the bid sought to be withdrawn; and
- (e) It is possible to place the agency in the same position as existed prior to the bid.

(2) Unless otherwise required by law, the sole remedy for a bid mistake in accordance with this Article shall be withdrawal of the bid, and the return of the bid bond, or other security, if any, to the bidder. Thereafter, the agency may, in its discretion, award the Contract to the next lowest bidder or rebid the Contract. Any amendment to or reformation of a bid or a Contract to rectify such an error or mistake

therein is strictly prohibited.

(3) If the mistake and the intended correct bid are clearly evident on the face of the bid document, the bid shall be corrected to the intended correct bid and may not be withdrawn. Examples of mistakes that may be corrected are typographical errors, errors in extending unit prices, transposition errors and arithmetical errors.

20. Low Tie Bids

(A) When two or more low responsive bids from responsible bidders are identical in price, meeting all the requirements and criteria set forth in the Invitation For Bids, the Agency Chief Contracting Officer will break the tie in the following manner and order of priority:

- (1) Award to a certified New York City small, minority or woman-owned business entity bidder;
- (2) Award to a New York City bidder;
- (3) Award to a certified New York State small, minority or woman-owned business bidder;
- (4) Award to a New York State bidder.

(B) If two or more bidders still remain equally eligible after application of paragraph (A) above, award shall be made by a drawing by lot limited to those bidders. The bidders involved shall be invited to attend the drawing. A witness shall be present to verify the drawing and shall certify the results on the bid tabulation sheet.

21. Rejection of Bids

(A) Rejection of Individual Bids: The Agency may reject a bid if:

- (1) The bidder fails to furnish any of the information required pursuant to Section 24 or 28 hereof; or if
- (2) The bidder is determined to be not responsible pursuant to the Procurement Policy Board Rules; or if
- (3) The bid is determined to be non-responsive pursuant to the Procurement Policy Board Rules; or if
- (4) The bid, in the opinion of the Agency Chief Contracting Officer, contains unbalanced bid prices and is thus non-responsive, unless the bidder can show that the prices are not unbalanced for the probable required quantity of items, or if the imbalance is corrected pursuant to Section 15.

(B) Rejection of All Bids: The Agency, upon written approval by the Agency Chief Contracting Officer, may reject all bids and may elect to resolicit bids if in its sole opinion it shall deem it in the best interest of the City so to do.

(C) Rejection of All Bids and Negotiation With All Responsible Bidders: The Agency Head may determine that it is appropriate to cancel the Invitation For Bids after bid opening and before award and to complete the acquisition by negotiation. This determination shall be based on one of the following reasons:

- (1) All otherwise acceptable bids received are at unreasonable prices, or only one bid is received and the Agency Chief Contracting Officer cannot determine the reasonableness of the bid price, or no responsive bid has been received from a responsible bidder; or
- (2) In the judgment of the Agency Chief Contracting Officer, the bids were not independently arrived at in open competition, were collusive, or were submitted in bad faith.

(D) When the Agency has determined that the Invitation for Bids is to be canceled and that use of negotiation is appropriate to complete the acquisition, the contracting officer may negotiate and award the Contract without issuing a new solicitation, subject to the following conditions:

- (1) prior notice of the intention to negotiate and a reasonable opportunity to negotiate have been given by the contracting officer to each responsible bidder that submitted a bid in response to the Invitation for Bids;
- (2) the negotiated price is the lowest negotiated price offered by a responsible bidder; and
- (3) the negotiated price is lower than the lowest rejected bid price of a responsible bidder that submitted a bid in response to the Invitation for Bids.

22. Right to Appeal Determinations of Non-Responsiveness or Non-Responsibility and Right to Protest Solicitations and Award

The bidder has the right to appeal a determination of non-responsiveness or non-responsibility and has the right to protest a solicitation and award. For further information concerning these rights, the bidder is directed to the Procurement Policy Board Rules.

23. Affirmative Action and Equal Employment Opportunity

This Invitation For Bids is subject to applicable provisions of Federal, State and Local Laws and executive orders requiring affirmative action and equal employment opportunity.

24. VENDEX Questionnaires

(A) Requirement: Pursuant to Administrative Code Section 6-116.2 and the PPB Rules, bidders may be obligated to complete and submit VENDEX Questionnaires. Generally, if this bid is \$100,000 or more, or if this bid when added to the sum total of all contracts, concessions and franchises the bidder has received from the City and any subcontracts received from City contractors over the past twelve months, equals or exceeds \$100,000, Vendex Questionnaires must be completed. If required, Vendex Questionnaires must be completed and submitted before any award of contract may be made or before approval is given for a proposed subcontractor. Non-compliance with these submission requirements may result in the disqualification of the bid, disapproval of a subcontractor, subsequent withdrawal of approval for the use of an approved subcontractor, or the cancellation of the contract after its award.

(B) Submission: Vendex Questionnaires must be submitted directly to the Mayor's Office of Contract Services, ATTN: Vendex, 253 Broadway, 9th Floor, New York, New York 10007. In addition, the bidder must submit a Confirmation of Vendex Compliance to the agency. A form for this confirmation is set forth in the Bid Booklet.

(C) Obtaining Forms: Vendex Questionnaires, as well as detailed instructions, may be obtained at www.nyc.gov/vendex. The bidder may also obtain Vendex forms and instructions by contacting the

Agency Chief Contracting Office or the contract person for this contract.

25. Complaints About the Bid Process

The New York City Comptroller is charged with the audit of contracts in New York City. Any vendor who believes that there has been unfairness, favoritism or impropriety in the bid process should inform the Comptroller, Office of Contract Administration, One Centre Street, Room 835, New York, New York; telephone number (212)669-2797.

26. Bid, Performance and Payment Security

(A) Bid Security: Each bid must be accompanied by bid security in an amount and type specified in Attachment 1 (page A-1 of the Bid Booklet). The bid security shall assure the City of New York of the adherence of the bidder to its proposal, the execution of the Contract, and the furnishing of Performance and Payment Bonds by the bidder, if required in Attachment 1. Bid security shall be returned to the bidder as follows:

- (1) Within ten (10) days after the bid opening, the Comptroller will be notified to return the deposits of all but the three (3) lowest bidders. Within five (5) days after the award, the Comptroller will be notified to return the deposits of the remaining two unsuccessful bidders.
- (2) Within five (5) days after the execution of the Contract and acceptance of the Contractor's bonds, the Comptroller will be notified to return the bid security of the successful bidder or, if performance and payment bonds are not required, only after the sum retained under Article 21 of the Contract equals the amount of the bid security.
- (3) Where all bids are rejected, the Comptroller will be notified to return the deposit of the three (3) lowest bidders at the time of rejection.

(B) Performance and Payment Security: Performance and Payment Security must be provided in an amount and type specified in Attachment 1 (page A-1 of the Bid Booklet). The performance and payment security shall be delivered by the contractor prior to or at the time of execution of the Contract. If a contractor fails to deliver the required performance and payment security, its bid security shall be enforced, and an award of Contract may be made to the next lowest responsible and responsive bidder, or the contract may be rebid.

(C) Acceptable Types of Security: Acceptable types of security for bids, performance, and payment shall be limited to the following:

- (1) a one-time bond in a form satisfactory to the City;
- (2) a bank certified check or money order;
- (3) obligations of the City of New York; or
- (4) other financial instruments as determined by the Office of Construction in consultation with the Comptroller.

Whenever the successful bidder deposits obligations of the City of New York as performance and payment security, the Comptroller may sell and use the proceeds thereof for any purpose for which the principal or surety on such bond would be liable under the terms of the Contract. If the money is deposited with the Comptroller, the successful bidder shall not be entitled to receive interest on such money from the City.

(D) Form of Bonds: Security provided in the form of bonds must be prepared on the form of bonds authorized by the City of New York. Forms for bid, performance, and payment bonds are included in the Invitation for Bids Documents. Such bonds must have as surety thereunder such surety company or companies as are: (1) approved by the City of New York; (2) authorized to do business in the State of New York, and (3) approved by the Department of the Treasury of the United States. Premiums for any required bonds must be included in the base bid.

The bidder is advised that submission of a bid bond where the surety on such bond fails to meet the criteria set forth herein, shall result in the rejection of the bid as non-responsive.

The Department of the Treasury of the United States advises that information concerning approved surety companies may be obtained as follows: (1) from the Government Printing Office at 202-512-1800; (2) through the Internet at <http://www.fms.treas.gov/c570/index.html>, and (3) through a computerized public bulletin board, which can be accessed by using your computer modem and dialing 202-874-6887.

(E) Power of Attorney: Attorneys in fact who sign bid, performance, or payment bonds must file with each bond a certified copy of their power of attorney to sign said bonds.

27. Failure to Execute Contract

In the event of failure of the successful bidder to execute the Contract and furnish the required security within ten (10) days after notice of the award of the Contract, the deposit of the successful bidder or so much thereof as shall be applicable to the amount of the award made shall be retained by the City, and the successful bidder shall be liable for and hereby agrees to pay on demand the difference between the price bid and the price for which such Contract shall be subsequently awarded, including the cost of any required reletting and less the amount of such deposit. No plea of mistake in such accepted bid shall be available to the bidder for the recovery of the deposit or as a defense to any action based upon such accepted bid. Further, should the bidder's failure to comply with this Section cause any funding agency, body or group (Federal, State, City, Public, Private, etc.) to terminate, cancel or reduce the funding on this project, the bidder in such event shall be liable also to the City for the amount of actual funding withdrawn by such agency on this project, less the amount of the forfeited deposit.

28. Bidder Responsibilities and Qualifications

(A) Bidders must include with their bids all information necessary for a determination of bidder responsibility, as set forth in the Specifications.

(B) The Agency may require any bidder or prospective bidder to furnish all books of account, records, vouchers, statements or other information concerning the bidder's financial status for examination as may be required by the Agency to ascertain the bidder's responsibility and capability to perform the Contract. If required, a bidder must also submit a sworn statement setting forth such information as the Agency may require concerning present and proposed plant and equipment, the personnel and qualifications of his working organizations, prior experience and performance record.

(C) Oral Examination on Qualifications: In addition thereto, and when directed by the Agency, the bidder, or a responsible officer, agent or employee of the bidder, must submit to an oral examination to be conducted by the Agency in relation to his proposed tentative plan and schedule of

operations, and such other matters as the Agency may deem necessary in order to determine the bidder's ability and responsibility to perform the work in accordance with the Contract. Each person so examined must sign and verify a stenographic transcript of such examination noting thereon such corrections as such person may desire to make.

(D) If the bidder fails or refuses to supply any of the documents or information set forth in paragraph (B) hereof or fails to comply with any of the requirements thereof, the Agency may reject the bid.

29. Employment Report

In accordance with Executive Order No. 50 (1980) as modified by Executive Order 108 (1986), the filing of a completed Employment Report (ER) is a requirement of doing business with the City of New York for construction contractors with contracts of \$1,000,000 or more and subcontractors with construction subcontracts of \$750,000 or more. The required forms and information are included in the Bid Booklet.

30. Labor Law Requirements

(A) General: The successful bidder will be required to comply strictly with all Federal, State and local labor laws and regulations.

(B) New York State Labor Law: This Contract is subject to New York State Labor Law Section 220, which requires that construction workers on the site be paid prevailing wages and supplements. The Contractor is reminded that all wage provisions of this Contract will be enforced strictly and failure to comply will be considered when evaluating performance. Noncompliance may result in the contractor being debarred by the City from future contracts. Complaints filed with the Comptroller may result in decisions which may debar a contractor from bidding contracts with any state governmental entity and other political subdivisions.

(C) Records: The Contractor is expected to submit accurate payroll reports and other required documents and verify attendance and job classifications being utilized in compliance with the law, Contract provisions and agency procedures.

31. Insurance

(A) Bidders are advised that the insurance requirements contained herein are regarded as material terms of the Contract. As required by Article 22 of the Contract, the contractor must effect and maintain with companies licensed and authorized to do business in the State of New York, the types of insurance set forth therein, when required by and in the amounts set forth in Schedule A of the General Conditions. Such required insurance must be provided from the date the contractor is ordered to commence work and up to the date of final acceptance of all required work.

(B) The contractor must, within ten days of receipt of the notice of award, submit the following insurance documentation: (a) original certificate of insurance for general liability in the amount required by Schedule A of the General Conditions, and (b) original certificates of insurance or other proof of coverage for workers' compensation and disability benefits, as required by Section 57 of the New York State Workers' Compensation Law and Section 220 of the Disability Benefits Law.

32. Lump Sum Contracts

(A) Comparison of Bids: Bids on Lump Sum Contracts will be compared on the basis of the lump sum price bid, adjusted for alternate prices bid, if any.

(B) Lump Sum Bids for "General Construction Work" which include excavation shall include all necessary excavation work defined in the Specifications as being included in the lump sum bid. The bidder shall also bid a unit price for the additional cost of excavating material which is defined in the Specifications as excavation for which additional payment will be made. The total estimated additional cost of removing such material will be taken as the quantity set forth in the Engineer's Estimate multiplied by the unit price bid. This total estimated cost of additional excavation shall be added to the lump sum bid for the General Construction Work for the purpose of comparing bids to determine the low bidder.

(C) Variations from Engineer's Estimate: The Engineer's Estimate of the quantity of excavation for which additional payment will be made is approximate only and is given solely to be used as a uniform basis for the comparison of bids and such estimate is not to be considered as part of this contract. The quantities actually required to complete the contract work may be more or less than the quantities in the Engineer's Estimate and, if so, no action for damages or for loss of profits shall accrue to the contractor by reason thereof.

33. Unit Price Contracts

(A) Comparison of Bids: Bids on Unit Price Contracts will be compared on the basis of a total estimated price, arrived at by taking the sum of the estimated quantities of such items, in accordance with the Engineer's Estimate of Quantities set forth in the Bid Schedule, multiplied by the corresponding unit prices, and including any lump sum bids on individual items.

(B) Variations from Engineer's Estimate: Bidders are warned that the Engineer's Estimate of Quantities on the various items of work and materials is approximate only, given solely to be used as a uniform basis for the comparison of bids, and is not be considered part of this contract. The quantities actually required to complete the contract work may be less or more than so estimated, and if so, no action for damages or for loss of profits shall accrue to the contractor by reason thereof.

(C) Overruns: The terms and conditions applicable to overruns of unit price items are set forth in Article 26 of the Contract.

34. Excise Tax

Bidders are referred to the Specifications for information on Federal Excise Tax exemptions.

35. Licenses and Permits

The successful bidder will be required to obtain all necessary licenses and permits necessary to perform the work.

36. Multiple Prime Contractors

If more than one prime contractor will be involved on this project, all contractors are required to examine the Invitation for Bid packages for all other parts of the project.

37. Locally Based Enterprise Requirements (LBE)

This Contract is subject to the requirements of Administrative Code, Section 6-108.1, and the regulations promulgated thereunder. No construction contract will be awarded unless and until these requirements have been complied with in their entirety. The bidder is advised of the provisions set forth below, as well as the provisions with respect to the Locally Based Enterprise Program contained in Article 67 of the Contract. The contractor is advised that:

(A) If any portion of the Contract is subcontracted, not less than ten percent of the total dollar amount of the contract shall be awarded to locally based enterprises ("LBEs"); except, where less than ten percent of the total dollar amount of the Contract is subcontracted, such lesser percentage shall be so awarded.

(B) No contractor shall require performance and payment bonds from LBE subcontractors.

(C) No Contract shall be awarded unless the contractor first identifies in its bid:

- (1) the percentage, dollar amount and type of work to be subcontracted; and
- (2) the percentage, dollar amount and type of work to be subcontracted to LBEs.

(D) Within ten calendar days after notification of low bid, the apparent low bidder shall submit an "LBE Participation Schedule" to the contracting agency. If such schedule does not identify sufficient LBE subcontractors to meet the requirements of Administrative Code Section 6-108.1, the apparent low bidder shall submit documentation of its good faith efforts to meet such requirements.

(1) The "LBE Participation Schedule" shall include:

- (a) the name and address of each LBE that will be given a subcontract,
- (b) the percentage, dollar amount and type of work to be subcontracted to the LBE, and
- (c) the dates when the LBE subcontract work will commence and end.

(2) The following documents shall be attached to the "LBE Participation Schedule":

- (a) verification letters from each subcontractor listed in the "LBE Participation Schedule" stating that the LBE will enter into a formal agreement for work,
- (b) certification documents of any proposed LBE subcontractor which is not on the LBE certified list, and
- (c) copies of the certification letter of any proposed subcontractor which is an LBE.

(3) Documentation of good faith efforts to achieve the required LBE percentage shall include as appropriate but not limited to the following:

- (a) attendance at prebid meetings, when scheduled by the agency, to advise bidders of contract requirements;

- (b) advertisement where appropriate in general circulation media, trade association publications and small business media of the specific subcontracts that would be at least equal to the percentage goal for LBE utilization specified by the contractor;
- (c) written notification to association of small, minority and women contractors soliciting specific subcontractors;
- (d) written notification by certified mail to LBE firms that their interest in the contract is solicited for specific work items and their estimated values;
- (e) demonstration of efforts made to select portions of the work for performance by LBE firms in order to increase the likelihood of achieving the stated goal;
- (f) documented efforts to negotiate with LBE firms for specific subcontracts, including at a minimum:
 - (i) The names, address and telephone numbers of LBE firms that are contacted;
 - (ii) A description of the information provided to LBE firms regarding the plans and specifications for portions of the work to be performed;
 - (iii) Documentation showing that no reasonable price can be obtained from LBE firms;
 - (iv) A statement of why agreements with LBE firms were not reached;
- (g) a statement of the reason for rejecting any LBE firm which the contractor deemed to be unqualified; and
- (h) documentation of efforts made to assist the LBE firms contacted that needed assistance in obtaining required insurance.

(E) Unless otherwise waived by the Commissioner with the approval of the Office of Economic and Financial Opportunity, failure of a proposed contractor to provide the information required by paragraphs (C) and (D) above may render the bid non-responsive and the Contract may not be awarded to the bidder. If the contractor states that it will subcontract a specific portion of the work, but can demonstrate despite good faith efforts it cannot achieve its required LBE percentage for subcontracted work until after award of Contract, the Contract may be awarded, subject to a letter of compliance from the contractor stating that it will comply with Administrative Code Section 6-108.1 and subject to approval by the Commissioner. If the contractor has not met its required LBE percentage prior to award, the contractor shall demonstrate that a good faith effort has been made subsequent to award to obtain LBEs on each subcontract until it meets the required percentage.

(F) When a bidder indicates prior to award that no work will be subcontracted, no work may be subcontracted without the prior written approval of the Commissioner, which shall be granted only if the contractor in good faith seeks LBE subcontractors at least six weeks prior to the start of work.

(G) The contractor may not substitute or change any LBE which was identified prior to award of the contract without the written permission of the Commissioner. The contractor shall make a written application to the Commissioner for permission to make such substitution or change, explaining why the contractor needs to change its LBE subcontractor and how the contractor will meet its LBE subcontracting requirement. Copies of such application must be served on the originally identified LBE by certified mail return receipt requested, as well as the proposed substitute LBE. The Commissioner shall determine whether or not to grant the contractor's request for substitution.

38. Bid Submission Requirements

The following forms, all of which are contained in the Bid Booklet, are to be completed and submitted with the bid:

- (1) Bid Schedule and Bid Form, including Affirmation
- (2) Bid Security (if required, see Attachment 1 on Page A-1)
- (3) M/WBE Subcontractor Utilization Plan (if participation goals have been established)

**FAILURE TO SUBMIT ITEMS (1), (2) AND (3)
WILL RESULT IN THE DISQUALIFICATION OF THE BID.**

- (4) Safety Questionnaire
- (5) Construction Employment Report (if bid is \$1,000,000 or more)
- (6) Contract Certificate (if bid is less than \$1,000,000)
- (7) Confirmation of Vendex Compliance
- (8) Special Experience Requirements (if applicable to this contract)
- (9) Apprenticeship Program Questionnaire (if applicable)

**FAILURE TO SUBMIT ITEMS (4) THROUGH (9)
MAY RESULT IN THE DISQUALIFICATION OF THE BID.**

39. Comptroller's Certificate

This Contract shall not be binding or of any force unless it is registered by the Comptroller in accordance with Section 328 of the City Charter and the Procurement Policy Board Rules. This Contract shall continue in force only after annual appropriation of funds by the City of New York and certification as hereinabove set forth.

40. Procurement Policy Board Rules

This Invitation For Bids is subject to the Rules of the Procurement Policy Board of the City of New York. In the event of a conflict between said Rules and a provision of this Invitation For Bids, the Rules shall take precedence.

41. DDC Safety Requirements

The DDC Safety Requirements apply to the work to be performed pursuant to the Contract. The DDC Safety Requirements are set forth on the following pages.

CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
SAFETY REQUIREMENTS

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.....

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) including, but not limited to “Respiratory Protection” (29 CFR 1910.134), “Permit-Required Confined Spaces” (29 CFR 1910.146), and “Hazard Communication” (29 CFR 1910.1200);
- ❑ 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 753
- ❑ NYC Local Law No. 113 (2005) Noise Control Code

In addition, all regulations promulgated by the NYC Department of Transportation, including requirements for Maintenance and Protection of Traffic (MPT), are applicable when contained in contract specifications. While MPT is a significant component of work in our Infrastructure Division, it does not supersede or exempt Contractors from complying with other applicable health and safety standards (for example, excavating and trenching standards, operation of heavy equipment and compliance with City environmental and noise regulations).

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 hazard, 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 QACS 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.

City of New York Department of Design and Construction: Safety Requirements
Technical Support Division – Bureau of Quality Assurance and Construction Safety

Construction Safety Unit: A part of QACS within the Division of Technical Support that assesses contractor safety on DDC jobsites and advises responsible parties of needed corrective actions.

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”).

Director - Quality Assurance and Construction Safety (QACS): Responsible for the operations of the QACS Construction Safety Unit and the DDC Site Safety management programs.

Job Hazard Assessment (JHA): A process of identifying site-specific hazards that may be present during construction and establishing the means and methods to reduce or eliminate those hazards.

Jobsite Safety Coordinator: A person designated by the Contractor to be onsite during all activities. This individual shall have received, at a minimum, the OSHA 10-hour construction safety program. Other examples of acceptable training are the 30-hour OSHA Safety and Health Standards for the Construction Industry training program (OSHA 510) or a degree/certificate in a safety and health from a college-level curriculum. This person does not necessarily have to be dedicated full-time to site safety, but must have sufficient experience and authority to undertake corrective action and must qualify to be a competent person. For certain projects, as defined in NYC Construction Codes – Title 28, this person may be required to have a Site Safety Manager’s License issued by the NYC DOB.

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.

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 CM, 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 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 precautions 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.

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. Resident Engineer / Construction Project Manager / Construction 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 meeting.
- 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 Protocol.
- Gathers facts related to all accidents and prepares DDC Accident Reports.
- Notifies the Construction Safety Unit of outside regulatory agency inspections and forwards a copy of the inspection report within three days of its receipt.
- Monitors the conditions at the site for conformance with the 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 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 emergency condition and directs the contractor to provide such labor, materials, equipment and supervision to abate such conditions.
- Reports gross safety violations to the Construction Safety Unit immediately.

B. Contractors

- Complete a Safety Questionnaire and submit with its bid or as part of a pre-qualification package.
- Provide a Written Job Hazard Assessment (JHA) that identifies expected safety issues of the work to be performed. JHA shall be included with the Site Safety Plan submitted by the contractor.
- Submit a Site Safety Plan and Safety Program within 15 days of issuance of the Notice to Proceed, 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.
- Ensure that all employees are aware of the hazards associated with the project through formal and informal training and/or other communications. Conduct and document weekly safety meetings for the duration of the project. Documentation to be provided to the RE/CPM/CM on a monthly basis.
- Name a Construction Superintendent, if required.
- Name a Job Site Safety Coordinator. The Contractor will be required to identify the Job Site Safety Coordinator 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.
- As part of the Site Safety Plan, prepare a site specific MPT (if not otherwise provided in the contract documents) and comply with all of its provisions.

City of New York Department of Design and Construction: Safety Requirements
Technical Support Division – Bureau of Quality Assurance and Construction Safety

- 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 controls that will be used to protect workers, the general public and property. The Job Site Safety Coordinator will conduct this training prior to mobilization and provide documentation to the RE/CPM/CM.
- 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 conditions or hazards to the DDC RE/CPM/CM as soon as practical, but no more than 24 hours after discovery, and take action to remove or abate such conditions.
- Report any accident involving injuries to workers or the general public, as well as property damage, to the DDC RE/CPM/CM within two (2) hours.
- Notify the DDC RE/CPM/CM within two (2) hours of the start of an inspection by any regulatory agency personnel, including OSHA.
- Maintain all records pertaining to all required compliance documents and accident and injury reports.
- Respond to 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 and environmental 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 their workers' compensation experience modification rating and OSHA Incidence 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 update within 30 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 years; and
- Criteria 4: A fatality (worker or member of public) experienced on or near Contractor's worksite within the last three (3) years; and
- Criteria 5: An unacceptable rating by QACS based on past performance on DDC projects; and
- Criteria 6: Contractor has in place an acceptable corporate safety program and its employees shall have completed all documented relative safety training; and
- Criteria 7: Contractor shall provide OSHA Injury Records (currently OSHA 300 Log) 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 detail concerning the Contractor's safety experience. DDC may request the Contractor to provide copies of, among other things, OSHA records, OSHA and DOB citations, EPA citations and written Safety Programs.

VI. SAFETY PROGRAM AND SITE SAFETY PLAN

Within fifteen (15) days of issuance of the Notice to Proceed, 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 standard, and the Site Safety Plan shall identify hazards associated with the project, and include specific safety precautions 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.

The Site Safety Plan shall apply to all Contractor and subcontractor operations, and shall have at a minimum, the following elements. Each element shall be described in a separate section in the written document. It may be necessary to modify the basic format for certain unique or high-risk projects (such as tunnels or high-rise construction). The basic elements are as follows:

1. **Responsibility and Organization:** Identify the person or persons with authority and responsibility for implementing the Site Safety Plan. Provide an organization chart and define levels of authority and responsibility. Identify the Competent Person, the Construction Superintendent (if required), the Job Safety Coordinator and the Qualified Person required for this project.
2. **Communication:** Establish a system for communicating with employees and subcontractors on matters relating to worker and public safety and health and environmental protection, including provisions designed to encourage employees to inform the employer of hazards at the worksite without fear of reprisal. An emergency response notification protocol is to be established that also includes after hours contact numbers. The plan must also include provisions for weekly safety meetings held by the Job Site Safety Coordinator.
3. **Job Hazard Assessment:** A written document submitted by the contractor, used to identify expected job hazards and public safety risks and state the specific means and methods to reduce, control or eliminate those hazards. This part of the Site Safety Plan must also include how on-going evaluations of those risks and hazards will be carried out, including plans for periodic inspections to identify unsafe conditions, work practices and public safety hazards.
4. **Accident/Exposure Investigation:** Establish a procedure to investigate and report occupational and public injury or illness, property damage, vehicle accidents or other mishaps.
5. **Hazard Correction:** Establish means, methods and/or procedures for correcting unsafe or unhealthy conditions that might be exposing both the public and workers to hazards. Corrective actions must be taken immediately when observed or discovered. Should an imminent hazard exist which cannot be immediately abated without endangering employees, the public and/or property, remove or restrict all exposed persons from the area except those necessary to correct the existing condition. Employees necessary to correct the hazardous condition shall be provided the necessary safeguards. When corrective actions cannot be taken immediately, temporary measures should be taken until such time permanent measures are taken to eliminate the potential risks or hazards.
6. **Training:** Describe site-specific hazard training programs. In addition to the required safety orientation, additional site specific training, in the form of required weekly safety meetings, will be required. Contractors must also initiate training when: a) new employees are hired; b) employees are given new job assignments for which training has not been previously received; c) new substances, processes, procedures or equipment are introduced that might represent a new public or worker hazard; d) the employee is made aware of a new or previously unrecognized hazard; e) new supervisors are assigned to familiarize themselves with the safety and health hazards to which employees under their immediate direction and control may be exposed; and f) after a jobsite incident or accident has occurred.

City of New York Department of Design and Construction: Safety Requirements
Technical Support Division – Bureau of Quality Assurance and Construction Safety

7. Recordkeeping: Establish procedures to maintain records of scheduled and periodic inspections, weekly safety meetings, and training records. Updated records shall be maintained at the jobsite, accessible to the Construction Safety Auditors and/or Quality Assurance Auditors/RE/CPM, and retained in accordance with DDC policy.

The most critical component of the Site Safety Plan is the Job Hazard Assessment section. This section must address specific hazards that are anticipated throughout the project. Each Site Safety Plan must address, at a minimum:

- Public and pedestrian safety
- Fall protection
- Electrical hazards
- Scaffolding
- Fire protection
- Emergency notification & response
- Housekeeping / debris removal
- Dust control
- Maintenance and protection of traffic
- Trenching and excavating
- Heavy equipment operations
- Material / equipment storage
- Environmental contamination
- Sheeting and shoring
- Alcohol and Drug Abuse Policy

The following additional hazards must be addressed, if applicable, based on the contract safety specifications and/or the results of the JHA (the list is not all-inclusive):

- Basic Personal Protective Equipment
- Compressed Air
- Compressed Gas Cylinders
- Cranes, Derricks and Hoists
- Demolition
- Electrical safety
- Excavations and Trenching
- Fall Protection – Floor openings/Stairways
- Fall Protection – Guardrails Toe boards etc
- Fall Protection – Leading Edge
- Fall Protection – Personal Fall Protection Devices
- Fire Protection and Fire Prevention
- Hazard Communication (RIGHT TO KNOW)
- Hazardous Energy & Lock Out / Tag Out
- Housekeeping/ Sanitation
- Maintenance and Protection of Traffic (MPT)
- Man Lifts /Aerial Lifts
- Marine Operations
- Motor Vehicle Safety
- Overhead Power lines
- Permit Required Confined Space
- Portable Ladders
- Powered Actuated Tools
- Powered Material Handling Equipment
- Scaffolds – Mobile
- Scaffolds – Stationary
- Scaffolds – Suspended
- Slings
- Steel Erection

City of New York Department of Design and Construction: Safety Requirements
Technical Support Division – Bureau of Quality Assurance and Construction Safety

- Welding and Cutting (Hot Work)
- Airborne Contaminants – Particulates – General
- Asbestos
- Blood borne Pathogens
- Hearing Protection
- Lead in Construction
- Mercury in Construction
- PCB's
- Respiratory Protection
- Silica
- Thermal Stress
- West Nile Virus
- Rodents and Vermin
- Noise Mitigation Plan

Certain DDC programs, such as Job Order Contracting System (JOCS), may not necessarily require Site Safety Plans. The JOCS contractor will be required to submit a Safety Program. In addition, certain DDC Operating Units may establish program or client-specific safety requirements. The contractor's Site Safety Plan must address such program or client specific safety requirements.

VII. KICK-OFF MEETINGS/PRE-CONSTRUCTION AND SAFETY REVIEW

As part of the construction kick-off meeting, a Site Safety Plan review will be part of the agenda. A QACS representative will participate in this meeting with the contractor 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 DDC personnel.

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 Superintendents or 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 forward them to the Construction Safety Unit on a weekly basis. Any critical deficiencies shall be immediately reported to QACS 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- QACS, or designee will meet with the Contractor's safety representative, the DDC project manager, the RE/CPM, or 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.

City of New York Department of Design and Construction: Safety Requirements
Technical Support Division – Bureau of Quality Assurance and Construction Safety

- 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 inform the Construction Safety Unit and ACCO Insurance and Risk Management Unit of all medical injuries or illnesses that require doctors' treatment resulting from an on-the-job incident within 24 hours of the occurrence. The Construction Safety Unit shall also be immediately informed of all fatalities, catastrophic accidents with more than one employee hospitalized, any injuries to members of the general public and major equipment damage (e.g., property damage, equipment rollovers, loads dropped from crane). QACS shall maintain a record of all contractor injuries and illnesses during the project and provide regular reports to the Agency.
- F. The Construction Safety Unit shall be immediately notified at the start of any NYS-DOL/ NYC-COSH/ OSHA/ EPA inspections. The Director of Quality Assurance & Construction Safety shall maintain a log of all contractor OSHA/EPA inspections and citations during the project.

IX. SAFETY PERFORMANCE EVALUATION

The contractor's safety record, including all DDC 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 will 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.

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CITY OF NEW YORK
STANDARD CONSTRUCTION CONTRACT

DECEMBER 2013

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CITY OF NEW YORK
STANDARD CONSTRUCTION CONTRACT

TABLE OF CONTENTS

CHAPTER I
THE CONTRACT AND DEFINITIONS

ARTICLE 1.	THE CONTRACT	1
ARTICLE 2.	DEFINITIONS	1

CHAPTER II
THE WORK AND ITS PERFORMANCE

ARTICLE 3.	CHARACTER OF THE WORK	4
ARTICLE 4.	MEANS AND METHODS OF CONSTRUCTION	4
ARTICLE 5.	COMPLIANCE WITH LAWS	4
ARTICLE 6.	INSPECTION	9
ARTICLE 7.	PROTECTION OF WORK AND OF PERSONS AND PROPERTY; NOTICES AND INDEMNIFICATION	10

CHAPTER III
TIME PROVISIONS

ARTICLE 8.	COMMENCEMENT AND PROTECTION OF THE WORK	11
ARTICLE 9.	PROGRESS SCHEDULES	11
ARTICLE 10.	REQUESTS FOR INFORMATION OR APPROVAL	12
ARTICLE 11.	NOTICE OF CONDITIONS CAUSING DELAY AND DOCUMENTATION OF DAMAGES CAUSED BY DELAY	12
ARTICLE 12.	COORDINATION WITH OTHER CONTRACTORS	13
ARTICLE 13.	EXTENSION OF TIME FOR PERFORMANCE	14
ARTICLE 14.	COMPLETION AND FINAL ACCEPTANCE OF THE WORK	16
ARTICLE 15.	LIQUIDATED DAMAGES	17
ARTICLE 16.	OCCUPATION OR USE PRIOR TO COMPLETION	18

CHAPTER IV
SUBCONTRACTS AND ASSIGNMENTS

ARTICLE 17.	SUBCONTRACTS	18
ARTICLE 18.	ASSIGNMENTS	20

CITY OF NEW YORK
STANDARD CONSTRUCTION CONTRACT

TABLE OF CONTENTS

CHAPTER V

CONTRACTOR'S SECURITY AND GUARANTY

ARTICLE 19.	SECURITY DEPOSIT	20
ARTICLE 20.	PAYMENT GUARANTEE	20
ARTICLE 21.	RETAINED PERCENTAGE	22
ARTICLE 22.	INSURANCE	23
ARTICLE 23.	MONEY RETAINED AGAINST CLAIMS	28
ARTICLE 24.	MAINTENANCE AND GUARANTY	28

CHAPTER VI

CHANGES, EXTRA WORK AND DOCUMENTATION OF CLAIM

ARTICLE 25.	CHANGES	29
ARTICLE 26.	METHODS OF PAYMENT FOR OVERRUNS AND EXTRA WORK	30
ARTICLE 27.	RESOLUTION OF DISPUTES	32
ARTICLE 28.	RECORD KEEPING FOR EXTRA OR DISPUTED WORK	36
ARTICLE 29.	OMITTED WORK	36
ARTICLE 30.	NOTICE AND DOCUMENTATION OF COSTS AND DAMAGES; PRODUCTION OF FINANCIAL RECORDS	37

CHAPTER VII

**POWERS OF THE RESIDENT ENGINEER, THE ENGINEER
OR ARCHITECT AND THE COMMISSIONER**

ARTICLE 31.	THE RESIDENT ENGINEER	38
ARTICLE 32.	THE ENGINEER OR ARCHITECT OR PROJECT MANAGER	38
ARTICLE 33.	THE COMMISSIONER	39
ARTICLE 34.	NO ESTOPPEL	39

CHAPTER VIII

LABOR PROVISIONS

ARTICLE 35.	EMPLOYEES	39
ARTICLE 36.	NO DISCRIMINATION	40
ARTICLE 37.	LABOR LAW REQUIREMENTS	42
ARTICLE 38.	PAYROLL REPORTS	47
ARTICLE 39.	DUST HAZARDS	47

CITY OF NEW YORK
STANDARD CONSTRUCTION CONTRACT

TABLE OF CONTENTS

CHAPTER IX

PARTIAL AND FINAL PAYMENTS

ARTICLE 40.	CONTRACT PRICE	47
ARTICLE 41.	BID BREAKDOWN ON LUMP SUM	47
ARTICLE 42.	PARTIAL PAYMENTS	48
ARTICLE 43.	PROMPT PAYMENT	48
ARTICLE 44.	SUBSTANTIAL COMPLETION PAYMENT	49
ARTICLE 45.	FINAL PAYMENT	50
ARTICLE 46.	ACCEPTANCE OF FINAL PAYMENT	51
ARTICLE 47.	APPROVAL BY PUBLIC DESIGN COMMISSION	51

CHAPTER X

CONTRACTOR'S DEFAULT

ARTICLE 48.	COMMISSIONER'S RIGHT TO DECLARE CONTRACTOR IN DEFAULT	52
ARTICLE 49.	EXERCISE OF THE RIGHT TO DECLARE DEFAULT	53
ARTICLE 50.	QUITTING THE SITE	53
ARTICLE 51.	COMPLETION OF THE WORK	53
ARTICLE 52.	PARTIAL DEFAULT	53
ARTICLE 53.	PERFORMANCE OF UNCOMPLETED WORK	54
ARTICLE 54.	OTHER REMEDIES	54

CHAPTER XI

MISCELLANEOUS PROVISIONS

ARTICLE 55.	CONTRACTOR'S WARRANTIES	54
ARTICLE 56.	CLAIMS AND ACTIONS THEREON	55
ARTICLE 57.	INFRINGEMENT	55
ARTICLE 58.	NO CLAIM AGAINST OFFICERS, AGENTS OR EMPLOYEES	55
ARTICLE 59.	SERVICES OF NOTICES	55
ARTICLE 60.	UNLAWFUL PROVISIONS DEEMED STRICKEN FROM CONTRACT	56
ARTICLE 61.	ALL LEGAL PROVISIONS DEEMED INCLUDED	56
ARTICLE 62.	TAX EXEMPTION	56
ARTICLE 63.	INVESTIGATION(S) CLAUSE	57
ARTICLE 64.	TERMINATION BY THE CITY	59
ARTICLE 65.	CHOICE OF LAW, CONSENT TO JURISDICTION AND VENUE	62

CITY OF NEW YORK
STANDARD CONSTRUCTION CONTRACT

TABLE OF CONTENTS

CHAPTER XI (CONT'D)

MISCELLANEOUS PROVISIONS

ARTICLE 66.	PARTICIPATION IN AN INTERNATIONAL BOYCOTT	74
ARTICLE 67.	LOCALLY BASED ENTERPRISE PROGRAM	74
ARTICLE 68.	ANTITRUST	75
ARTICLE 69.	MACBRIDE PRINCIPLES PROVISIONS	75
ARTICLE 70	ELECTRONIC FILING/NYC DEVELOPMENT HUB	77
ARTICLE 71.	PROHIBITION OF TROPICAL HARDWOODS	77
ARTICLE 72.	CONFLICTS OF INTEREST	78
ARTICLE 73.	MERGER CLAUSE	78
ARTICLE 74.	STATEMENT OF WORK	78
ARTICLE 75.	COMPENSATION TO BE PAID TO CONTRACTOR	78
ARTICLE 76:	ELECTRONIC FUNDS TRANSFER	78
ARTICLE 77:	RECORDS RETENTION	79
ARTICLE 78:	PARTICIPATION BY MINORITY-OWNED AND WOMEN-OWNED BUSINESS ENTERPRISES IN CITY PROCUREMENT	79

SIGNATURES	87
ACKNOWLEDGMENT BY CORPORATION	88
ACKNOWLEDGMENT BY PARTNERSHIP	88
ACKNOWLEDGMENT BY INDIVIDUAL	88
ACKNOWLEDGMENT BY COMMISSIONER AUTHORITY	88
COMPTROLLER'S CERTIFICATE	89
MAYOR'S CERTIFICATE	90
PERFORMANCE BOND #1	91
PERFORMANCE BOND #2	92
PAYMENT BOND	96
	100

WITNESSETH:

The parties, in consideration of the mutual agreements contained herein, agree as follows:

**CHAPTER I
THE CONTRACT AND DEFINITIONS**

ARTICLE 1. THE CONTRACT

1.1 Except for titles, subtitles, headings, running headlines, tables of contents and indices (all of which are printed herein merely for convenience), the following, except for such portions thereof as may be specifically excluded, shall be deemed to be part of this Contract:

1.1.1 All provisions required by law to be inserted in this Contract, whether actually inserted or not;

1.1.2 The Contract Drawings and Specifications;

1.1.3 The General Conditions and Special Conditions, if any;

1.1.4 The Contract;

1.1.5 The Information for Bidders; Request for Proposals; Notice of Solicitation and Proposal For Bids; Bid or Proposal, and, if used, the Bid Booklet;

1.1.6 All Addenda issued prior to the receipt of the bids; the Notice of Award; Performance and Payment Bonds, if required; and the Notice to Proceed or the Order to Work.

1.2 Should any conflict occur in or between the Drawings and Specifications, the Contractor shall be deemed to have estimated the most expensive way of doing the Work, unless the Contractor shall have asked for and obtained a decision in writing from the Commissioner of the Agency that is entering into this Contract, before the submission of its bid, as to what shall govern.

ARTICLE 2. DEFINITIONS

2.1 The following words and expressions, or pronouns used in their stead, shall, wherever they appear in this Contract, be construed as follows, unless a different meaning is clear from the context:

2.1.1 "**Addendum**" or "**Addenda**" shall mean the additional Contract provisions and/or technical clarifications issued in writing by the Commissioner prior to the receipt of bids.

2.1.2 "**Agency**" shall mean a city, county, borough or other office, position, department, division, bureau, board or commission, or a corporation, institution or agency of government, the expenses of which are paid in whole or in part from the City treasury.

2.1.3 "**Agency Chief Contracting Officer**" (**ACCO**) shall mean a person delegated authority by the Commissioner to organize and supervise the procurement activity of subordinate Agency staff in conjunction with the CCPO, or his/her duly authorized representative.

2.1.4 **"Allowance"** shall mean a sum of money which the Agency may include in the total amount of the Contract for such specific contingencies as the Agency believes may be necessary to complete the Work, *e.g.*, lead or asbestos remediation, and for which the Contractor will be paid on the basis of stipulated unit prices or a formula set forth in the Contract or negotiated between the parties provided, however, that if the Contractor is not directed to use the Allowance, the Contractor shall have no right to such money and it shall be deducted from the total amount of the Contract.

2.1.5 **"City"** shall mean the City of New York.

2.1.6 **"City Chief Procurement Officer" (CCPO)** shall mean a person delegated authority by the Mayor to coordinate and oversee the procurement activity of Mayoral agency staff, including the ACCO and any offices which have oversight responsibility for the procurement of construction, or his/her duly authorized representative.

2.1.7 **"Commissioner"** shall mean the head of the Agency that has entered into this Contract, or his/her duly authorized representative.

2.1.8 **"Comptroller"** shall mean the Comptroller of the City of New York.

2.1.9 **"Contract"** or **"Contract Documents"** shall mean each of the various parts of the contract referred to in Article 1 hereof, both as a whole and severally.

2.1.10 **"Contract Drawings"** shall mean only those drawings specifically entitled as such and listed in the Specifications or in any Addendum, or any drawings furnished by the Commissioner, pertaining or supplemental thereto.

2.1.11 **"Contract Work"** shall mean everything required to be furnished and done by the Contractor by any one or more of the parts of the Contract referred to in Article 1, except Extra Work as hereinafter defined.

2.1.12 **"Contractor"** shall mean the entity which executed this Contract, whether a corporation, firm, partnership, joint venture, individual, or any combination thereof, and its, their, his/her successors, personal representatives, executors, administrators, and assigns, and any person, firm, partnership, joint venture, individual, or corporation which shall at any time be substituted in the place of the Contractor under this Contract.

2.1.13 **"Days"** shall mean calendar days, except where otherwise specified.

2.1.14 **"Engineer"** or **"Architect"** or **"Project Manager"** shall mean the person so designated in writing by the Commissioner in the Notice to Proceed or the Order to Work to act as such in relation to this Contract, including a private Architect or Engineer or Project Manager, as the case may be. Subject to written approval by the Commissioner, the Engineer, Architect or Project Manager may designate an authorized representative.

2.1.15 **"Engineering Audit Officer" (EAO)** shall mean the person so designated by the Commissioner to perform responsible auditing functions hereunder.

2.1.16 **"Extra Work"** shall mean Work other than that required by the Contract at the time of award which is authorized by the Commissioner pursuant to Chapter VI of this Contract.

2.1.17 **"Federal-Aid Contract"** shall mean a contract in which the United States (federal) Government provides financial funding as so designated in the Information for Bidders.

2.1.18 **"Final Acceptance"** shall mean final written acceptance of all the Work by the Commissioner, a copy of which shall be sent to the Contractor.

2.1.19 **"Final Approved Punch List"** shall mean a list, approved pursuant to Article 14.2.2, specifying those items of Work to be completed by the Contractor after Substantial Completion and dates for the completion of each item of Work.

2.1.20 **"Law"** or **"Laws"** shall mean the Constitution of the State of New York, the New York City Charter, the New York City Administrative Code, a statute of the United States or of the State of New York, a local law of the City of New York, any ordinance, rule or regulation having the force of law, or common law.

2.1.21 **"Materialman"** shall mean any corporation, firm, partnership, joint venture, or individual, other than employees of the Contractor, who or which contracts with the Contractor or any Subcontractor, to fabricate or deliver, or who actually fabricates or delivers, plant, materials or equipment to be incorporated in the Work.

2.1.22 **"Means and Methods of Construction"** shall mean the labor, materials, temporary structures, tools, plant, and construction equipment, and the manner and time of their use, necessary to accomplish the result intended by this Contract.

2.1.23 **"Notice to Proceed"** or **"Order to Work"** shall mean the written notice issued by the Commissioner specifying the time for commencement of the Work and the Engineer, Architect or Project Manager.

2.1.24 **"Other Contractor(s)"** shall mean any contractor (other than the entity which executed this Contract or its Subcontractors) who or which has a contract with the City for work on or adjacent to the building or Site of the Work.

2.1.25 **"Payroll Taxes"** shall mean State Unemployment Insurance (SUI), Federal Unemployment Insurance (FUI), and payments pursuant to the Federal Insurance Contributions Act (FICA).

2.1.26 **"Project"** shall mean the public improvement to which this Contract relates.

2.1.27 **"Procurement Policy Board"** (PPB) shall mean the Agency of the City of New York whose function is to establish comprehensive and consistent procurement policies and rules which shall have broad application throughout the City.

2.1.28 **"Required Quantity"** in a unit price Contract shall mean the actual quantity of any item of Work or materials which is required to be performed or furnished in order to comply with the Contract.

2.1.29 **"Resident Engineer"** shall mean the representative of the Commissioner duly designated by the Commissioner to be his/her representative at the site of the Work.

2.1.30 **"Site"** shall mean the area upon or in which the Contractor's operations are carried on, and such other areas adjacent thereto as may be designated as such by the Engineer.

2.1.31 **"Small Tools"** shall mean items that are ordinarily required for a worker's job function, including but not limited to, equipment that ordinarily has no licensing, insurance

or substantive storage costs associated with it; such as circular and chain saws, impact drills, threaders, benders, wrenches, socket tools, etc.

2.1.32 "**Specifications**" shall mean all of the directions, requirements, and standards of performance applying to the Work as hereinafter detailed and designated under the Specifications.

2.1.33 "**Subcontractor**" shall mean any person, firm or corporation, other than employees of the Contractor, who or which contracts with the Contractor or with its subcontractors to furnish, or actually furnishes labor, or labor and materials, or labor and equipment, or superintendence, supervision and/or management at the Site. Wherever the word Subcontractor appears, it shall also mean sub-Subcontractor.

2.1.34 "**Substantial Completion**" shall mean the written determination by the Engineer that the Work required under this Contract is substantially, but not entirely, complete and the approval of the **Final Approved Punch List**.

2.1.35 "**Work**" shall mean all services required to complete the Project in accordance with the Contract Documents, including without limitation, labor, material, superintendence, management, administration, equipment, and incidentals, and obtaining any and all permits, certifications and licenses as may be necessary and required to complete the Work, and shall include both Contract Work and Extra Work.

CHAPTER II THE WORK AND ITS PERFORMANCE

ARTICLE 3. CHARACTER OF THE WORK

3.1 Unless otherwise expressly provided in the **Contract Drawings, Specifications, and Addenda**, the **Work** shall be performed in accordance with the best modern practice, utilizing, unless otherwise specified in writing, new and unused materials of standard first grade quality and workmanship and design of the highest quality, to the satisfaction of the **Commissioner**.

ARTICLE 4. MEANS AND METHODS OF CONSTRUCTION

4.1 Unless otherwise expressly provided in the **Contract Drawings, Specifications, and Addenda**, the **Means and Methods of Construction** shall be such as the **Contractor** may choose; subject, however, to the **Engineer's** right to reject the **Means and Methods of Construction** proposed by the **Contractor** which in the opinion of the **Engineer**:

4.1.1 Will constitute or create a hazard to the **Work**, or to persons or property; or

4.1.2 Will not produce finished **Work** in accordance with the terms of the **Contract**; or

4.1.3 Will be detrimental to the overall progress of the **Project**.

4.2 The **Engineer's** approval of the **Contractor's Means and Methods of Construction**, or his/her failure to exercise his/her right to reject such means or methods, shall not relieve the **Contractor** of its obligation to complete the **Work** as provided in this **Contract**; nor shall the exercise of such right to reject create a cause of action for damages.

ARTICLE 5. COMPLIANCE WITH LAWS

5.1 The **Contractor** shall comply with all **Laws** applicable to this **Contract** and to the **Work** to be done hereunder.

5.2 Procurement Policy Board Rules: This **Contract** is subject to the Rules of the **PPB** ("**PPB Rules**") in effect at the time of the bid opening for this **Contract**. In the event of a conflict between the **PPB Rules** and a provision of this **Contract**, the **PPB Rules** shall take precedence.

5.3 Noise Control Code provisions.

5.3.1 In accordance with the provisions of Section 24-216(b) of the Administrative Code of the **City** ("**Administrative Code**"), Noise Abatement Contract Compliance, devices and activities which will be operated, conducted, constructed or manufactured pursuant to this **Contract** and which are subject to the provisions of the **City Noise Control Code** shall be operated, conducted, constructed, or manufactured without causing a violation of the **Administrative Code**. Such devices and activities shall incorporate advances in the art of noise control development for the kind and level of noise emitted or produced by such devices and activities, in accordance with regulations issued by the **Commissioner** of the **City Department of Environmental Protection**.

5.3.2 The **Contractor** agrees to comply with Section 24-219 of the **Administrative Code** and implementing rules codified at 15 Rules of the **City of New York** ("**RCNY**") Section 28-100 *et seq.* In accordance with such provisions, the **Contractor**, if the **Contractor** is the responsible party under such regulations, shall prepare and post a **Construction Noise Mitigation Plan** at each **Site**, in which the **Contractor** shall certify that all construction tools and equipment have been maintained so that they operate at normal manufacturers operating specifications. If the **Contractor** cannot make this certification, it must have in place an **Alternative Noise Mitigation Plan** approved by the **City Department of Environmental Protection**. In addition, the **Contractor's** certified **Construction Noise Mitigation Plan** is subject inspection by the **City Department of Environmental Protection** in accordance with Section 28-101 of Title 15 of **RCNY**. No **Contract Work** may take place at a **Site** unless there is a **Construction Noise Mitigation Plan** or approved **Alternative Noise Mitigation Plan** in place. In addition, the **Contractor** shall create and implement a noise mitigation training program. Failure to comply with these requirements may result in fines and other penalties pursuant to the applicable provisions of the **Administrative Code** and **RCNY**.

5.4 Ultra Low Sulfur Diesel Fuel: In accordance with the provisions of Section 24-163.3 of the **Administrative Code**, the **Contractor** specifically agrees as follows:

5.4.1 Definitions. For purposes of this Article 5.4, the following definitions apply:

5.4.1(a) "**Contractor**" means any person or entity that enters into a **Public Works Contract** with a **City Agency**, or any person or entity that enters into an agreement with such person or entity, to perform work or provide labor or services related to such **Public Works Contract**.

5.4.1(b) "**Motor Vehicle**" means any self-propelled vehicle designed for transporting persons or property on a street or highway.

5.4.1(c) "**Nonroad Engine**" means an internal combustion engine (including the fuel system) that is not used in a **Motor Vehicle** or a vehicle used solely for competition, or that is not subject to standards promulgated under Section 7411 or Section 7521 of

Title 42 of the United States Code, except that this term shall apply to internal combustion engines used to power generators, compressors or similar equipment used in any construction program or project.

5.4.1(d) "Nonroad Vehicle" means a vehicle that is powered by a Nonroad Engine, fifty (50) horsepower and greater, and that is not a Motor Vehicle or a vehicle used solely for competition, which shall include, but not be limited to, excavators, backhoes, cranes, compressors, generators, bulldozers, and similar equipment, except that this term shall not apply to horticultural maintenance vehicles used for landscaping purposes that are powered by a Nonroad Engine of sixty-five (65) horsepower or less and that are not used in any construction program or project.

5.4.1(e) "Public Works Contract" means a contract with a **City Agency** for a construction program or project involving the construction, demolition, restoration, rehabilitation, repair, renovation, or abatement of any building, structure, tunnel, excavation, roadway, park or bridge; a contract with a **City Agency** for the preparation for any construction program or project involving the construction, demolition, restoration, rehabilitation, repair, renovation, or abatement of any building, structure, tunnel, excavation, roadway, park or bridge; or a contract with a **City Agency** for any final work involved in the completion of any construction program or project involving the construction, demolition, restoration, rehabilitation, repair, renovation, or abatement of any building, structure, tunnel, excavation, roadway, park or bridge.

5.4.1(f) "Ultra Low Sulfur Diesel Fuel" means diesel fuel that has a sulfur content of no more than fifteen parts per million (15 ppm).

5.4.2 Ultra Low Sulfur Diesel Fuel

5.4.2(a) All **Contractors** shall use Ultra Low Sulfur Diesel Fuel in diesel-powered Nonroad Vehicles in the performance of this **Contract**.

5.4.2(b) Notwithstanding the requirements of Article 5.4.2(a), **Contractors** may use diesel fuel that has a sulfur content of no more than thirty parts per million (30 ppm) to fulfill the requirements of this Article 5.4.2, where the Commissioner of the City Department of Environmental Protection ("DEP Commissioner") has issued a determination that a sufficient quantity of Ultra Low Sulfur Diesel Fuel is not available to meet the needs of **Agencies** and **Contractors**. Any such determination shall expire after six (6) months unless renewed.

5.4.2(c) **Contractors** shall not be required to comply with this Article 5.4.2 where the **City Agency** letting this **Contract** makes a written finding, which is approved, in writing, by the DEP Commissioner, that a sufficient quantity of Ultra Low Sulfur Diesel Fuel, or diesel fuel that has a sulfur content of no more than thirty parts per million (30 ppm) is not available to meet the requirements of Section 24-163.3 of the Administrative Code, provided that such **Contractor** in its fulfillment of the requirements of this **Contract**, to the extent practicable, shall use whatever quantity of Ultra Low Sulfur Diesel Fuel or diesel fuel that has a sulfur content of no more than thirty parts per million (30 ppm) is available. Any finding made pursuant to this Article 5.4.2(c) shall expire after sixty (60) **Days**, at which time the requirements of this Article 5.4.2 shall be in full force and effect unless the **City Agency** renews the finding in writing and such renewal is approved by the DEP Commissioner.

5.4.2(d) **Contractors** may check on determinations and approvals issued by the DEP Commissioner pursuant to Section 24-163.3 of the Administrative Code, if any, at www.dep.nyc.gov or by contacting the **City Agency** letting this **Contract**.

5.4.2(e) The requirements of this Article 5.4.2 do not apply where they are precluded by federal or State funding requirements or where the **Contract** is an emergency procurement.

5.4.3 Best Available Technology

5.4.3(a) All **Contractors** shall utilize the best available technology for reducing the emission of pollutants for diesel-powered Nonroad Vehicles in the performance of this **Contract**. For determinations of best available technology for each type of diesel-powered Nonroad Vehicle, **Contractors** shall comply with the regulations of the **City Department of Environmental Protection**, as and when adopted, Chapter 14 of Title 15 of the Rules of the City of New York (RCNY). The **Contractor** shall fully document all steps in the best available technology selection process and shall furnish such documentation to the **City Agency** or the DEP Commissioner upon request. The **Contractor** shall retain all documentation generated in the best available technology selection process for as long as the selected best available technology is in use.

5.4.3(b) No **Contractor** shall be required to replace best available technology for reducing the emission of pollutants or other authorized technology utilized for a diesel-powered Nonroad Vehicle in accordance with the provisions of this Article 5.4.3 within three (3) years of having first utilized such technology for such vehicle.

5.4.3(c) This Article 5.4.3 shall not apply to any vehicle used to satisfy the requirements of a specific Public Works Contract for fewer than twenty (20) **Days**.

5.4.3(d) The **Contractor** shall not be required to comply with this Article 5.4.3 with respect to a diesel-powered Nonroad Vehicle under the following circumstances:

5.4.3(d)(i) Where the **City Agency** makes a written finding, which is approved, in writing, by the DEP Commissioner, that the best available technology for reducing the emission of pollutants as required by this Article 5.4.3 is unavailable for such vehicle, the **Contractor** shall use whatever technology for reducing the emission of pollutants, if any, is available and appropriate for such vehicle.

5.4.3(d)(ii) Where the DEP Commissioner has issued a written waiver based upon the **Contractor** having demonstrated to the DEP Commissioner that the use of the best available technology for reducing the emission of pollutants might endanger the operator of such vehicle or those working near such vehicle, due to engine malfunction, the **Contractor** shall use whatever technology for reducing the emission of pollutants, if any, is available and appropriate for such vehicle, which would not endanger the operator of such vehicle or those working near such vehicle.

5.4.3(d)(iii) In determining which technology to use for the purposes of Articles 5.4.3(d)(i) and 5.4.3(d)(ii) above, the **Contractor** shall primarily consider the reduction in emissions of particulate matter and secondarily consider the reduction in emissions of nitrogen oxides associated with the use of such

technology, which shall in no event result in an increase in the emissions of either such pollutant.

5.4.3(d)(iv) The **Contractor** shall submit requests for a finding or a waiver pursuant to this Article 5.4.3(d) in writing to the DEP Commissioner, with a copy to the **ACCO** of the **City Agency** letting this **Contract**. Any finding or waiver made or issued pursuant to Articles 5.4.3(d)(i) and 5.4.3(d)(ii) above shall expire after one hundred eighty (180) **Days**, at which time the requirements of Article 5.4.3(a) shall be in full force and effect unless the **City Agency** renews the finding, in writing, and the DEP Commissioner approves such finding, in writing, or the DEP Commissioner renews the waiver, in writing.

5.4.3(e) The requirements of this Article 5.4.3 do not apply where they are precluded by federal or State funding requirements or where the **Contract** is an emergency procurement.

5.4.4 Section 24-163 of the Administrative Code. The **Contractor** shall comply with Section 24-163 of the Administrative Code related to the idling of the engines of motor vehicles while parking.

5.4.5 Compliance

5.4.5(a) The **Contractor's** compliance with Article 5.4 may be independently monitored. If it is determined that the **Contractor** has failed to comply with any provision of Article 5.4, any costs associated with any independent monitoring incurred by the **City** shall be reimbursed by the **Contractor**.

5.4.5(b) Any **Contractor** who violates any provision of Article 5.4, except as provided in Article 5.4.5(c) below, shall be liable for a civil penalty between the amounts of one thousand (\$1,000) and ten thousand (\$10,000) dollars, in addition to twice the amount of money saved by such **Contractor** for failure to comply with Article 5.4.

5.4.5(c) No **Contractor** shall make a false claim with respect to the provisions of Article 5.4 to a **City Agency**. Where a **Contractor** has been found to have done so, such **Contractor** shall be liable for a civil penalty of twenty thousand (\$20,000) dollars, in addition to twice the amount of money saved by such **Contractor** in association with having made such false claim.

5.4.6 Reporting

5.4.6(a) For all Public Works Contracts covered by this Article 5.4, the **Contractor** shall report to the **City Agency** the following information:

5.4.6(a)(i) The total number of diesel-powered Nonroad Vehicles used to fulfill the requirements of this Public Works Contract;

5.4.6(a)(ii) The number of such Nonroad Vehicles that were powered by Ultra Low Sulfur Diesel Fuel;

5.4.6(a)(iii) The number of such Nonroad Vehicles that utilized the best available technology for reducing the emission of pollutants, including a breakdown by vehicle model and the type of technology;

5.4.6(a)(iv) The number of such Nonroad Vehicles that utilized such other authorized technology in accordance with Article 5.4.3, including a breakdown by vehicle model and the type of technology used for each such vehicle;

5.4.6(a)(v) The locations where such Nonroad Vehicles were used; and

5.4.6(a)(vi) Where a determination is in effect pursuant to Article 5.4.2(b) or 5.4.2(c), detailed information concerning the **Contractor's** efforts to obtain Ultra Low Sulfur Diesel Fuel or diesel fuel that has a sulfur content of no more than thirty parts per million (30 ppm).

5.4.6(b) The **Contractor** shall submit the information required by Article 5.4.6(a) at the completion of **Work** under the Public Works Contract and on a yearly basis no later than August 1 throughout the term of the Public Works Contract. The yearly report shall cover **Work** performed during the preceding fiscal year (July 1 - June 30).

5.5 Ultra Low Sulfur Diesel Fuel. In accordance with the Coordinated Construction Act for Lower Manhattan, as amended:

5.5.1 Definitions. For purposes of this Article 5.5, the following definitions apply:

5.5.1(a) "Lower Manhattan" means the area to the south of and within the following lines: a line beginning at a point where the United States pierhead line in the Hudson River as it exists now or may be extended would intersect with the southerly line of West Houston Street in the Borough of Manhattan extended, thence easterly along the southerly side of West Houston Street to the southerly side of Houston Street, thence easterly along the southerly side of Houston Street to the southerly side of East Houston Street, thence northeasterly along the southerly side of East Houston Street to the point where it would intersect with the United States pierhead line in the East River as it exists now or may be extended, including tax lots within or immediately adjacent thereto.

5.5.1(b) "Lower Manhattan Redevelopment Project" means any project in Lower Manhattan that is funded in whole or in part with federal or State funding, or any project intended to improve transportation between Lower Manhattan and the two air terminals in the City known as LaGuardia Airport and John F. Kennedy International Airport, or between Lower Manhattan and the air terminal in Newark known as Newark Liberty International Airport, and that is funded in whole or in part with federal funding.

5.5.1(c) "Nonroad Engine" means an internal combustion engine (including the fuel system) that is not used in a Motor Vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under Section 7411 or Section 7521 of Title 42 of the United States Code, except that this term shall apply to internal combustion engines used to power generators, compressors or similar equipment used in any construction program or project.

5.5.1(d) "Nonroad Vehicle" means a vehicle that is powered by a Nonroad Engine, fifty (50) horsepower (HP) and greater, and that is not a Motor Vehicle or a vehicle used solely for competition, which shall include, but not be limited to, excavators, backhoes, cranes, compressors, generators, bulldozers, and similar equipment, except

that this terms shall not apply to horticultural maintenance vehicles used for landscaping purposes that are powered by a Nonroad Engine of sixty-five (65) HP or less and that are not used in any construction program or project.

5.5.1(e) "Ultra Low Sulfur Diesel Fuel" means diesel fuel that has a sulfur content of no more than fifteen parts per million (15 ppm).

5.5.2 Requirements. **Contractors and Subcontractors** are required to use only Ultra Low Sulfur Diesel Fuel to power the diesel-powered Nonroad Vehicles with engine HP rating of fifty (50) HP and above used on a Lower Manhattan Redevelopment Project and, where practicable, to reduce the emission of pollutants by retrofitting such Nonroad Vehicles with oxidation catalysts, particulate filters, or technology that achieves lowest particulate matter emissions.

5.6 Pesticides. In accordance with Section 17-1209 of the Administrative Code, to the extent that the **Contractor** or any **Subcontractor** applies pesticides to any property owned or leased by the **City**, the **Contractor**, and any **Subcontractor** shall comply with Chapter 12 of the Administrative Code.

5.7 Waste Treatment, Storage, and Disposal Facilities and Transporters. In connection with the **Work**, the **Contractor** and any **Subcontractor** shall use only those waste treatment, storage, and disposal facilities and waste transporters that possess the requisite license, permit or other governmental approval necessary to treat, store, dispose, or transport the waste, materials or hazardous substances.

5.8 Environmentally Preferable Purchasing. The **Contractor** shall ensure that products purchased or leased by the **Contractor** or any **Subcontractor** for the **Work** that are not specified by the **City** or are submitted as equivalents to a product specified by the **City** comply with the requirements of the New York City Environmentally Preferable Purchasing Program contained in Chapter 11 of Title 43 of the RCNY, pursuant to Chapter 3 of Title 6 of the Administrative Code.

ARTICLE 6. INSPECTION

6.1 During the progress of the **Work** and up to the date of **Final Acceptance**, the **Contractor** shall at all times afford the representatives of the **City** every reasonable, safe, and proper facility for inspecting all **Work** done or being done at the **Site** and also for inspecting the manufacture or preparation of materials and equipment at the place of such manufacture or preparation.

6.2 The **Contractor's** obligation hereunder shall include the uncovering or taking down of finished **Work** and its restoration thereafter; provided, however, that the order to uncover, take down and restore shall be in writing, and further provided that if **Work** thus exposed proves satisfactory, and if the **Contractor** has complied with Article 6.1, such uncovering or taking down and restoration shall be considered an item of **Extra Work** to be paid for in accordance with the provisions of Article 26. If the **Work** thus exposed proves unsatisfactory, the **City** has no obligation to compensate the **Contractor** for the uncovering, taking down or restoration.

6.3 Inspection and approval by the **Commissioner**, the **Engineer**, **Project Manager**, or **Resident Engineer**, of finished **Work** or of **Work** being performed, or of materials and equipment at the place of manufacture or preparation, shall not relieve the **Contractor** of its obligation to perform the **Work** in strict accordance with the **Contract**. Finished or unfinished **Work** not found to be in strict accordance with the **Contract** shall be replaced as directed by the **Engineer**, even though such **Work** may have been previously approved and paid for. Such corrective **Work** is **Contract Work** and shall not be deemed **Extra Work**.

6.4 Rejected **Work** and materials shall be promptly taken down and removed from the **Site**, which must at all times be kept in a reasonably clean and neat condition.

**ARTICLE 7. PROTECTION OF WORK AND OF PERSONS
AND PROPERTY; NOTICES AND INDEMNIFICATION**

7.1 During the performance of the **Work** and up to the date of **Final Acceptance**, the **Contractor** shall be under an absolute obligation to protect the finished and unfinished **Work** against any damage, loss, injury, theft and/or vandalism and in the event of such damage, loss, injury, theft and/or vandalism, it shall promptly replace and/or repair such **Work** at the **Contractor's** sole cost and expense, as directed by the **Resident Engineer**. The obligation to deliver finished **Work** in strict accordance with the **Contract** prior to **Final Acceptance** shall be absolute and shall not be affected by the **Resident Engineer's** approval of, or failure to prohibit, the **Means and Methods of Construction** used by the **Contractor**.

7.2 During the performance of the **Work** and up to the date of **Final Acceptance**, the **Contractor** shall take all reasonable precautions to protect all persons and the property of the **City** and of others from damage, loss or injury resulting from the **Contractor's**, and/or its **Subcontractors'** operations under this **Contract**. The **Contractor's** obligation to protect shall include the duty to provide, place or replace, and adequately maintain at or about the **Site** suitable and sufficient protection such as lights, barricades, and enclosures.

7.3 The **Contractor** shall comply with the notification requirements set forth below in the event of any loss, damage or injury to **Work**, persons or property, or any accidents arising out of the operations of the **Contractor** and/or its **Subcontractors** under this **Contract**.

7.3.1 The **Contractor** shall make a full and complete report in writing to the **Resident Engineer** within three (3) **Days** after the occurrence.

7.3.2 The **Contractor** shall also send written notice of any such event to all insurance carriers that issued potentially responsive policies (including commercial general liability insurance carriers for events relating to the **Contractor's** own employees) no later than twenty (20) days after such event and again no later than twenty (20) days after the initiation of any claim and/or action resulting therefrom. Such notice shall contain the following information: the number of the insurance policy, the name of the Named Insured, the date and location of the incident, and the identity of the persons injured or property damaged. For any policy on which the **City** and/or the **Engineer, Architect, or Project Manager** are Additional Insureds, such notice shall expressly specify that "this notice is being given on behalf of the City of New York as Additional Insured, such other Additional Insureds, as well as the Named Insured."

7.3.2(a) Whenever such notice is sent under a policy on which the **City** is an Additional Insured, the **Contractor** shall provide copies of the notice to the **Comptroller, the Commissioner** and the **City Corporation Counsel**. The copy to the **Comptroller** shall be sent to the Insurance Unit, NYC Comptroller's Office, 1 Centre Street – Room 1222, New York, New York, 10007. The copy to the **Commissioner** shall be sent to the address set forth in Schedule A of the General Conditions. The copy to the **City Corporation Counsel** shall be sent to Insurance Claims Specialist, Affirmative Litigation Division, New York City Law Department, 100 Church Street, New York, New York 10007.

7.3.2(b) If the **Contractor** fails to provide any of the foregoing notices to any appropriate insurance carrier(s) in a timely and complete manner, the **Contractor** shall indemnify the **City** for all losses, judgments, settlements, and expenses, including reasonable attorneys' fees, arising from an insurer's disclaimer of coverage citing late notice by or on behalf of the **City**.

7.4 To the fullest extent permitted by law, the **Contractor** shall defend, indemnify, and hold the **City**, its employees, and officials (the "Indemnitees") harmless against any and all claims (including but not limited to claims asserted by any employee of the **Contractor** and/or its **Subcontractors**) and costs and expenses of whatever kind (including but not limited to payment or reimbursement of attorneys' fees and disbursements) allegedly arising out of or in any way related to the operations of the **Contractor** and/or its **Subcontractors** in the performance of this **Contract** or from the **Contractor's** and/or its **Subcontractors'** failure to comply with any of the provisions of this **Contract** or of the **Law**. Such costs and expenses shall include all those incurred in defending the underlying claim and those incurred in connection with the enforcement of this Article 7.4 by way of cross-claim, third-party claim, declaratory action or otherwise. The parties expressly agree that the indemnification obligation hereunder contemplates (1) full indemnity in the event of liability imposed against the Indemnitees without negligence and solely by reason of statute, operation of **Law** or otherwise; and (2) partial indemnity in the event of any actual negligence on the part of the Indemnitees either causing or contributing to the underlying claim (in which case, indemnification will be limited to any liability imposed over and above that percentage attributable to actual fault whether by statute, by operation of **Law**, or otherwise). Where partial indemnity is provided hereunder, all costs and expenses shall be indemnified on a pro rata basis.

7.4.1 Indemnification under Article 7.4 or any other provision of the **Contract** shall operate whether or not **Contractor** or its **Subcontractors** have placed and maintained the insurance specified under Article 22.

7.5 The provisions of this Article 7 shall not be deemed to create any new right of action in favor of third parties against the **Contractor** or the **City**.

CHAPTER III TIME PROVISIONS

ARTICLE 8. COMMENCEMENT AND PROSECUTION OF THE WORK

8.1 The **Contractor** shall commence the **Work** on the date specified in the **Notice to Proceed** or the **Order to Work**. The time for performance of the **Work** under the **Contract** shall be computed from the date specified in the **Notice to Proceed** or the **Order to Work**. **TIME BEING OF THE ESSENCE** to the **City**, the **Contractor** shall thereafter prosecute the **Work** diligently, using such **Means and Methods of Construction** as are in accord with Article 4 herein and as will assure its completion not later than the date specified in this **Contract**, or on the date to which the time for completion may be extended.

ARTICLE 9. PROGRESS SCHEDULES

9.1 To enable the **Work** to be performed in an orderly and expeditious manner, the **Contractor**, within fifteen (15) **Days** after the **Notice to Proceed** or **Order to Work**, unless otherwise directed by the **Engineer**, shall submit to the **Engineer** a proposed progress schedule based on the Critical Path Method in the form of a bar graph or in such other form as specified by the **Engineer**, and monthly cash flow requirements, showing:

9.1.1 The anticipated time of commencement and completion of each of the various operations to be performed under this **Contract**; and

9.1.2 The sequence and interrelation of each of these operations with the others and with those of other related contracts; and

9.1.3 The estimated time required for fabrication or delivery, or both, of all materials and equipment required for the **Work**, including the anticipated time for obtaining required approvals pursuant to Article 10; and

9.1.4 The estimated amount in dollars the **Contractor** will claim on a monthly basis.

9.2 The proposed schedule shall be revised as directed by the **Engineer**, until finally approved by the **Engineer**, and after such approval, subject to the provisions of Article 11, shall be strictly adhered to by the **Contractor**.

9.3 If the **Contractor** shall fail to adhere to the approved progress schedule, or to the schedule as revised pursuant to Article 11, it shall promptly adopt such other or additional **Means and Methods of Construction**, at its sole cost and expense, as will make up for the time lost and will assure completion in accordance with the approved progress schedule. The approval by the **City** of a progress schedule which is shorter than the time allotted under the **Contract** shall not create any liability for the **City** if the approved progress schedule is not met.

9.4 The **Contractor** will not receive any payments until the proposed progress schedule is submitted.

ARTICLE 10. REQUESTS FOR INFORMATION OR APPROVAL

10.1 From time to time as the **Work** progresses and in the sequence indicated by the approved progress schedule, the **Contractor** shall submit to the **Engineer** a specific request in writing for each item of information or approval required by the **Contractor**. These requests shall state the latest date upon which the information or approval is actually required by the **Contractor**, and shall be submitted in a reasonable time in advance thereof to provide the **Engineer** a sufficient time to act upon such submissions, or any necessary re-submissions thereof.

10.2 The **Contractor** shall not have any right to an extension of time on account of delays due to the **Contractor's** failure to submit requests for the required information or the required approval in accordance with the above requirements.

ARTICLE 11. NOTICE OF CONDITIONS CAUSING DELAY AND DOCUMENTATION OF DAMAGES CAUSED BY DELAY

11.1 After the commencement of any condition which is causing or may cause a delay in completion of the **Work**, including conditions for which the **Contractor** may be entitled to an extension of time, the following notifications and submittals are required:

11.1.1 Within seven (7) **Days** after the commencement of such condition, the **Contractor** must notify the **Engineer** in writing of the existence, nature and effect of such condition upon the approved progress schedule and the **Work**, and must state why and in what respects, if any, the condition is causing or may cause a delay.

11.1.2 If the **Contractor** shall claim to be sustaining damages for delay as provided for in this Article 11, within forty-five (45) **Days** from the time such damages are first incurred, and every thirty (30) **Days** thereafter for as long as such damages are being incurred, the **Contractor** shall submit to the **Commissioner** verified written statements of the details and the amounts of such damages, together with documentary evidence of such damages, ("statement of delay damages") as further detailed in Article 11.6. The **Contractor** may submit any of the above statements within such additional time as may be granted by the **Commissioner** in writing upon written request therefor. On failure of the **Contractor** to strictly comply with all of the foregoing provisions, such claims shall be deemed waived and no right to recover on such claims shall exist. Damages that the **Contractor** may claim in any action arising under or by reason of this **Contract** shall not be different from or in excess of the statements made and documentation provided pursuant to this Article 11.

11.1.3 Within 60 days of submission of the final verified statement of claims pursuant to Article 44, the **Commissioner** shall make a determination as to whether a compensable delay has occurred and, if so, the amount of compensation due the **Contractor**. Notwithstanding the above, the **Commissioner** may make a determination as to whether a compensable delay has occurred at any time after the **Contractor's** first submission of a statement of delay damages provided, however, that the amount of compensation due to the **Contractor** will not be determined until the **Commissioner** determines that the **Work** is delayed after the date set for substantial completion.

11.2 Failure of the **Contractor** to strictly comply with the requirements of Article 11.1.1 may, in the discretion of the **Commissioner**, be deemed sufficient cause to deny any extension of time on account of delay arising out of such condition. Failure of the **Contractor** to strictly comply with the requirements of Articles 11.1.1 and 11.1.2 shall be deemed a conclusive waiver by the **Contractor** of any and all claims for damages for delay arising from such condition and no right to recover on such claims shall exist.

11.3 When appropriate and directed by the **Engineer**, the progress schedule shall be revised by the **Contractor** until finally approved by the **Engineer**. The revised progress schedule must be strictly adhered to by the **Contractor**.

11.4 Compensable Delays

11.4.1 The **Contractor** agrees to make claim only for additional costs attributable to delay in the performance of this **Contract** necessarily extending the time for completion of the **Work** or resulting from acceleration directed by the **Commissioner** and required to maintain the **Project** schedule, occasioned solely by any act or omission to act of the **City** listed below. The **Contractor** also agrees that delay from any other cause shall be compensated, if at all, solely by an extension of time to complete the performance of the **Work**.

11.4.1.1 The failure of the **City** to take reasonable measures to coordinate and progress the **Work**, except that the **City** shall not be responsible for the **Contractor's** obligation to coordinate and progress the **Work** of its **Subcontractors**.

11.4.1.2 Extended delays attributable to the **City** in the review or issuance of change orders, in shop drawing reviews and approvals or as a result of the cumulative impact of multiple change orders, which have a verifiable impact on **Project** costs.

11.4.1.3 The unavailability of the **Site** for an extended period of time that significantly affects the scheduled completion of the **Contract**.

11.4.1.4 The issuance by the **Engineer** of a stop work order relative to a substantial portion of the **Work** for a period exceeding thirty (30) **Days**, that was not brought about through any action or omission of the **Contractor**.

11.4.1.5 Differing site conditions that were neither known nor reasonably ascertainable on a pre-bid inspection of the **Site** or review of the bid documents or other publicly available sources, and that are not ordinarily encountered in the **Project's** geographical area or neighborhood or in the type of **Work** to be performed.

11.4.1.6 Delays caused by the **City's** bad faith or its willful, malicious, or grossly negligent conduct;

11.4.1.7 Delays not contemplated by the parties;

11.4.1.8 Delays so unreasonable that they constitute an intentional abandonment of the **Contract** by the **City**; and

11.4.1.9 Delays resulting from the **City's** breach of a fundamental obligation of the **Contract**.

11.4.2 No claim may be made for any alleged delay in **Substantial Completion** of the **Work** by a date earlier than the date of **Substantial Completion** provided for in Schedule A unless there is a provision in the **Contract** providing for additional compensation for early completion. No claim may be made for any alleged delay in **Substantial Completion** of the **Work** if the work is substantially completed by the date of **Substantial Completion** provided for in Schedule A unless acceleration has been directed by the **Commissioner** to meet the date of **Substantial Completion** set forth in Schedule A.

11.4.3 The provisions of this Article 11 apply only to claims for additional costs attributable to delay and do not preclude determinations by the **Commissioner** allowing reimbursements for additional costs for **Extra Work** pursuant to Articles 25 and 26 of this **Contract**. To the extent that any cost attributable to delay is reimbursed as part of a change order, no additional claim for compensation under this Article 11 shall be allowed.

11.5 Non-Compensable Delays. The **Contractor** agrees to make no claim for, and is deemed to have included in its bid prices for the various items of the **Contract**, the extra/additional costs attributable to any delays caused by or attributable to the items set forth below. For such items, the **Contractor** shall be compensated, if at all, solely by an extension of time to complete the performance of the **Work**, in accordance with the provisions of Article 13. Such extensions of time will be granted, if at all, pursuant to the grounds set forth in Article 13.3.

11.5.1 The acts or omissions of any third parties, including but not limited to **Other Contractors**, public/ governmental bodies (other than **City Agencies**), utilities or private enterprises, who are disclosed in the **Contract Documents** or are ordinarily encountered or generally recognized as related to the **Work**;

11.5.2 Any situation which was within the contemplation of the parties at the time of entering into the **Contract**, including any delay indicated or disclosed in the **Contract Documents** or generally recognized as related to the nature of the **Work**, and/or the existence of any facility or appurtenance owned, operated or maintained by any third party, as indicated or disclosed in the **Contract Documents** or ordinarily encountered or generally recognized as related to the nature of the **Work**;

11.5.3 Restraining orders, injunctions or judgments issued by a court which were caused by a Contractor's submission, action or inaction or by a Contractor's **Means and Methods of**

Construction, or by third parties, unless such order, injunction or judgment was the result of an action or omission by the **City**;

11.5.4 Any labor boycott, strike, picketing, lockout or similar situation;

11.5.5 Any shortages of supplies or materials, or unavailability of equipment, required by the **Contract Work**;

11.5.6 Climatic conditions, storms, floods, droughts, tidal waves, fires, hurricanes, earthquakes, landslides or other catastrophes or acts of God, or acts of war or of the public enemy or terrorist acts, including the **City's** reasonable responses thereto; and

11.5.7 **Extra Work** which does not significantly affect the overall completion of the **Contract**, reasonable delays in the review or issuance of change orders or field orders and/or in shop drawing reviews or approvals.

11.6 Required Content of Submission of Statement of Delay Damages

11.6.1 In the verified written statement of delay damages required by Article 11.1.2, the following information shall be provided by the **Contractor**:

11.6.1.1 For each delay, the start and end dates of the claimed periods of delay and, in addition, a description of the operations that were delayed, an explanation of how they were delayed, and the reasons for the delay, including identifying the applicable act or omission of the **City** listed in Article 11.4.

11.6.1.2 A detailed factual statement of the claim providing all necessary dates, locations and items of **Work** affected by the claim.

11.6.1.3 The amount of additional compensation sought and a breakdown of that amount into categories as described in Article 26.2, subject to the limitations set forth in Article 11.7.

11.6.1.4 Any additional information requested by the **Commissioner**.

11.7 Recoverable Costs

11.7.1 Delay damages may be recoverable for the following costs actually and necessarily incurred in the performance of the **Work**:

11.7.1.1 Direct labor, including payroll taxes (subject to statutory wage caps) and supplemental benefits, based on time and materials records;

11.7.1.2 Necessary materials (including transportation to the **Site**), based on time and material records;

11.7.1.3 Reasonable rental value of necessary plant and equipment other than small tools, plus fuel/energy costs according to the applicable formula set forth in Articles 26.2.4 and/or 26.2.8, based on time and material records;

11.7.1.4 Insurance and bond costs;

11.7.1.5 Extended field office costs;

11.7.1.6 Extended **Site** overhead; and

11.7.1.7 Extended home office overhead.

11.7.2 Recoverable Subcontractor Costs. When the **Work** is performed by a **Subcontractor**, the **Contractor** may be paid the actual and necessary costs of such subcontracted **Work** as outlined above in Articles 11.7.1.1 through 11.7.1.6, and an

additional overhead of five (5%) percent of the costs outlined in Articles 11.7.1.1 through 11.7.1.3.

11.7.3 **Non-Recoverable Costs.** The parties agree that the **City** will have no liability for the following items and the **Contractor** agrees it shall make no claim for the following items:

11.7.3.1 Profit, or loss of anticipated or unanticipated profit;

11.7.3.2 Consequential damages, including but not limited to interest on monies in dispute, including interest which is paid on such monies, loss of bonding capacity, bidding opportunities, or interest in investment, or any resulting insolvency;

11.7.3.3 Indirect costs or expenses of any nature;

11.7.3.4 Direct or indirect costs attributable to performance of **Work** where the **Contractor**, because of situations or conditions within its control, has not progressed the **Work** in a satisfactory manner; and

11.7.3.5 Attorneys' fees and dispute and claims preparation expenses.

11.8 Determinations under this Article 11 are not subject to the jurisdiction of the Contract Dispute Resolution Board pursuant to the dispute resolution process set forth in Article 27.

11.9 If the parties agree, pursuant to Article 11.1.3 above, that a compensable delay has occurred and agree on the amount of compensation, payment may be made pursuant to a written change order. Payment pursuant to such change order is subject to pre-audit by the **Engineering Audit Officer**, and may be post-audited by the **Comptroller** and/or the **Agency**.

ARTICLE 12. COORDINATION WITH OTHER CONTRACTORS

12.1 During the progress of the **Work**, **Other Contractors** may be engaged in performing other work or may be awarded other contracts for additional work on this **Project**. In that event, the **Contractor** shall coordinate the **Work** to be done hereunder with the work of such **Other Contractors** and the **Contractor** shall fully cooperate with such **Other Contractors** and carefully fit its own **Work** to that provided under other contracts as may be directed by the **Engineer**. The **Contractor** shall not commit or permit any act which will interfere with the performance of work by any **Other Contractors**.

12.2 If the **Engineer** determines that the **Contractor** is failing to coordinate its **Work** with the work of **Other Contractors** as the **Engineer** has directed, then the **Commissioner** shall have the right to withhold any payments otherwise due hereunder until the **Contractor** completely complies with the **Engineer's** directions.

12.3 The **Contractor** shall notify the **Engineer** in writing if any **Other Contractor** on this **Project** is failing to coordinate its work with the **Work** of this **Contract**. If the **Engineer** finds such charges to be true, the **Engineer** shall promptly issue such directions to the **Other Contractor** with respect thereto as the situation may require. The **City** shall not, however, be liable for any damages suffered by any **Other Contractor's** failure to coordinate its work with the **Work** of this **Contract** or by reason of the **Other Contractor's** failure to promptly comply with the directions so issued by the **Engineer**, or by reason of any **Other Contractor's** default in performance, it being understood that the **City** does not guarantee the responsibility or continued efficiency of any contractor. The **Contractor** agrees to make no claim against

the City for any damages relating to or arising out of any directions issued by the **Engineer** pursuant to this Article 12 (including but not limited to the failure of any **Other Contractor** to comply or promptly comply with such directions), or the failure of the **Engineer** to issue any directions, or the failure of any **Other Contractor** to coordinate its work, or the default in performance of any **Other Contractor**.

12.4 The **Contractor** shall indemnify and hold the City harmless from any and all claims or judgments for damages and from costs and expenses to which the City may be subjected or which it may suffer or incur by reason of the **Contractor's** failure to comply with the **Engineer's** directions promptly; and the **Comptroller** shall have the right to exercise the powers reserved in Article 23 with respect to any claims which may be made for damages due to the **Contractor's** failure to comply with the **Engineer's** directions promptly. Insofar as the facts and Law relating to any claim would preclude the City from being completely indemnified by the **Contractor**, the City shall be partially indemnified by the **Contractor** to the fullest extent provided by Law.

12.5 Should the **Contractor** sustain any damage through any act or omission of any **Other Contractor** having a contract with the City for the performance of work upon the Site or of work which may be necessary to be performed for the proper prosecution of the Work to be performed hereunder, or through any act or omission of a subcontractor of such **Other Contractor**, the **Contractor** shall have no claim against the City for such damage, but shall have a right to recover such damage from the **Other Contractor** under the provision similar to the following provisions which apply to this Contract and have been or will be inserted in the contracts with such **Other Contractors**:

12.5.1 Should any **Other Contractor** having or who shall hereafter have a contract with the City for the performance of work upon the Site sustain any damage through any act or omission of the **Contractor** hereunder or through any act or omission of any **Subcontractor** of the **Contractor**, the **Contractor** agrees to reimburse such **Other Contractor** for all such damages and to defend at its own expense any action based upon such claim and if any judgment or claim (even if the allegations of the action are without merit) against the City shall be allowed the **Contractor** shall pay or satisfy such judgment or claim and pay all costs and expenses in connection therewith and agrees to indemnify and hold the City harmless from all such claims. Insofar as the facts and Law relating to any claim would preclude the City from being completely indemnified by the **Contractor**, the City shall be partially indemnified by the **Contractor** to the fullest extent provided by Law.

12.6 The City's right to indemnification hereunder shall in no way be diminished, waived or discharged by its recourse to assessment of liquidated damages as provided in Article 15, or by the exercise of any other remedy provided for by Contract or by Law.

ARTICLE 13. EXTENSION OF TIME FOR PERFORMANCE

13.1 If performance by the **Contractor** is delayed for a reason set forth in Article 13.3, the **Contractor** may be allowed a reasonable extension of time in conformance with this Article 13 and the PPB Rules.

13.2 Any extension of time may be granted only by the ACCO or by the Board for the Extension of Time (hereafter "Board") (as set forth below) upon written application by the **Contractor**.

13.3 Grounds for Extension: If such application is made, the **Contractor** shall be entitled to an extension of time for delay in completion of the Work caused solely:

13.3.1 By the acts or omissions of the City, its officials, agents or employees; or

13.3.2 By the act or omissions of **Other Contractors** on this **Project**; or

13.3.3 By supervening conditions entirely beyond the control of either party hereto (such as, but not limited to, acts of God or the public enemy, excessive inclement weather, war or other national emergency making performance temporarily impossible or illegal, or strikes or labor disputes not brought about by any act or omission of the **Contractor**).

13.3.4 The **Contractor** shall, however, be entitled to an extension of time for such causes only for the number of **Days** of delay which the **ACCO** or the Board may determine to be due solely to such causes, and then only if the **Contractor** shall have strictly complied with all of the requirements of Articles 9 and 10.

13.4 The **Contractor** shall not be entitled to receive a separate extension of time for each of several causes of delay operating concurrently, but, if at all, only for the actual period of delay in completion of the **Work** as determined by the **ACCO** or the Board, irrespective of the number of causes contributing to produce such delay. If one of several causes of delay operating concurrently results from any act, fault or omission of the **Contractor** or of its **Subcontractors** or **Materialmen**, and would of itself (irrespective of the concurrent causes) have delayed the **Work**, no extension of time will be allowed for the period of delay resulting from such act, fault or omission.

13.5 The determination made by the **ACCO** or the Board on an application for an extension of time shall be binding and conclusive on the **Contractor**.

13.6 The **ACCO** or the Board acting entirely within their discretion may grant an application for an extension of time for causes of delay other than those herein referred.

13.7 Permitting the **Contractor** to continue with the **Work** after the time fixed for its completion has expired, or after the time to which such completion may have been extended has expired, or the making of any payment to the **Contractor** after such time, shall in no way operate as a waiver on the part of the **City** of any of its rights under this **Contract**.

13.8 Application for Extension of Time:

13.8.1 Before the **Contractor's** time extension request will be considered, the **Contractor** shall notify the **ACCO** of the condition which allegedly has caused or is causing the delay, and shall submit a written application to the **ACCO** identifying:

13.8.1(a) The **Contractor**; the registration number; and **Project** description;

13.8.1(b) Liquidated damage assessment rate, as specified in the **Contract**;

13.8.1(c) Original total bid price;

13.8.1(d) The original **Contract** start date and completion date;

13.8.1(e) Any previous time extensions granted (number and duration); and

13.8.1(f) The extension of time requested.

13.8.2 In addition, the application for extension of time shall set forth in detail:

13.8.2(a) The nature of each alleged cause of delay in completing the **Work**;

13.8.2(b) The date upon which each such cause of delay began and ended and the number of **Days** attributable to each such cause;

13.8.2(c) A statement that the **Contractor** waives all claims except for those delineated in the application, and the particulars of any claims which the **Contractor** does not agree to waive. For time extensions for **Substantial Completion** and final completion payments, the application shall include a detailed statement of the dollar amounts of each element of claim item reserved; and

13.8.2(d) A statement indicating the **Contractor's** understanding that the time extension is granted only for purposes of permitting continuation of **Contract** performance and payment for **Work** performed and that the **City** retains its right to conduct an investigation and assess liquidated damages as appropriate in the future.

13.9 Analysis and Approval of Time Extensions:

13.9.1 For time extensions for partial payments, a written determination shall be made by the **ACCO** who may, for good and sufficient cause, extend the time for the performance of the **Contract** as follows:

13.9.1(a) If the **Work** is to be completed within six (6) months, the time for performance may be extended for sixty (60) **Days**;

13.9.1(b) If the **Work** is to be completed within less than one (1) year but more than six (6) months, an extension of ninety (90) **Days** may be granted;

13.9.1(c) If the **Contract** period exceeds one (1) year, besides the extension granted in Article 13.9.1(b), an additional thirty (30) **Days** may be granted for each multiple of six (6) months involved beyond the one (1) year period; or

13.9.1(d) If exceptional circumstances exist, the **ACCO** may extend the time for performance beyond the extensions in Articles 13.9.1(a), 13.9.1(b), and 13.9.1(c). In that event, the **ACCO** shall file with the Mayor's Office of Contract Services a written explanation of the exceptional circumstances.

13.9.2 For extensions of time for **Substantial Completion** and final completion payments, the **Engineer**, in consultation with the **ACCO**, shall prepare a written analysis of the delay (including a preliminary determination of the causes of delay, the beginning and end dates for each such cause of delay, and whether the delays are excusable under the terms of this **Contract**). The report shall be subject to review by and approval of the Board, which shall have authority to question its analysis and determinations and request additional facts or documentation. The report as reviewed and made final by the Board shall be made a part of the **Agency** contract file. Neither the report itself nor anything contained therein shall operate as a waiver or release of any claim the **City** may have against the **Contractor** for either actual or liquidated damages.

13.9.3 Approval Mechanism for Time Extensions for **Substantial Completion** or Final Completion Payments: An extension shall be granted only with the approval of the Board which is comprised of the **ACCO** of the **Agency**, the **City** Corporation Counsel, and the **Comptroller**, or their authorized representatives.

13.9.4 Neither the granting of any application for an extension of time to the **Contractor** or any **Other Contractor** on this **Project** nor the papers, records or reports related to any application for or grant of an extension of time or determination related thereto shall be referred to or offered in evidence by the **Contractor** or its attorneys in any action or proceeding.

13.10 No Damage for Delay: The **Contractor** agrees to make no claim for damages for delay in the performance of this **Contract** occasioned by any act or omission to act of the **City** or any of its representatives, except as provided for in Article 11.

ARTICLE 14. COMPLETION AND FINAL ACCEPTANCE OF THE WORK

14.1 Date for **Substantial Completion**: The **Contractor** shall substantially complete the **Work** within the time fixed in Schedule A of the General Conditions, or within the time to which such **Substantial Completion** may be extended.

14.2 Determining the Date of **Substantial Completion**: The **Work** will be deemed to be substantially complete when the two conditions set forth below have been met.

14.2.1 Inspection: The **Engineer** has inspected the **Work** and has made a written determination that it is substantially complete.

14.2.2 Approval of **Final Approved Punch List** and Date for **Final Acceptance**: Following inspection of the **Work**, the **Engineer** shall furnish the **Contractor** with a final punch list, specifying all items of **Work** to be completed and proposing dates for the completion of each specified item of **Work**. The **Contractor** shall then submit in writing to the **Engineer** within ten (10) **Days** of the **Engineer** furnishing the final punch list either acceptance of the dates or proposed alternative dates for the completion of each specified item of **Work**. If the **Contractor** proposes alternative dates, then, within a reasonable time after receipt, the **Engineer**, in a written notification to the **Contractor**, shall approve the **Contractor's** completion dates or, if they are unable to agree, the **Engineer** shall establish dates for the completion of each item of **Work**. If the **Contractor** neither accepts the dates nor proposes alternative dates within ten (10) **Days**, the schedule proposed by the **Engineer** shall be deemed accepted. The latest completion date specified shall be the date for **Final Acceptance** of the **Work**.

14.3 Date of **Substantial Completion**. The date of approval of the **Final Approved Punch List**, shall be the date of **Substantial Completion**. The date of approval of the **Final Approved Punch List** shall be either (a) if the **Contractor** approves the final punch list and proposed dates for completion furnished by the **Engineer**, the date of the **Contractor's** approval; or (b) if the **Contractor** neither accepts the dates nor proposes alternative dates, ten (10) **Days** after the **Engineer** furnishes the **Contractor** with a final punch list and proposed dates for completion; or (c) if the **Contractor** proposes alternative dates, the date that the **Engineer** sends written notification to the **Contractor** either approving the **Contractor's** proposed alternative dates or establishing dates for the completion for each item of **Work**.

14.4 Determining the Date of **Final Acceptance**: The **Work** will be accepted as final and complete as of the date of the **Engineer's** inspection if, upon such inspection, the **Engineer** finds that all items on the **Final Approved Punch List** are complete and no further **Work** remains to be done. The **Commissioner** will then issue a written determination of **Final Acceptance**.

14.5 Request for Inspection: Inspection of the **Work** by the **Engineer** for the purpose of **Substantial Completion** or **Final Acceptance** shall be made within ten (10) **Days** after receipt of the **Contractor's** written request therefor.

14.6 Request for Re-inspection: If upon inspection for the purpose of **Substantial Completion** or **Final Acceptance**, the **Engineer** determines that there are items of **Work** still to be performed, the **Contractor** shall promptly perform them and then request a re-inspection. If upon re-inspection, the **Engineer** determines that the **Work** is substantially complete or finally accepted, the date of such re-inspection shall be the date of **Substantial Completion** or **Final Acceptance**. Re-inspection by the **Engineer** shall be made within ten (10) **Days** after receipt of the **Contractor's** written request therefor.

14.7 Initiation of Inspection by the **Engineer**: If the **Contractor** does not request inspection or re-inspection of the **Work** for the purpose of **Substantial Completion** or **Final Acceptance**, the **Engineer** may initiate such inspection or re-inspection.

ARTICLE 15. LIQUIDATED DAMAGES

15.1 In the event the **Contractor** fails to substantially complete the **Work** within the time fixed for such **Substantial Completion** in Schedule A of the General Conditions, plus authorized time extensions, or if the **Contractor**, in the sole determination of the **Commissioner**, has abandoned the **Work**, the **Contractor** shall pay to the **City** the sum fixed in Schedule A of the General Conditions, for each and every **Day** that the time consumed in substantially completing the **Work** exceeds the time allowed therefor; which said sum, in view of the difficulty of accurately ascertaining the loss which the **City** will suffer by reason of delay in the **Substantial Completion** of the **Work** hereunder, is hereby fixed and agreed as the liquidated damages that the **City** will suffer by reason of such delay, and not as a penalty. This Article 15 shall also apply to the **Contractor** whether or not the **Contractor** is defaulted pursuant to Chapter X of this **Contract**. Neither the failure to assess liquidated damages nor the granting of any time extension shall operate as a waiver or release of any claim the **City** may have against the **Contractor** for either actual or liquidated damages.

15.2 Liquidated damages received hereunder are not intended to be nor shall they be treated as either a partial or full waiver or discharge of the **City's** right to indemnification, or the **Contractor's** obligation to indemnify the **City**, or to any other remedy provided for in this **Contract** or by **Law**.

15.3 The **Commissioner** may deduct and retain out of the monies which may become due hereunder, the amount of any such liquidated damages; and in case the amount which may become due hereunder shall be less than the amount of liquidated damages suffered by the **City**, the **Contractor** shall be liable to pay the difference.

ARTICLE 16. OCCUPATION OR USE PRIOR TO COMPLETION

16.1 Unless otherwise provided for in the **Specifications**, the **Commissioner** may take over, use, occupy or operate any part of the **Work** at any time prior to **Final Acceptance**, upon written notification to the **Contractor**. The **Engineer** shall inspect the part of the **Work** to be taken over, used, occupied, or operated, and will furnish the **Contractor** with a written statement of the **Work**, if any, which remains to be performed on such part. The **Contractor** shall not object to, nor interfere with, the **Commissioner's** decision to exercise the rights granted by Article 16. In the event the **Commissioner** takes over, uses, occupies, or operates any part of the **Work**:

16.1.1 the **Engineer** shall issue a written determination of **Substantial Completion** with respect to such part of the **Work**;

16.1.2 the **Contractor** shall be relieved of its absolute obligation to protect such part of the unfinished **Work** in accordance with Article 7;

16.1.3 the **Contractor's** guarantee on such part of the **Work** shall begin on the date of such use by the **City**; and;

16.1.4 the **Contractor** shall be entitled to a return of so much of the amount retained in accordance with Article 21 as it relates to such part of the **Work**, except so much thereof as may be retained under Articles 24 and 44.

CHAPTER IV SUBCONTRACTS AND ASSIGNMENTS

ARTICLE 17. SUBCONTRACTS

17.1 The **Contractor** shall not make subcontracts totaling an amount more than the percentage of the total **Contract** price fixed in Schedule A of the General Conditions, without prior written permission from the **Commissioner**. All subcontracts made by the **Contractor** shall be in writing. No **Work** may be performed by a **Subcontractor** prior to the **Contractor** entering into a written subcontract with the **Subcontractor** and complying with the provisions of this Article 17.

17.2 Before making any subcontracts, the **Contractor** shall submit a written statement to the **Commissioner** giving the name and address of the proposed **Subcontractor**; the portion of the **Work** and materials which it is to perform and furnish; the cost of the subcontract; the VENDEX questionnaire if required; the proposed subcontract if requested by the **Commissioner**; and any other information tending to prove that the proposed **Subcontractor** has the necessary facilities, skill, integrity, past experience, and financial resources to perform the **Work** in accordance with the terms and conditions of this **Contract**.

17.3 In addition to the requirements in Article 17.2, **Contractor** is required to list the **Subcontractor** in the web based Subcontractor Reporting System through the City's Payee Information Portal (PIP), available at www.nyc.gov/pip.¹ For each **Subcontractor** listed, **Contractor** is required to provide the following information: maximum contract value, description of **Subcontractor's** Work, start and end date of the subcontract and identification of the **Subcontractor's** industry. Thereafter, **Contractor** will be required to report in the system the payments made to each **Subcontractor** within 30 days of making the payment. If any of the required information changes throughout the Term of the **Contract**, **Contractor** will be required to revise the information in the system.

Failure of the **Contractor** to list a **Subcontractor** and/or to report **Subcontractor** payments in a timely fashion may result in the **Commissioner** declaring the **Contractor** in default of the **Contract** and will subject **Contractor** to liquidated damages in the amount of \$100 per day for each day that the **Contractor** fails to identify a **Subcontractor** along with the required information about the **Subcontractor** and/or fails to report payments to a **Subcontractor**, beyond the time frames set forth herein or in the notice from the **City**. Article 15 shall govern the issue of liquidated damages.

¹ In order to use the new system, a PIP account will be required. Detailed instructions on creating a PIP account and using the new system are also available at www.nyc.gov/pip. Additional assistance with PIP may be obtained by emailing the Financial Information Services Agency Help Desk at pip@fisa.nyc.gov.

17.4 If an approved **Subcontractor** elects to subcontract any portion of its subcontract, the proposed sub-subcontract shall be submitted in the same manner as directed above.

17.5 The **Commissioner** will notify the **Contractor** in writing whether the proposed **Subcontractor** is approved. If the proposed **Subcontractor** is not approved, the **Contractor** may submit another proposed **Subcontractor** unless the **Contractor** decides to do the **Work**. No **Subcontractor** shall be permitted to enter or perform any work on the **Site** unless approved.

17.6 Before entering into any subcontract hereunder, the **Contractor** shall provide the proposed **Subcontractor** with a complete copy of this document and inform the proposed **Subcontractor** fully and completely of all provisions and requirements of this **Contract** relating either directly or indirectly to the **Work** to be performed and the materials to be furnished under such subcontract, and every such **Subcontractor** shall expressly stipulate that all labor performed and materials furnished by the **Subcontractor** shall strictly comply with the requirements of this **Contract**.

17.7 Documents given to a prospective **Subcontractor** for the purpose of soliciting the **Subcontractor's** bid shall include either a copy of the bid cover or a separate information sheet setting forth the **Project** name, the **Contract** number (if available), the **Agency** (as noted in Article 2.1.6), and the **Project's** location.

17.8 The **Commissioner's** approval of a **Subcontractor** shall not relieve the **Contractor** of any of its responsibilities, duties, and liabilities hereunder. The **Contractor** shall be solely responsible to the **City** for the acts or defaults of its **Subcontractor** and of such **Subcontractor's** officers, agents, and employees, each of whom shall, for this purpose, be deemed to be the agent or employee of the **Contractor** to the extent of its subcontract.

17.9 If the **Subcontractor** fails to maintain the necessary facilities, skill, integrity, past experience, and financial resources (other than due to the **Contractor's** failure to make payments where required) to perform the **Work** in accordance with the terms and conditions of this **Contract**, the **Contractor** shall promptly notify the **Commissioner** and replace such **Subcontractor** with a newly approved **Subcontractor** in accordance with this Article 17.

17.10 The **Contractor** shall be responsible for ensuring that all **Subcontractors** performing **Work** at the **Site** maintain all insurance required by **Law**.

17.11 The **Contractor** shall promptly, upon request, file with the **Engineer** a conformed copy of the subcontract and its cost. The subcontract shall provide the following:

17.11.1 **Payment to Subcontractors:** The agreement between the **Contractor** and its **Subcontractor** shall contain the same terms and conditions as to method of payment for **Work**, labor, and materials, and as to retained percentages, as are contained in this **Contract**.

17.11.2 **Prevailing Rate of Wages:** The agreement between the **Contractor** and its **Subcontractor** shall include the prevailing wage rates and supplemental benefits to be paid in accordance with Labor Law Section 220.

17.11.3 **Section 6-123 of the Administrative Code:** Pursuant to the requirements of Section 6-123 of the Administrative Code, every agreement between the **Contractor** and a **Subcontractor** in excess of fifty thousand (\$50,000) dollars shall include a provision that the **Subcontractor** shall not engage in any unlawful discriminatory practice as defined in Title VIII of the Administrative Code (Section 8-101 *et seq.*).

17.11.4 All requirements required pursuant to federal and/or state grant agreement(s), if applicable to the **Work**.

17.12 The **Commissioner** may deduct from the amounts certified under this **Contract** to be due to the **Contractor**, the sum or sums due and owing from the **Contractor** to the **Subcontractors** according to the terms of the said subcontracts, and in case of dispute between the **Contractor** and its **Subcontractor**, or **Subcontractors**, as to the amount due and owing, the **Commissioner** may deduct and withhold from the amounts certified under this **Contract** to be due to the **Contractor** such sum or sums as may be claimed by such **Subcontractor**, or **Subcontractors**, in a sworn affidavit, to be due and owing until such time as such claim or claims shall have been finally resolved.

17.13 On contracts where performance bonds and payment bonds are executed, the **Contractor** shall include on each requisition for payment the following data: **Subcontractor's** name, value of the subcontract, total amount previously paid to **Subcontractor** for **Work** previously requisitioned, and the amount, including retainage, to be paid to the **Subcontractor** for **Work** included in the requisition.

17.14 On **Contracts** where performance bonds and payment bonds are not executed, the **Contractor** shall include with each requisition for payment submitted hereunder, a signed statement from each and every **Subcontractor** and/or **Materialman** for whom payment is requested in such requisition. Such signed statement shall be on the letterhead of the **Subcontractor** and/or **Materialman** for whom payment is requested and shall (i) verify that such **Subcontractor** and/or **Materialman** has been paid in full for all **Work** performed and/or material supplied to date, exclusive of any amount retained and any amount included on the current requisition, and (ii) state the total amount of retainage to date, exclusive of any amount retained on the current requisition.

ARTICLE 18. ASSIGNMENTS

18.1 The **Contractor** shall not assign, transfer, convey or otherwise dispose of this **Contract**, or the right to execute it, or the right, title or interest in or to it or any part thereof, or assign, by power of attorney or otherwise any of the monies due or to become due under this **Contract**, unless the previous written consent of the **Commissioner** shall first be obtained thereto, and the giving of any such consent to a particular assignment shall not dispense with the necessity of such consent to any further or other assignments.

18.2 Such assignment, transfer, conveyance or other disposition of this **Contract** shall not be valid until filed in the office of the **Commissioner** and the **Comptroller**, with the written consent of the **Commissioner** endorsed thereon or attached thereto.

18.3 Failure to obtain the previous written consent of the **Commissioner** to such an assignment, transfer, conveyance or other disposition, may result in the revocation and annulment of this **Contract**. The **City** shall thereupon be relieved and discharged from any further liability to the **Contractor**, its assignees, transferees or sublessees, who shall forfeit and lose all monies therefor earned under the **Contract**, except so much as may be required to pay the **Contractor's** employees.

18.4 The provisions of this clause shall not hinder, prevent, or affect an assignment by the **Contractor** for the benefit of its creditors made pursuant to the **Laws** of the State of New York.

18.5 This **Contract** may be assigned by the **City** to any corporation, agency or instrumentality having authority to accept such assignment.

**CHAPTER V
CONTRACTOR'S SECURITY AND GUARANTEE**

ARTICLE 19. SECURITY DEPOSIT

19.1 If performance and payment bonds are required, the City shall retain the bid security to ensure that the successful bidder executes the **Contract** and furnishes the required payment and performance security within ten (10) **Days** after notice of the award of the **Contract**. If the successful bidder fails to execute the **Contract** and furnish the required payment and performance security, the City shall retain such bid security as set forth in the Information for Bidders. If the successful bidder executes the **Contract** and furnishes the required payment and performance security, the City shall return the bid security within a reasonable time after the furnishing of such bonds and execution of the **Contract** by the City.

19.2 If performance and payment bonds are not required, the bid security shall be retained by the City as security for the **Contractor's** faithful performance of the **Contract**. If partial payments are provided, the bid security will be returned to the **Contractor** after the sum retained under Article 21 equals the amount of the bid security, subject to other provisions of this **Contract**. If partial payments are not provided, the bid security will be released when final payment is certified by the City for payment.

19.3 If the **Contractor** is declared in default under Article 48 prior to the return of the deposit, or if any claim is made such as referred to in Article 23, the amount of such deposit, or so much thereof as the **Comptroller** may deem necessary, may be retained and then applied by the **Comptroller**:

19.3.1 To compensate the City for any expense, loss or damage suffered or incurred by reason of or resulting from such default, including the cost of re-letting and liquidated damages; or

19.3.2 To indemnify the City against any and all claims.

ARTICLE 20. PAYMENT GUARANTEE

20.1 On **Contracts** where one hundred (100%) percent performance bonds and payment bonds are executed, this Article 20 does not apply.

20.2 In the event the terms of this **Contract** do not require the **Contractor** to provide a payment bond or where the **Contract** does not require a payment bond for one hundred (100%) percent of the **Contract** price, the City shall, in accordance with the terms of this Article 20, guarantee payment of all lawful claims for:

20.2.1 Wages and compensation for labor performed and/or services rendered; and

20.2.2 Materials, equipment, and supplies provided, whether incorporated into the **Work** or not, when demands have been filed with the City as provided hereinafter by any person, firm, or corporation which furnished labor, material, equipment, supplies, or any combination thereof, in connection with the **Work** performed hereunder (hereinafter referred to as the "beneficiary") at the direction of the City or the **Contractor**.

20.3 The provisions of Article 20.2 are subject to the following limitations and conditions:

20.3.1 If the **Contractor** provides a payment bond for a value that is less than one hundred (100%) percent of the value of the **Contract Work**, the payment bond provided by the **Contractor** shall be primary (and non-contributing) to the payment guarantee provided under this Article 20.

20.3.2 The guarantee is made for the benefit of all beneficiaries as defined in Article 20.2 provided that those beneficiaries strictly adhere to the terms and conditions of Article 20.3.4 and 20.3.5.

20.3.3 Nothing in this Article 20 shall prevent a beneficiary providing labor, services or material for the **Work** from suing the **Contractor** for any amounts due and owing the beneficiary by the **Contractor**.

20.3.4 Every person who has furnished labor or material, to the **Contractor** or to a **Subcontractor** of the **Contractor**, in the prosecution of the **Work** and who has not been paid in full therefor before the expiration of a period of ninety (90) **Days** after the date on which the last of the labor was performed or material was furnished by him/her for which the claim is made, shall have the right to sue on this payment guarantee in his/her own name for the amount, or the balance thereof, unpaid at the time of commencement of the action; provided, however, that a person having a direct contractual relationship with a **Subcontractor** of the **Contractor** but no contractual relationship express or implied with the **Contractor** shall not have a right of action upon the guarantee unless he/she shall have given written notice to the **Contractor** within one hundred twenty (120) **Days** from the date on which the last of the labor was performed or the last of the material was furnished, for which his/her claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the material was furnished or for whom the labor was performed. The notice shall be served by delivering the same personally to the **Contractor** or by mailing the same by registered mail, postage prepaid, in an envelope addressed to the **Contractor** at any place where it maintains an office or conducts its business; provided, however, that where such notice is actually received by the **Contractor** by other means, such notice shall be deemed sufficient.

20.3.5 Except as provided in Labor Law Section 220-g, no action on this payment guarantee shall be commenced after the expiration of the one-year limitations period set forth in Section 137(4)(b) of the State Finance Law.

20.3.6 The **Contractor** shall promptly forward to the **City** any notice or demand received pursuant to Article 20.3.4. The **Contractor** shall inform the **City** of any defenses to the notice or demand and shall forward to the **City** any documents the **City** requests concerning the notice or demand.

20.3.7 All demands made against the **City** by a beneficiary of this payment guarantee shall be presented to the **Engineer** along with all written documentation concerning the demand which the **Engineer** deems reasonably appropriate or necessary, which may include, but shall not be limited to: the subcontract; any invoices presented to the **Contractor** for payment; the notarized statement of the beneficiary that the demand is due and payable, that a request for payment has been made of the **Contractor** and that the demand has not been paid by the **Contractor** within the time allowed for such payment by the subcontract; and copies of any correspondence between the beneficiary and the **Contractor** concerning such demand. The **City** shall notify the **Contractor** that a demand has been made. The **Contractor** shall inform the **City** of any defenses to the demand and shall forward to the **City** any documents the **City** requests concerning the demand.

20.3.8 The City shall make payment only if, after considering all defenses presented by the Contractor, it determines that the payment is due and owing to the beneficiary making the demand.

20.3.9 No beneficiary shall be entitled to interest from the City, or to any other costs, including, but not limited to, attorneys' fees, except to the extent required by State Finance Law Section 137.

20.4 Upon the receipt by the City of a demand pursuant to this Article 20, the City may withhold from any payment otherwise due and owing to the Contractor under this Contract an amount sufficient to satisfy the demand.

20.4.1 In the event the City determines that the demand is valid, the City shall notify the Contractor of such determination and the amount thereof and direct the Contractor to immediately pay such amount to the beneficiary. In the event the Contractor, within seven (7) Days of receipt of such notification from the City, fails to pay the beneficiary, such failure shall constitute an automatic and irrevocable assignment of payment by the Contractor to the beneficiary for the amount of the demand determined by the City to be valid. The Contractor, without further notification or other process, hereby gives its unconditional consent to such assignment of payment to the beneficiary and authorizes the City, on its behalf, to take all necessary actions to implement such assignment of payment, including without limitation the execution of any instrument or documentation necessary to effectuate such assignment.

20.4.2 In the event that the amount otherwise due and owing to the Contractor by the City is insufficient to satisfy such demand, the City may, at its option, require payment from the Contractor of an amount sufficient to cover such demand and exercise any other right to require or recover payment which the City may have under Law or Contract.

20.4.3 In the event the City determines that the demand is invalid, any amount withheld pending the City's review of such demand shall be paid to the Contractor; provided, however, no lien has been filed. In the event a claim or an action has been filed, the terms and conditions set forth in Article 23 shall apply. In the event a lien has been filed, the parties will be governed by the provisions of the Lien Law of the State of New York.

20.5 The provisions of this Article 20 shall not prevent the City and the Contractor from resolving disputes in accordance with the PPB Rules, where applicable.

20.6 In the event the City determines that the beneficiary is entitled to payment pursuant to this Article 20, such determination and any defenses and counterclaims raised by the Contractor shall be taken into account in evaluating the Contractor's performance.

20.7 Nothing in this Article 20 shall relieve the Contractor of the obligation to pay the claims of all persons with valid and lawful claims against the Contractor relating to the Work.

20.8 The Contractor shall not require any performance, payment or other bonds of any Subcontractor if this Contract does not require such bonds of the Contractor.

20.9 The payment guarantee made pursuant to this Article 20 shall be construed in a manner consistent with Section 137 of the State Finance Law and shall afford to persons furnishing labor or materials to the Contractor or its Subcontractors in the prosecution of the Work under this Contract all of the rights and remedies afforded to such persons by such section, including but not limited to, the right

to commence an action against the City on the payment guarantee provided by this Article 20 within the one-year limitations period set forth in Section 137(4)(b).

ARTICLE 21. RETAINED PERCENTAGE

21.1 If this **Contract** requires one hundred (100%) percent performance and payment security, then as further security for the faithful performance of this **Contract**, the **Commissioner** shall deduct, and retain until the substantial completion of the **Work**, five (5%) percent of the value of **Work** certified for payment in each partial payment voucher.

21.2 If this **Contract** does not require one hundred (100%) percent performance and payment security and if the price for which this **Contract** was awarded does not exceed one million (\$1,000,000) dollars, then as further security for the faithful performance of this **Contract**, the **Commissioner** shall deduct, and retain until the substantial completion of the **Work**, five (5%) percent of the value of **Work** certified for payment in each partial payment voucher.

21.3 If this **Contract** does not require one hundred (100%) percent performance and payment security and if the price for which this **Contract** was awarded exceeds one million (\$1,000,000) dollars, then as further security for the faithful performance of this **Contract**, the **Commissioner** shall deduct, and retain until the substantial completion of the **Work**, up to ten (10%) percent of the value of **Work** certified for payment in each partial payment voucher. The percentage to be retained is set forth in Schedule A of the General Conditions.

ARTICLE 22. INSURANCE

22.1 Types of Insurance: The **Contractor** shall procure and maintain the following types of insurance if, and as indicated, in Schedule A of the General Conditions (with the minimum limits and special conditions specified in Schedule A). Such insurance shall be maintained from the date the **Contractor** is required to provide Proof of Insurance pursuant to Article 22.3.1 through the date of completion of all required **Work** (including punch list work as certified in writing by the **Resident Engineer**), except for insurance required pursuant to Article 22.1.4, which may terminate upon **Substantial Completion** of the **Contract**. All insurance shall meet the requirements set forth in this Article 22. Wherever this Article requires that insurance coverage be "at least as broad" as a specified form (including all ISO forms), there is no obligation that the form itself be used, provided that the **Contractor** can demonstrate that the alternative form or endorsement contained in its policy provides coverage at least as broad as the specified form.

22.1.1 Commercial General Liability Insurance: The **Contractor** shall provide Commercial General Liability Insurance covering claims for property damage and/or bodily injury, including death, which may arise from any of the operations under this **Contract**. Coverage under this insurance shall be at least as broad as that provided by the latest edition of Insurance Services Office ("ISO") Form CG 0001. Such insurance shall be "occurrence" based rather than "claims-made" and include, without limitation, the following types of coverage: premises operations; products and completed operations; contractual liability (including the tort liability of another assumed in a contract); broad form property damage; independent contractors; explosion, collapse and underground (XCU); construction means and methods; and incidental malpractice. Such insurance shall contain a "per project" aggregate limit, as specified in Schedule A, that applies separately to operations under this **Contract**.

22.1.1(a) Such Commercial General Liability Insurance shall name the **City** as an Additional Insured. Coverage for the **City** shall specifically include the **City's** officials and employees, be at least as broad as the latest edition of ISO Form CG 20 10 and provide completed operations coverage at least as broad as the latest edition of ISO Form CG 20 37.

22.1.1(b) Such Commercial General Liability Insurance shall name all other entities designated as additional insureds in Schedule A but only for claims arising from the **Contractor's** operations under this **Contract**, with coverage at least as broad as the latest edition of ISO Form CG 20 26.

22.1.1(c) If the **Work** requires a permit from the Department of Buildings pursuant to 1 RCNY Section 101-08, at http://www.nyc.gov/html/dob/downloads/rules/1_RCNY_101-08.pdf, the **Contractor** shall provide Commercial General Liability Insurance with limits of at least those required by 1 RCNY section 101-08. If the **Work** does not require such a permit, the minimum limits shall be those provided for in Schedule A.

22.1.1(d) If any of the **Work** includes repair of a waterborne vessel owned by or to be delivered to the **City**, such Commercial General Liability shall include, or be endorsed to include, Ship Repairer's Legal Liability Coverage to protect against, without limitation, liability arising from navigation of such vessels prior to delivery to and acceptance by the **City**.

22.1.2 Workers' Compensation Insurance, Employers' Liability Insurance, and Disability Benefits Insurance: The **Contractor** shall provide, and shall cause its **Subcontractors** to provide, Workers Compensation Insurance, Employers' Liability Insurance, and Disability Benefits Insurance in accordance with the **Laws** of the State of New York on behalf of all employees providing services under this **Contract** (except for those employees, if any, for which the **Laws** require insurance only pursuant to Article 22.1.3).

22.1.3 United States Longshoremen's and Harbor Workers Act and/or Jones Act Insurance: If specified in Schedule A of the **General Conditions** or if required by **Law**, the **Contractor** shall provide insurance in accordance with the United States Longshoremen's and Harbor Workers Act and/or the Jones Act, on behalf of all qualifying employees providing services under this **Contract**.

22.1.4 Builders Risk Insurance: If specified in Schedule A of the **General Conditions**, the **Contractor** shall provide Builders Risk Insurance on a completed value form for the total value of the **Work** through **Substantial Completion** of the **Work** in its entirety. Such insurance shall be provided on an All Risk basis and include coverage, without limitation, for windstorm (including named windstorm), storm surge, flood and earth movement. Unless waived by the **Commissioner**, it shall include coverage for ordinance and law, demolition and increased costs of construction, debris removal, pollutant clean up and removal, and expediting costs. Such insurance shall cover, without limitation, (a) all buildings and/or structures involved in the **Work**, as well as temporary structures at the **Site**, and (b) any property that is intended to become a permanent part of such building or structure, whether such property is on the **Site**, in transit or in temporary storage. Policies shall name the **Contractor** as Named Insured and list the **City** as both an Additional Insured and a Loss Payee as its interest may appear.

22.1.4(a) Policies of such insurance shall specify that, in the event a loss occurs at an occupied facility, occupancy of such facility is permitted without the consent of the issuing insurance company.

22.1.4(b) Such insurance may be provided through an Installation Floater, at the **Contractor's** option, if it otherwise conforms with the requirements of this Article 22.1.4.

22.1.5 Commercial Automobile Liability Insurance: The **Contractor** shall provide Commercial Automobile Liability Insurance for liability arising out of ownership, maintenance or use of any owned (if any), non-owned and hired vehicles to be used in connection with this **Contract**. Coverage shall be at least as broad as the latest edition of ISO Form CA0001. If vehicles are used for transporting hazardous materials, the Automobile Liability Insurance shall be endorsed to provide pollution liability broadened coverage for covered vehicles (endorsement CA 99 48) as well as proof of MCS 90.

22.1.6 Contractors Pollution Liability Insurance: If specified in Schedule A of the General Conditions, the **Contractor** shall maintain, or cause the **Subcontractor** doing such **Work** to maintain, Contractors Pollution Liability Insurance covering bodily injury and property damage. Such insurance shall provide coverage for actual, alleged or threatened emission, discharge, dispersal, seepage, release or escape of pollutants (including asbestos), including any loss, cost or expense incurred as a result of any cleanup of pollutants (including asbestos) or in the investigation, settlement or defense of any claim, action, or proceedings arising from the operations under this **Contract**. Such insurance shall be in the **Contractor's** name and list the **City** as an Additional Insured and any other entity specified in Schedule A. Coverage shall include, without limitation, (a) loss of use of damaged property or of property that has not been physically injured, (b) transportation, and (c) non-owned disposal sites.

22.1.6(a) Coverage for the **City** as Additional Insured shall specifically include the **City's** officials and employees and be at least as broad as provided to the **Contractor** for this **Project**.

22.1.6(b) If such insurance is written on a claims-made policy, such policy shall have a retroactive date on or before the effective date of this **Contract**, and continuous coverage shall be maintained, or an extended discovery period exercised, for a period of not less than three (3) years from the time the **Work** under this **Contract** is completed.

22.1.7 Marine Insurance:

22.1.7(a) Marine Protection and Indemnity Insurance: If specified in Schedule A of the General Conditions or if the **Contractor** engages in marine operations in the execution of any part of the **Work**, the **Contractor** shall maintain, or cause the **Subcontractor** doing such **Work** to maintain, Marine Protection and Indemnity Insurance with coverage at least as broad as Form SP-23. The insurance shall provide coverage for the **Contractor** or **Subcontractor** (whichever is doing this **Work**) and for the **City** (together with its officials and employees) and any other entity specified in Schedule A as an Additional Insured for bodily injury and property damage arising from marine operations under this **Contract**. Coverage shall include, without limitation, injury or death of crew members (if not fully provided through other insurance), removal of wreck, damage to piers, wharves and other fixed or floating objects and loss of or damage to any other vessel or craft, or to property on such other vessel or craft.

22.1.7(b) Hull and Machinery Insurance: If specified in Schedule A of the General Conditions or if the **Contractor** engages in marine operations in the execution of any part of the **Work**, the **Contractor** shall maintain, or cause the **Subcontractor** doing such **Work** to maintain, Hull and Machinery Insurance with coverage for the **Contractor** or **Subcontractor** (whichever is doing this **Work**) and for the **City** (together with its officials and employees) as Additional Insured at least as broad as the latest edition of American Institute Tug Form for all tugs used under this **Contract** and Collision Liability at least as broad as the latest edition of American Institute Hull Clauses.

22.1.7(c) Marine Pollution Liability Insurance: If specified in Schedule A of the General Conditions or if the **Contractor** engages in marine operations in the execution of any part of the **Work**, the **Contractor** shall maintain, or cause the **Subcontractor** doing such **Work** to maintain, Marine Pollution Liability Insurance covering itself (or the **Subcontractor** doing such **Work**) as Named Insured and the **City** (together with its officials and employees) and any other entity specified in Schedule A as an Additional Insured. Coverage shall be at least as broad as that provided by the latest edition of Water Quality Insurance Syndicate Form and include, without limitation, liability arising from the discharge or substantial threat of a discharge of oil, or from the release or threatened release of a hazardous substance including injury to, or economic losses resulting from, the destruction of or damage to real property, personal property or natural resources.

22.1.8 The **Contractor** shall provide such other types of insurance, at such minimum limits and with such conditions, as are specified in Schedule A of the General Conditions.

22.2 General Requirements for Insurance Coverage and Policies:

22.2.1 All required insurance policies shall be maintained with companies that may lawfully issue the required policy and have an A.M. Best rating of at least A-/VII or a Standard and Poor's rating of at least A, unless prior written approval is obtained from the **City** Corporation Counsel.

22.2.2 The **Contractor** shall be solely responsible for the payment of all premiums for all required policies and all deductibles and self-insured retentions to which such policies are subject, whether or not the **City** is an insured under the policy.

22.2.3 In his/her sole discretion, the **Commissioner** may, subject to the approval of the **Comptroller** and the **City** Corporation Counsel, accept Letters of Credit and/or custodial accounts in lieu of required insurance.

22.2.4 The **City's** limits of coverage for all types of insurance required pursuant to Schedule A of the General Conditions shall be the greater of (i) the minimum limits set forth in Schedule A or (ii) the limits provided to the **Contractor** as Named Insured under all primary, excess, and umbrella policies of that type of coverage.

22.2.5 The **Contractor** may satisfy its insurance obligations under this Article 22 through primary policies or a combination of primary and excess/umbrella policies, so long as all policies provide the scope of coverage required herein.

22.2.6 Policies of insurance provided pursuant to this Article 22 shall be primary and non-contributing to any insurance or self-insurance maintained by the **City**.

22.3 Proof of Insurance:

22.3.1 For all types of insurance required by Article 22.1 and Schedule A, except for insurance required by Articles 22.1.4 and 22.1.7, the **Contractor** shall file proof of insurance in accordance with this Article 22.3 within ten (10) **Days** of award. For insurance provided pursuant to Articles 22.1.4 and 22.1.7, proof shall be filed by a date specified by the **Commissioner** or ten (10) **Days** prior to the commencement of the portion of the **Work** covered by such policy, whichever is earlier.

22.3.2 For Workers' Compensation Insurance provided pursuant to Article 22.1.2, the **Contractor** shall submit one of the following forms: C-105.2 Certificate of Workers' Compensation Insurance; U-26.3 - State Insurance Fund Certificate of Workers' Compensation Insurance; Request for WC/DB Exemption (Form CE-200); equivalent or successor forms used by the New York State Workers' Compensation Board; or other proof of insurance in a form acceptable to the **Commissioner**. For Disability Benefits Insurance provided pursuant to Article 22.1.2, the Contractor shall submit DB-120.1 - Certificate Of Insurance Coverage Under The NYS Disability Benefits Law, Request for WC/DB Exemption (Form CE-200); equivalent or successor forms used by the New York State Workers' Compensation Board; or other proof of insurance in a form acceptable to the **Commissioner**. ACORD forms are not acceptable.

22.3.3 For policies provided pursuant to all of Article 22.1 other than Article 22.1.2, the **Contractor** shall submit one or more Certificates of Insurance on forms acceptable to the **Commissioner**. All such Certificates of Insurance shall certify (a) the issuance and effectiveness of such policies of insurance, each with the specified minimum limits (b) for insurance secured pursuant to Article 22.1.1 that the **City** and any other entity specified in Schedule A is an Additional Insured with coverage at least as broad as the most recent edition of ISO Forms CG 20 10, CG 20 37, and CG 20 26, as applicable; (c) in the event insurance is required pursuant to Article 22.1.6 and/or Article 22.1.7, that the **City** is an Additional Insured thereunder; (d) the company code issued to the insurance company by the National Association of Insurance Commissioners (the NAIC number); and (e) the number assigned to the **Contract** by the **City**. All such Certificates of Insurance shall be accompanied by either a duly executed "Certification by Broker" in the form contained in Part III of Schedule A or copies of all policies referenced in such Certificate of Insurance as certified by an authorized representative of the issuing insurance carrier. If any policy is not available at the time of submission, certified binders may be submitted until such time as the policy is available, at which time a certified copy of the policy shall be submitted.

22.3.4 Documentation confirming renewals of insurance shall be submitted to the **Commissioner** prior to the expiration date of coverage of policies required under this **Contract**. Such proofs of insurance shall comply with the requirements of Articles 22.3.2 and 22.3.3.

22.3.5 The **Contractor** shall be obligated to provide the **City** with a copy of any policy of insurance provided pursuant to this Article 22 upon the demand for such policy by the **Commissioner** or the **City Corporation Counsel**.

22.4 Operations of the Contractor:

22.4.1 The **Contractor** shall not commence the **Work** unless and until all required certificates have been submitted to and accepted by the **Commissioner**. Acceptance by the **Commissioner** of a certificate does not excuse the **Contractor** from securing insurance

consistent with all provisions of this Article 22 or of any liability arising from its failure to do so.

22.4.2 The **Contractor** shall be responsible for providing continuous insurance coverage in the manner, form, and limits required by this **Contract** and shall be authorized to perform **Work** only during the effective period of all required coverage.

22.4.3 In the event that any of the required insurance policies lapse, are revoked, suspended or otherwise terminated, for whatever cause, the **Contractor** shall immediately stop all **Work**, and shall not recommence **Work** until authorized in writing to do so by the **Commissioner**. Upon quitting the **Site**, except as otherwise directed by the **Commissioner**, the **Contractor** shall leave all plant, materials, equipment, tools, and supplies on the **Site**. **Contract** time shall continue to run during such periods and no extensions of time will be granted. The **Commissioner** may also declare the **Contractor** in default for failure to maintain required insurance.

22.4.4 In the event the **Contractor** receives notice, from an insurance company or other person, that any insurance policy required under this Article 22 shall be cancelled or terminated (or has been cancelled or terminated) for any reason, the **Contractor** shall immediately forward a copy of such notice to both the **Commissioner** and the New York City Comptroller, attn: Office of Contract Administration, Municipal Building, One Centre Street, room 1005, New York, New York 10007. Notwithstanding the foregoing, the **Contractor** shall ensure that there is no interruption in any of the insurance coverage required under this Article 22.

22.4.5 Where notice of loss, damage, occurrence, accident, claim or suit is required under an insurance policy maintained in accordance with this Article 22, the **Contractor** shall notify in writing all insurance carriers that issued potentially responsive policies of any such event relating to any operations under this **Contract** (including notice to Commercial General Liability insurance carriers for events relating to the **Contractor**'s own employees) no later than 20 days after such event. For any policy where the **City** is an Additional Insured, such notice shall expressly specify that "this notice is being given on behalf of the City of New York as Insured as well as the Named Insured." Such notice shall also contain the following information: the number of the insurance policy, the name of the named insured, the date and location of the damage, occurrence, or accident, and the identity of the persons or things injured, damaged or lost. The **Contractor** shall simultaneously send a copy of such notice to the City of New York c/o Insurance Claims Specialist, Affirmative Litigation Division, New York City Law Department, 100 Church Street, New York, New York 10007.

22.4.6 In the event of any loss, accident, claim, action, or other event that does or can give rise to a claim under any insurance policy required under this Article 22, the **Contractor** shall at all times fully cooperate with the **City** with regard to such potential or actual claim.

22.5 **Subcontractor Insurance:** In the event the **Contractor** requires any **Subcontractor** to procure insurance with regard to any operations under this **Contract** and requires such **Subcontractor** to name the **Contractor** as an **Additional Insured** thereunder, the **Contractor** shall ensure that the **Subcontractor** name the **City**, including its officials and employees, as an **Additional Insured** with coverage at least as broad as the most recent edition of ISO Form CG 20 26.

22.6 Wherever reference is made in Article 7 or this Article 22 to documents to be sent to the **Commissioner** (e.g., notices, filings, or submissions), such documents shall be sent to the address set forth in Schedule A of the General Conditions. In the event no address is set forth in Schedule A, such documents are to be sent to the **Commissioner**'s address as provided elsewhere in this **Contract**.

22.7 Apart from damages or losses covered by insurance provided pursuant to Articles 22.1.2, 22.1.3, or 22.1.5, the **Contractor** waives all rights against the **City**, including its officials and employees, for any damages or losses that are covered under any insurance required under this Article 22 (whether or not such insurance is actually procured or claims are paid thereunder) or any other insurance applicable to the operations of the **Contractor** and/or its employees, agents, or **Subcontractors**.

22.8 In the event the **Contractor** utilizes a self-insurance program to satisfy any of the requirements of this Article 22, the **Contractor** shall ensure that any such self-insurance program provides the **City** with all rights that would be provided by traditional insurance under this Article 22, including but not limited to the defense and indemnification obligations that insurers are required to undertake in liability policies.

22.9 Materiality/Non-Waiver: The **Contractor's** failure to secure policies in complete conformity with this Article 22, or to give an insurance company timely notice of any sort required in this **Contract** or to do anything else required by this Article 22 shall constitute a material breach of this **Contract**. Such breach shall not be waived or otherwise excused by any action or inaction by the **City** at any time.

22.10 Pursuant to General Municipal Law Section 108, this **Contract** shall be void and of no effect unless **Contractor** maintains Workers' Compensation Insurance for the term of this **Contract** to the extent required and in compliance with the New York State Workers' Compensation Law.

22.11 Other Remedies: Insurance coverage provided pursuant to this Article 22 or otherwise shall not relieve the **Contractor** of any liability under this **Contract**, nor shall it preclude the **City** from exercising any rights or taking such other actions available to it under any other provisions of this **Contract** or **Law**.

ARTICLE 23. MONEY RETAINED AGAINST CLAIMS

23.1 If any claim shall be made by any person or entity (including **Other Contractors** with the **City** on this **Project**) against the **City** or against the **Contractor** and the **City** for any of the following:

(a) An alleged loss, damage, injury, theft or vandalism of any of the kinds referred to in Articles 7 and 12, plus the reasonable costs of defending the **City**, which in the opinion of the **Comptroller** may not be paid by an insurance company (for any reason whatsoever); or

(b) An infringement of copyrights, patents or use of patented articles, tools, etc., as referred to in Article 57; or

(c) Damage claimed to have been caused directly or indirectly by the failure of the **Contractor** to perform the **Work** in strict accordance with this **Contract**,

the amount of such claim, or so much thereof as the **Comptroller** may deem necessary, may be withheld by the **Comptroller**, as security against such claim, from any money due hereunder. The **Comptroller**, in his/her discretion, may permit the **Contractor** to substitute other satisfactory security in lieu of the monies so withheld.

23.2 If an action on such claim is timely commenced and the liability of the **City**, or the **Contractor**, or both, shall have been established therein by a final judgment of a court of competent jurisdiction, or if such claim shall have been admitted by the **Contractor** to be valid, the **Comptroller**

shall pay such judgment or admitted claim out of the monies retained by the **Comptroller** under the provisions of this Article 23, and return the balance, if any, without interest, to the **Contractor**.

ARTICLE 24. MAINTENANCE AND GUARANTY

24.1 The **Contractor** shall promptly repair, replace, restore or rebuild, as the **Commissioner** may determine, any finished **Work** in which defects of materials or workmanship may appear or to which damage may occur because of such defects, during the one (1) year period subsequent to the date of **Substantial Completion** (or use and occupancy in accordance with Article 16), except where other periods of maintenance and guaranty are provided for in Schedule A.

24.2 As security for the faithful performance of its obligations hereunder, the **Contractor**, upon filing its requisition for payment on **Substantial Completion**, shall deposit with the **Commissioner** a sum equal to one (1%) percent of the price (or the amount fixed in Schedule A of the General Conditions) in cash or certified check upon a state or national bank and trust company or a check of such bank and trust company signed by a duly authorized officer thereof and drawn to the order of the **Comptroller**, or obligations of the **City**, which the **Comptroller** may approve as of equal value with the sum so required.

24.3 In lieu of the above, the **Contractor** may make such security payment to the **City** by authorizing the **Commissioner** in writing to deduct the amount from the **Substantial Completion** payment which shall be deemed the deposit required above.

24.4 If the **Contractor** has faithfully performed all of its obligations hereunder the **Commissioner** shall so certify to the **Comptroller** within five (5) **Days** after the expiration of one (1) year from the date of **Substantial Completion** and acceptance of the **Work** or within thirty (30) **Days** after the expiration of the guarantee period fixed in the **Specifications**. The security payment shall be repaid to the **Contractor** without interest within thirty (30) **Days** after certification by the **Commissioner** to the **Comptroller** that the **Contractor** has faithfully performed all of its obligations hereunder.

24.5 Notice by the **Commissioner** to the **Contractor** to repair, replace, rebuild or restore such defective or damaged **Work** shall be timely, pursuant to this article, if given not later than ten (10) **Days** subsequent to the expiration of the one (1) year period or other periods provided for herein.

24.6 If the **Contractor** shall fail to repair, replace, rebuild or restore such defective or damaged **Work** promptly after receiving such notice, the **Commissioner** shall have the right to have the **Work** done by others in the same manner as provided for in the completion of a defaulted **Contract**, under Article 51.

24.7 If the security payment so deposited is insufficient to cover the cost of such **Work**, the **Contractor** shall be liable to pay such deficiency on demand by the **Commissioner**.

24.8 The **Engineer's** certificate setting forth the fair and reasonable cost of repairing, replacing, rebuilding or restoring any damaged or defective **Work** when performed by one other than the **Contractor**, shall be binding and conclusive upon the **Contractor** as to the amount thereof.

24.9 The **Contractor** shall obtain all manufacturers' warranties and guaranties of all equipment and materials required by this **Contract** in the name of the **City** and shall deliver same to the **Commissioner**. All of the **City's** rights and title and interest in and to said manufacturers' warranties and guaranties may be assigned by the **City** to any subsequent purchasers of such equipment and materials or lessees of the premises into which the equipment and materials have been installed.

CHAPTER VI
CHANGES, EXTRA WORK, AND DOCUMENTATION OF CLAIM

ARTICLE 25. CHANGES

25.1 Changes may be made to this **Contract** only as duly authorized in writing by the **Commissioner** in accordance with the **Law** and this **Contract**. All such changes, modifications, and amendments will become a part of the **Contract**. **Work** so ordered shall be performed by the **Contractor**.

25.2 **Contract** changes will be made only for **Work** necessary to complete the **Work** included in the original scope of the **Contract** and/or for non-material changes to the scope of the **Contract**. Changes are not permitted for any material alteration in the scope of **Work** in the **Contract**.

25.3 The **Contractor** shall be entitled to a price adjustment for **Extra Work** performed pursuant to a written change order. Adjustments to price shall be computed in one or more of the following ways:

25.3.1 By applicable unit prices specified in the **Contract**; and/or

25.3.2 By agreement of a fixed price; and/or

25.3.3 By time and material records; and/or

25.3.4 In any other manner approved by the **CCPO**.

25.4 All payments for change orders are subject to pre-audit by the **Engineering Audit Officer** and may be post-audited by the **Comptroller** and/or the **Agency**.

ARTICLE 26. METHODS OF PAYMENT FOR OVERRUNS AND EXTRA WORK

26.1 **Overrun of Unit Price Item**: An overrun is any quantity of a unit price item which the **Contractor** is directed to provide which is in excess of one hundred twenty-five (125%) percent of the estimated quantity for that item set forth in the bid schedule.

26.1.1 For any unit price item, the **Contractor** will be paid at the unit price bid for any quantity up to one hundred twenty-five (125%) percent of the estimated quantity for that item set forth in the bid schedule. If during the progress of the **Work**, the actual quantity of any unit price item required to complete the **Work** approaches the estimated quantity for that item, and for any reason it appears that the actual quantity of any unit price item necessary to complete the **Work** will exceed the estimated quantity for that item by twenty-five (25%) percent, the **Contractor** shall immediately notify the **Engineer** of such anticipated overrun. The **Contractor** shall not be compensated for any quantity of a unit price item provided which is in excess of one hundred twenty-five (125%) percent of the estimated quantity for that item set forth in the bid schedule without written authorization from the **Engineer**.

26.1.2 If the actual quantity of any unit price item necessary to complete the **Work** will exceed one hundred twenty five (125%) percent of the estimated quantity for that item set forth in the bid schedule, the **City** reserves the right and the **Contractor** agrees to negotiate a new unit price for such item. In no event shall such negotiated new unit price exceed the unit bid price. If the **City** and **Contractor** cannot agree on a new unit price, then the **City** shall order the **Contractor** and the **Contractor** agrees to provide additional quantities of the

item on the basis of time and material records for the actual and reasonable cost as determined under Article 26.2, but in no event at a unit price exceeding the unit price bid.

26.2 Extra Work: For **Extra Work** where payment is by agreement on a fixed price in accordance with Article 25.3.2, the price to be paid for such **Extra Work** shall be based on the fair and reasonable estimated cost of the items set forth below. For **Extra Work** where payment is based on time and material records in accordance with Article 25.3.3, the price to be paid for such **Extra Work** shall be the actual and reasonable cost of the items set forth below, calculated in accordance with the formula specified therein, if any.

26.2.1 Necessary materials (including transportation to the Site); plus

26.2.2 Necessary direct labor, including payroll taxes (subject to statutory wage caps) and supplemental benefits; plus

26.2.3 Sales and personal property taxes, if any, required to be paid on materials not incorporated into such **Extra Work**; plus

26.2.4 Reasonable rental value of **Contractor-owned** (or **Subcontractor-owned**, as applicable), necessary plant and equipment other than **Small Tools**, plus fuel/energy costs. Except for fuel costs for pick-up trucks which shall be reimbursed based on a consumption of five (5) gallons per shift, fuel costs shall be reimbursed based on actual costs or, in the absence of auditable documentation, the following fuel consumption formula per operating hour: $(.035) \times (\text{HP rating}) \times (\text{Fuel cost/gallon})$. Reasonable rental value is defined as the lower of either seventy-five percent of the monthly prorated rental rates established in "The AED Green Book, Rental Rates and Specifications for Construction Equipment" published by Equipment Watch (the "Green Book"), or seventy-five percent of the monthly prorated rental rates established in the "Rental Rate Blue Book for Construction Equipment" published by Equipment Watch (the "Blue Book") (the applicable Blue Book rate being for rental only without the addition of any operational costs listed in the Blue Book). The reasonable rental value is deemed to be inclusive of all operating costs except for fuel/energy consumption and equipment operator's wages/costs. For multiple shift utilization, reimbursement shall be calculated as follows: first shift shall be seventy-five (75%) percent of such rental rates; second shift shall be sixty (60%) percent of the first shift rate; and third shift shall be forty (40%) percent of the first shift rate. Equipment on standby shall be reimbursed at one-third (1/3) the prorated monthly rental rate. **Contractor-owned** (or **Subcontractor-owned**, as applicable) equipment includes equipment from rental companies affiliated with or controlled by the **Contractor** (or **Subcontractor**, as applicable), as determined by the **Commissioner**. In establishing cost reimbursement for non-operating **Contractor-owned** (or **Subcontractor-owned**, as applicable) equipment (scaffolding, sheeting systems, road plates, etc.), the **City** may restrict reimbursement to a purchase-salvage/life cycle basis if less than the computed rental costs; plus

26.2.5 Necessary installation and dismantling of such plant and equipment, including transportation to and from the Site, if any, provided that, in the case of non-**Contractor-owned** (or non-**Subcontractor-owned**, as applicable) equipment rented from a third party, the cost of installation and dismantling are not allowable if such costs are included in the rental rate; plus

26.2.6 Necessary fees charged by governmental entities; plus

26.2.7 Necessary construction-related service fees charged by non-governmental entities, such as landfill tipping fees; plus

26.2.8 Reasonable rental costs of non-Contractor-owned (or non-Subcontractor-owned, as applicable) necessary plant and equipment other than **Small Tools**, plus fuel/energy costs. Except for fuel costs for pick-up trucks which shall be reimbursed based on a consumption of five (5) gallons per shift, fuel costs shall be reimbursed based on actual costs or, in the absence of auditable documentation, the following fuel consumption formula per hour of operation: $(.035) \times (\text{HP rating}) \times (\text{Fuel cost/gallon})$. In lieu of renting, the City reserves the right to direct the purchase of non-operating equipment (scaffolding, sheeting systems, road plates, etc.), with payment on a purchase-salvage/life cycle basis, if less than the projected rental costs; plus

26.2.9 Workers' Compensation Insurance, and any insurance coverage expressly required by the City for the performance of the **Extra Work** which is different than the types of insurance required by Article 22 and Schedule A of the General Conditions. The cost of Workers' Compensation Insurance is subject to applicable payroll limitation caps and shall be based upon the carrier's Manual Rate for such insurance derived from the applicable class Loss Cost ("LC") and carrier's Lost Cost Multiplier ("LCM") approved by the New York State Department of Financial Services, and with the exception of experience rating, rate modifiers as promulgated by the New York Compensation Insurance Rating Board ("NYCIRB"); plus

26.2.10 Additional costs incurred as a result of the **Extra Work** for performance and payment bonds; plus

26.2.11 Twelve percent (12%) percent of the total of items in Articles 26.2.1 through 26.2.5 as compensation for overhead, except that no percentage for overhead will be allowed on **Payroll Taxes** or on the premium portion of overtime pay or on sales and personal property taxes. Overhead shall include without limitation, all costs and expenses in connection with administration, management superintendence, small tools, and insurance required by Schedule A of the General Conditions other than Workers' Compensation Insurance; plus

26.2.12 Ten (10%) percent of the total of items in Articles 26.2.1 through 26.2.5, plus the items in Article 26.2.11, as compensation for profit, except that no percentage for profit will be allowed on **Payroll Taxes** or on the premium portion of overtime pay or on sales and personal property taxes; plus

26.2.13 Five (5%) percent of the total of items in Articles 26.2.6 through 26.2.10 as compensation for overhead and profit.

26.3 Where the **Extra Work** is performed in whole or in part by other than the Contractor's own forces pursuant to Article 26.2, the Contractor shall be paid, subject to pre-audit by the **Engineering Audit Officer**, the cost of such **Work** computed in accordance with Article 26.2 above, plus an additional allowance of five (5%) percent to cover the Contractor's overhead and profit.

26.4 Where a change is ordered, involving both **Extra Work** and omitted or reduced **Contract Work**, the **Contract** price shall be adjusted, subject to pre-audit by the **EAO**, in an amount based on the difference between the cost of such **Extra Work** and of the omitted or reduced **Work**.

26.5 Where the Contractor and the Commissioner can agree upon a fixed price for **Extra Work** in accordance with Article 25.3.2 or another method of payment for **Extra Work** in accordance with Article

25.3.4, or for **Extra Work** ordered in connection with omitted **Work**, such method, subject to pre-audit by the **EAO**, may, at the option of the **Commissioner**, be substituted for the cost plus a percentage method provided in Article 26.2; provided, however, that if the **Extra Work** is performed by a **Subcontractor**, the **Contractor** shall not be entitled to receive more than an additional allowance of five (5%) percent for overhead and profit over the cost of such **Subcontractor's Work** as computed in accordance with Article 26.2.

ARTICLE 27. RESOLUTION OF DISPUTES

27.1 All disputes between the **City** and the **Contractor** of the kind delineated in this Article 27.1 that arise under, or by virtue of, this **Contract** shall be finally resolved in accordance with the provisions of this Article 27 and the **PPB Rules**. This procedure for resolving all disputes of the kind delineated herein shall be the exclusive means of resolving any such disputes.

27.1.1 This Article 27 shall not apply to disputes concerning matters dealt with in other sections of the **PPB Rules**, or to disputes involving patents, copyrights, trademarks, or trade secrets (as interpreted by the courts of New York State) relating to proprietary rights in computer software.

27.1.2 This Article 27 shall apply only to disputes about the scope of **Work** delineated by the **Contract**, the interpretation of **Contract** documents, the amount to be paid for **Extra Work** or disputed work performed in connection with the **Contract**, the conformity of the **Contractor's Work** to the **Contract**, and the acceptability and quality of the **Contractor's Work**; such disputes arise when the **Engineer, Resident Engineer, Engineering Audit Officer**, or other designee of the **Commissioner** makes a determination with which the **Contractor** disagrees.

27.2 All determinations required by this Article 27 shall be made in writing clearly stated, with a reasoned explanation for the determination based on the information and evidence presented to the party making the determination. Failure to make such determination within the time required by this Article 27 shall be deemed a non-determination without prejudice that will allow application to the next level.

27.3 During such time as any dispute is being presented, heard, and considered pursuant to this Article 27, the **Contract** terms shall remain in force and the **Contractor** shall continue to perform **Work** as directed by the **ACCO** or the **Engineer**. Failure of the **Contractor** to continue **Work** as directed shall constitute a waiver by the **Contractor** of its claim.

27.4 Presentation of Disputes to **Commissioner**.

Notice of Dispute and Agency Response. The **Contractor** shall present its dispute in writing ("Notice of Dispute") to the **Commissioner** within thirty (30) Days of receiving written notice of the determination or action that is the subject of the dispute. This notice requirement shall not be read to replace any other notice requirements contained in the **Contract**. The Notice of Dispute shall include all the facts, evidence, documents, or other basis upon which the **Contractor** relies in support of its position, as well as a detailed computation demonstrating how any amount of money claimed by the **Contractor** in the dispute was arrived at. Within thirty (30) Days after receipt of the detailed written submission comprising the complete Notice of Dispute, the **Engineer, Resident Engineer, Engineering Audit Officer**, or other designee of the **Commissioner** shall submit to the **Commissioner** all materials he or she deems pertinent to the dispute. Following initial submissions to the **Commissioner**, either party may demand of the other the production of any document or other material the demanding party believes may be relevant to the dispute. The requested party shall produce all relevant materials that are not otherwise

protected by a legal privilege recognized by the courts of New York State. Any question of relevancy shall be determined by the **Commissioner** whose decision shall be final. Willful failure of the **Contractor** to produce any requested material whose relevancy the **Contractor** has not disputed, or whose relevancy has been affirmatively determined, shall constitute a waiver by the **Contractor** of its claim.

27.4.1 **Commissioner Inquiry.** The **Commissioner** shall examine the material and may, in his or her discretion, convene an informal conference with the **Contractor**, the **ACCO**, and the **Engineer, Resident Engineer, Engineering Audit Officer**, or other designee of the **Commissioner** to resolve the issue by mutual consent prior to reaching a determination. The **Commissioner** may seek such technical or other expertise as he or she shall deem appropriate, including the use of neutral mediators, and require any such additional material from either or both parties as he or she deems fit. The **Commissioner's** ability to render, and the effect of, a decision hereunder shall not be impaired by any negotiations in connection with the dispute presented, whether or not the **Commissioner** participated therein. The **Commissioner** may or, at the request of any party to the dispute, shall compel the participation of any **Other Contractor** with a contract related to the **Work** of this **Contract**, and that **Contractor** shall be bound by the decision of the **Commissioner**. Any **Other Contractor** thus brought into the dispute resolution proceeding shall have the same rights and obligations under this Article 27 as the **Contractor** initiating the dispute.

27.4.2 **Commissioner Determination.** Within thirty (30) **Days** after the receipt of all materials and information, or such longer time as may be agreed to by the parties, the **Commissioner** shall make his or her determination and shall deliver or send a copy of such determination to the **Contractor**, the **ACCO**, and **Engineer, Resident Engineer, Engineering Audit Officer**, or other designee of the **Commissioner**, as applicable, together with a statement concerning how the decision may be appealed.

27.4.3 **Finality of Commissioner's Decision.** The **Commissioner's** decision shall be final and binding on all parties, unless presented to the Contract Dispute Resolution Board pursuant to this Article 27. The **City** may not take a petition to the Contract Dispute Resolution Board. However, should the **Contractor** take such a petition, the **City** may seek, and the Contract Dispute Resolution Board may render, a determination less favorable to the **Contractor** and more favorable to the **City** than the decision of the **Commissioner**.

27.5 **Presentation of Dispute to the Comptroller.** Before any dispute may be brought by the **Contractor** to the Contract Dispute Resolution Board, the **Contractor** must first present its claim to the **Comptroller** for his or her review, investigation, and possible adjustment.

27.5.1 **Time, Form, and Content of Notice.** Within thirty (30) **Days** of its receipt of a decision by the **Commissioner**, the **Contractor** shall submit to the **Comptroller** and to the **Commissioner** a Notice of Claim regarding its dispute with the **Agency**. The Notice of Claim shall consist of (i) a brief written statement of the substance of the dispute, the amount of money, if any, claimed and the reason(s) the **Contractor** contends the dispute was wrongly decided by the **Commissioner**; (ii) a copy of the written decision of the **Commissioner**; and (iii) a copy of all materials submitted by the **Contractor** to the **Agency**, including the Notice of Dispute. The **Contractor** may not present to the **Comptroller** any material not presented to the **Commissioner**, except at the request of the **Comptroller**.

27.5.2 **Response.** Within thirty (30) **Days** of receipt of the Notice of Claim, the **Agency** shall make available to the **Comptroller** a copy of all material submitted by the **Agency** to the **Commissioner** in connection with the dispute. The **Agency** may not present to the

Comptroller any material not presented to the **Commissioner** except at the request of the **Comptroller**.

27.5.3 **Comptroller Investigation.** The **Comptroller** may investigate the claim in dispute and, in the course of such investigation, may exercise all powers provided in Sections 7-201 and 7-203 of the Administrative Code. In addition, the **Comptroller** may demand of either party, and such party shall provide, whatever additional material the **Comptroller** deems pertinent to the claim, including original business records of the **Contractor**. Willful failure of the **Contractor** to produce within fifteen (15) **Days** any material requested by the **Comptroller** shall constitute a waiver by the **Contractor** of its claim. The **Comptroller** may also schedule an informal conference to be attended, by the **Contractor**, **Agency** representatives, and any other personnel desired by the **Comptroller**.

27.5.4 **Opportunity of Comptroller to Compromise or Adjust Claim.** The **Comptroller** shall have forty-five (45) **Days** from his or her receipt of all materials referred to in Article 27.5.3 to investigate the disputed claim. The period for investigation and compromise may be further extended by agreement between the **Contractor** and the **Comptroller**, to a maximum of ninety (90) **Days** from the **Comptroller's** receipt of all materials. The **Contractor** may not present its petition to the Contract Dispute Resolution Board until the period for investigation and compromise delineated in this Article 27.5.4 has expired. In compromising or adjusting any claim hereunder, the **Comptroller** may not revise or disregard the terms of the **Contract** between the parties.

27.6 **Contract Dispute Resolution Board.** There shall be a Contract Dispute Resolution Board composed of:

27.6.1 The chief administrative law judge of the Office of Administrative Trials and Hearings (OATH) or his/her designated OATH administrative law judge, who shall act as chairperson, and may adopt operational procedures and issue such orders consistent with this Article 27 as may be necessary in the execution of the Contract Dispute Resolution Board's functions, including, but not limited to, granting extensions of time to present or respond to submissions;

27.6.2 The **CCPO** or his/her designee; any designee shall have the requisite background to consider and resolve the merits of the dispute and shall not have participated personally and substantially in the particular matter that is the subject of the dispute or report to anyone who so participated; and

27.6.3 A person with appropriate expertise who is not an employee of the **City**. This person shall be selected by the presiding administrative law judge from a prequalified panel of individuals, established and administered by OATH with appropriate background to act as decision-makers in a dispute. Such individual may not have a contract or dispute with the **City** or be an officer or employee of any company or organization that does, or regularly represents persons, companies, or organizations having disputes with the **City**.

27.7 **Petition to the Contract Dispute Resolution Board.** In the event the claim has not been settled or adjusted by the **Comptroller** within the period provided in this Article 27, the **Contractor**, within thirty (30) **Days** thereafter, may petition the Contract Dispute Resolution Board to review the **Commissioner's** determination.

27.7.1 **Form and Content of Petition by Contractor.** The **Contractor** shall present its dispute to the Contract Dispute Resolution Board in the form of a petition, which shall

include (i) a brief written statement of the substance of the dispute, the amount of money, if any, claimed, and the reason(s) the **Contractor** contends the dispute was wrongly decided by the **Commissioner**; (ii) a copy of the written Decision of the **Commissioner**, (iii) copies of all materials submitted by the **Contractor** to the Agency; (iv) a copy of the written decision of the **Comptroller**, if any, and (v) copies of all correspondence with, or written material submitted by the **Contractor**, to the **Comptroller**. The **Contractor** shall concurrently submit four (4) complete sets of the Petition: one set to the City Corporation Counsel (Attn: Commercial and Real Estate Litigation Division) and three (3) sets to the Contract Dispute Resolution Board at OATH's offices with proof of service on the City Corporation Counsel. In addition, the **Contractor** shall submit a copy of the written statement of the substance of the dispute, cited in (i) above, to both the **Commissioner** and the **Comptroller**.

27.7.2 **Agency Response.** Within thirty (30) **Days** of its receipt of the Petition by the City Corporation Counsel, the **Agency** shall respond to the brief written statement of the **Contractor** and make available to the Contract Dispute Resolution Board all material it submitted to the **Commissioner** and **Comptroller**. Three (3) complete copies of the **Agency** response shall be provided to the Contract Dispute Resolution Board and one to the **Contractor**. Extensions of time for submittal of the **Agency** response shall be given as necessary upon a showing of good cause or, upon consent of the parties, for an initial period of up to thirty (30) **Days**.

27.7.3 **Further Proceedings.** The Contract Dispute Resolution Board shall permit the **Contractor** to present its case by submission of memoranda, briefs, and oral argument. The Contract Dispute Resolution Board shall also permit the **Agency** to present its case in response to the **Contractor** by submission of memoranda, briefs, and oral argument. If requested by the City Corporation Counsel, the **Comptroller** shall provide reasonable assistance in the preparation of the **Agency's** case. Neither the **Contractor** nor the **Agency** may support its case with any documentation or other material that was not considered by the **Comptroller**, unless requested by the Contract Dispute Resolution Board. The Contract Dispute Resolution Board, in its discretion, may seek such technical or other expert advice as it shall deem appropriate and may seek, on its own or upon application of a party, any such additional material from any party as it deems fit. The Contract Dispute Resolution Board, in its discretion, may combine more than one dispute between the parties for concurrent resolution.

27.7.4 **Contract Dispute Resolution Board Determination.** Within forty-five (45) **Days** of the conclusion of all written submissions and oral arguments, the Contract Dispute Resolution Board shall render a written decision resolving the dispute. In an unusually complex case, the Contract Dispute Resolution Board may render its decision in a longer period, not to exceed ninety (90) **Days**, and shall so advise the parties at the commencement of this period. The Contract Dispute Resolution Board's decision must be consistent with the terms of the **Contract**. Decisions of the Contract Dispute Resolution Board shall only resolve matters before the Contract Dispute Resolution Board and shall not have precedential effect with respect to matters not before the Contract Dispute Resolution Board.

27.7.5 **Notification of Contract Dispute Resolution Board Decision.** The Contract Dispute Resolution Board shall send a copy of its decision to the **Contractor**, the **ACCO**, the Engineer, the **Comptroller**, the City Corporation Counsel, the **CCPO**, and the **PPB**. A decision in favor of the **Contractor** shall be subject to the prompt payment provisions of the **PPB Rules**. The Required Payment Date shall be thirty (30) **Days** after the date the parties are formally notified of the Contract Dispute Resolution Board's decision.

27.7.6 Finality of Contract Dispute Resolution Board Decision. The Contract Dispute Resolution

Board's decision shall be final and binding on all parties. Any party may seek review of the Contract Dispute Resolution Board's decision solely in the form of a challenge, filed within four (4) months of the date of the Contract Dispute Resolution Board's decision, in a court of competent jurisdiction of the State of New York, County of New York pursuant to Article 78 of the Civil Practice Law and Rules. Such review by the court shall be limited to the question of whether or not the Contract Dispute Resolution Board's decision was made in violation of lawful procedure, was affected by an error of Law, or was arbitrary and capricious or an abuse of discretion. No evidence or information shall be introduced or relied upon in such proceeding that was not presented to the Contract Dispute Resolution Board in accordance with this Article 27.

27.8 Any termination, cancellation, or alleged breach of the Contract prior to or during the pendency of any proceedings pursuant to this Article 27 shall not affect or impair the ability of the Commissioner or Contract Dispute Resolution Board to make a binding and final decision pursuant to this Article 27.

ARTICLE 28. RECORD KEEPING FOR EXTRA OR DISPUTED WORK OR WORK ON A TIME & MATERIALS BASIS

28.1 While the Contractor or any of its Subcontractors is performing Work on a time and material basis or Extra Work on a time and material basis ordered by the Commissioner under Article 25, or where the Contractor believes that it or any of its Subcontractors is performing Extra Work but a final determination by Agency has not been made, or the Contractor or any of its Subcontractors is performing disputed Work (whether on or off the Site), or complying with a determination or order under protest in accordance with Articles 11, 27, and 30, in each such case the Contractor shall furnish the Resident Engineer daily with three (3) copies of written statements signed by the Contractor's representative at the Site showing:

28.1.1 The name, trade, and number of each worker employed on such Work or engaged in complying with such determination or order, the number of hours employed, and the character of the Work each is doing; and

28.1.2 The nature and quantity of any materials, plant and equipment furnished or used in connection with the performance of such Work or compliance with such determination or order, and from whom purchased or rented.

28.2 A copy of such statement will be countersigned by the Resident Engineer, noting thereon any items not agreed to or questioned, and will be returned to the Contractor within two (2) Days after submission.

28.3 The Contractor and its Subcontractors, when required by the Commissioner, or the Comptroller, shall also produce for inspection, at the office of the Contractor or Subcontractor, any and all of its books, bid documents, financial statements, vouchers, records, daily job diaries and reports, and cancelled checks, and any other documents relating to showing the nature and quantity of the labor, materials, plant and equipment actually used in the performance of such Work, or in complying with such determination or order, and the amounts expended therefor, and shall permit the Commissioner and the Comptroller to make such extracts therefrom, or copies thereof, as they or either of them may desire.

28.4 In connection with the examination provided for herein, the Commissioner, upon demand therefor, will produce for inspection by the Contractor such records as the Agency may have with

respect to such **Extra Work** or disputed **Work** performed under protest pursuant to order of the **Commissioner**, except those records and reports which may have been prepared for the purpose of determining the accuracy and validity of the **Contractor's** claim.

28.5 Failure to comply strictly with these requirements shall constitute a waiver of any claim for extra compensation or damages on account of the performance of such **Work** or compliance with such determination or order.

ARTICLE 29. OMITTED WORK

29.1 If any **Contract Work** in a lump sum **Contract**, or if any part of a lump sum item in a unit price, lump sum, or percentage-bid **Contract** is omitted by the **Commissioner** pursuant to Article 33, the **Contract** price, subject to audit by the EAO, shall be reduced by a pro rata portion of the lump sum bid amount based upon the percent of **Work** omitted subject to Article 29.4. For the purpose of determining the pro rata portion of the lump sum bid amount, the bid breakdown submitted in accordance with Article 41 shall be considered, but shall not be the determining factor.

29.2 If the whole of a lump sum item or units of any other item is so omitted by the **Commissioner** in a unit price, lump sum, or percentage-bid **Contract**, then no payment will be made therefor except as provided in Article 29.4.

29.3 For units that have been ordered but are only partially completed, the unit price shall be reduced by a pro rata portion of the unit price bid based upon the percentage of **Work** omitted subject to Article 29.4.

29.4 In the event the **Contractor**, with respect to any omitted **Work**, has purchased any non-cancelable material and/or equipment that is not capable of use except in the performance of this **Contract** and has been specifically fabricated for the sole purpose of this **Contract**, but not yet incorporated into the **Work**, the **Contractor** shall be paid for such material and/or equipment in accordance with Article 64.2.1(b); provided, however, such payment is contingent upon the **Contractor's** delivery of such material and/or equipment in acceptable condition to a location designated by the **City**.

29.5 The **Contractor** agrees to make no claim for damages or for loss of overhead and profit with regard to any omitted **Work**.

ARTICLE 30. NOTICE AND DOCUMENTATION OF COSTS AND DAMAGES; PRODUCTION OF FINANCIAL RECORDS

30.1 If the **Contractor** shall claim to be sustaining damages by reason of any act or omission of the **City** or its agents, it shall submit to the **Commissioner** within forty-five (45) **Days** from the time such damages are first incurred, and every thirty (30) **Days** thereafter for as long as such damages are incurred, verified statements of the details and the amounts of such damages, together with documentary evidence of such damages. The **Contractor** may submit any of the above statements within such additional time as may be granted by the **Commissioner** in writing upon written request therefor. Failure of the **Commissioner** to respond in writing to a written request for additional time within thirty (30) **Days** shall be deemed a denial of the request. On failure of the **Contractor** to strictly comply with the foregoing provisions, such claims shall be deemed waived and no right to recover on such claims shall exist. Damages that the **Contractor** may claim in any action or dispute resolution procedure arising under or by reason of this **Contract** shall not be different from or in excess of the statements and documentation made pursuant to this Article 30.

30.2 In addition to the foregoing statements, the **Contractor** shall, upon notice from the **Commissioner**, produce for examination at the **Contractor's** office, by the **Engineer, Architect or Project Manager**, all of its books of account, bills, invoices, payrolls, subcontracts, time books, daily reports, bank deposit books, bank statements, check books, and cancelled checks, showing all of its acts and transactions in connection with or relating to or arising by reason of this **Contract**, and submit itself and persons in its employment, for examination under oath by any person designated by the **Commissioner** or **Comptroller** to investigate claims made or disputes against the **City** under this **Contract**. At such examination, a duly authorized representative of the **Contractor** may be present.

30.3 In addition to the statements required under Article 28 and this Article 30, the **Contractor** and/or its **Subcontractor** shall, within thirty (30) **Days** upon notice from the **Commissioner** or **Comptroller**, produce for examination at the **Contractor's** and/or **Subcontractor's** office, by a representative of either the **Commissioner** or **Comptroller**, all of its books of account, bid documents, financial statements, accountant workpapers, bills, invoices, payrolls, subcontracts, time books, daily reports, bank deposit books, bank statements, check books, and cancelled checks, showing all of its acts and transactions in connection with or relating to or arising by reason of this **Contract**. Further, the **Contractor** and/or its **Subcontractor** shall submit any person in its employment, for examination under oath by any person designated by the **Commissioner** or **Comptroller** to investigate claims made or disputes against the **City** under this **Contract**. At such examination, a duly authorized representative of the **Contractor** may be present.

30.4 Unless the information and examination required under Article 30.3 is provided by the **Contractor** and/or its **Subcontractor** upon thirty (30) **Days'** notice from the **Commissioner** or **Comptroller**, or upon the **Commissioner's** or **Comptroller's** written authorization to extend the time to comply, the **City** shall be released from all claims arising under, relating to or by reason of this **Contract**, except for sums certified by the **Commissioner** to be due under the provisions of this **Contract**. It is further stipulated and agreed that no person has the power to waive any of the foregoing provisions and that in any action or dispute resolution procedure against the **City** to recover any sum in excess of the sums certified by the **Commissioner** to be due under or by reason of this **Contract**, the **Contractor** must allege in its complaint and prove, at trial or during such dispute resolution procedure, compliance with the provisions of this Article 30.

30.5 In addition, after the commencement of any action or dispute resolution procedure by the **Contractor** arising under or by reason of this **Contract**, the **City** shall have the right to require the **Contractor** to produce for examination under oath, up until the trial of the action or hearing before the Contract Dispute Resolution Board, the books and documents described in Article 30.3 and submit itself and all persons in its employ for examination under oath. If this Article 30 is not complied with as required, then the **Contractor** hereby consents to the dismissal of the action or dispute resolution procedure.

CHAPTER VII
POWERS OF THE RESIDENT ENGINEER,
THE ENGINEER OR ARCHITECT AND THE COMMISSIONER

ARTICLE 31. THE RESIDENT ENGINEER

31.1 The **Resident Engineer** shall have the power to inspect, supervise, and control the performance of the **Work**, subject to review by the **Commissioner**. The **Resident Engineer** shall not, however, have the power to issue an **Extra Work** order, except as specifically designated in writing by the **Commissioner**.

ARTICLE 32. THE ENGINEER OR ARCHITECT OR PROJECT MANAGER

32.1 The **Engineer** or **Architect** or **Project Manager**, in addition to those matters elsewhere herein delegated to the **Engineer** and expressly made subject to his/her determination, direction or approval, shall have the power, subject to review by the **Commissioner**:

32.1.1 To determine the amount, quality, and location of the **Work** to be paid for hereunder; and

32.1.2 To determine all questions in relation to the **Work**, to interpret the **Contract Drawings, Specifications, and Addenda**, and to resolve all patent inconsistencies or ambiguities therein; and

32.1.3 To determine how the **Work** of this **Contract** shall be coordinated with **Work of Other Contractors** engaged simultaneously on this **Project**, including the power to suspend any part of the **Work**, but not the whole thereof; and

32.1.4 To make minor changes in the **Work** as he/she deems necessary, provided such changes do not result in a net change in the cost to the **City** or to the **Contractor** of the **Work** to be done under the **Contract**; and

32.1.5 To amplify the **Contract Drawings**, add explanatory information and furnish additional **Specifications** and drawings, consistent with this **Contract**.

32.2 The foregoing enumeration shall not imply any limitation upon the power of the **Engineer** or **Architect** or **Project Manager**, for it is the intent of this **Contract** that all of the **Work** shall generally be subject to his/her determination, direction, and approval, except where the determination, direction or approval of someone other than the **Engineer** or **Architect** or **Project Manager** is expressly called for herein.

32.3 The **Engineer** or **Architect** or **Project Manager** shall not, however, have the power to issue an **Extra Work** order, except as specifically designated in writing by the **Commissioner**.

ARTICLE 33. THE COMMISSIONER

33.1 The **Commissioner**, in addition to those matters elsewhere herein expressly made subject to his/her determination, direction or approval, shall have the power:

33.1.1 To review and make determinations on any and all questions in relation to this **Contract** and its performance; and

33.1.2 To modify or change this **Contract** so as to require the performance of **Extra Work** (subject, however, to the limitations specified in Article 25) or the omission of **Contract Work**; and

33.1.3 To suspend the whole or any part of the **Work** whenever in his/her judgment such suspension is required:

33.1.3(a) In the interest of the **City** generally; or

33.1.3(b) To coordinate the **Work** of the various contractors engaged on this **Project** pursuant to the provisions of Article 12; or

33.1.3(c) To expedite the completion of the entire **Project** even though the completion of this particular **Contract** may thereby be delayed.

ARTICLE 34. NO ESTOPPEL

34.1 Neither the **City** nor any **Agency**, official, agent or employee thereof, shall be bound, precluded or estopped by any determination, decision, approval, order, letter, payment or certificate made or given under or in connection with this **Contract** by the **City**, the **Commissioner**, the **Engineer**, the **Resident Engineer**, or any other official, agent or employee of the **City**, either before or after the final completion and acceptance of the **Work** and payment therefor:

34.1.1 From showing the true and correct classification, amount, quality or character of the **Work** actually done; or that any such determination, decision, order, letter, payment or certificate was untrue, incorrect or improperly made in any particular, or that the **Work**, or any part thereof, does not in fact conform to the requirements of this **Contract**; and

34.1.2 From demanding and recovering from the **Contractor** any overpayment made to it, or such damages as the **City** may sustain by reason of the **Contractor's** failure to perform each and every part of its **Contract**.

CHAPTER VIII LABOR PROVISIONS

ARTICLE 35. EMPLOYEES

35.1 The **Contractor** and its **Subcontractors** shall not employ on the **Work**:

35.1.1 Anyone who is not competent, faithful and skilled in the **Work** for which he/she shall be employed; and whenever the **Commissioner** shall inform the **Contractor**, in writing, that any employee is, in his/her opinion, incompetent, unfaithful or disobedient, that employee shall be discharged from the **Work** forthwith, and shall not again be employed upon it; or

35.1.2 Any labor, materials or means whose employment, or utilization during the course of this **Contract**, may tend to or in any way cause or result in strikes, work stoppages, delays, suspension of **Work** or similar troubles by workers employed by the **Contractor** or its **Subcontractors**, or by any of the trades working in or about the buildings and premises where **Work** is being performed under this **Contract**, or by **Other Contractors** or their **Subcontractors** pursuant to other contracts, or on any other building or premises owned or operated by the **City**, its **Agencies**, departments, boards or authorities. Any violation by the **Contractor** of this requirement may, upon certification of the **Commissioner**, be considered as proper and sufficient cause for declaring the **Contractor** to be in default, and for the **City** to take action against it as set forth in Chapter X of this **Contract**, or such other article of this **Contract** as the **Commissioner** may deem proper; or

35.1.3 In accordance with Section 220.3-e of the Labor Law of the State of New York (hereinafter "Labor Law"), the **Contractor** and its **Subcontractors** shall not employ on the **Work** any apprentice, unless he/she is a registered individual, under a bona fide program

registered with the New York State Department of Labor. The allowable ratio of apprentices to journey-level workers in any craft classification shall not be greater than the ratio permitted to the **Contractor** as to its work force on any job under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered as above, shall be paid the wage rate determined by the **Comptroller** of the **City** for the classification of **Work** actually performed. The **Contractor** or **Subcontractor** will be required to furnish written evidence of the registration of its program and apprentices as well as all the appropriate ratios and wage rates, for the area of the construction prior to using any apprentices on the **Contract Work**.

35.2 If the total cost of the **Work** under this **Contract** is at least two hundred fifty thousand (\$250,000) dollars, all laborers, workers, and mechanics employed in the performance of the **Contract** on the public work site, either by the **Contractor**, **Subcontractor** or other person doing or contracting to do the whole or a part of the **Work** contemplated by the **Contract**, shall be certified prior to performing any **Work** as having successfully completed a course in construction safety and health approved by the United States Department of Labor's Occupational Safety and Health Administration that is at least ten (10) hours in duration.

35.3 In accordance with Local Law Nos. 30-2012 and 33-2012, codified at sections 6-132 and 12-113 of the Administrative Code, respectively,

35.3.1 The **Contractor** shall not take an adverse personnel action with respect to an officer or employee in retaliation for such officer or employee making a report of information concerning conduct which such officer or employee knows or reasonably believes to involve corruption, criminal activity, conflict of interest, gross mismanagement or abuse of authority by any officer or employee relating to this **Contract** to (a) the Commissioner of the Department of Investigation, (b) a member of the New York City Council, the Public Advocate, or the **Comptroller**, or (c) the **CCPO**, **ACCO**, **Agency head**, or **Commissioner**.

35.3.2 If any of the **Contractor's** officers or employees believes that he or she has been the subject of an adverse personnel action in violation of Article 35.3.1, he or she shall be entitled to bring a cause of action against the **Contractor** to recover all relief necessary to make him or her whole. Such relief may include but is not limited to: (a) an injunction to restrain continued retaliation, (b) reinstatement to the position such employee would have had but for the retaliation or to an equivalent position, (c) reinstatement of full fringe benefits and seniority rights, (d) payment of two times back pay, plus interest, and (e) compensation for any special damages sustained as a result of the retaliation, including litigation costs and reasonable attorney's fees.

35.3.3 The **Contractor** shall post a notice provided by the **City** in a prominent and accessible place on any site where work pursuant to the **Contract** is performed that contains information about:

35.3.3(a) how its employees can report to the New York City Department of Investigation allegations of fraud, false claims, criminality or corruption arising out of or in connection with the **Contract**; and

35.3.3(b) the rights and remedies afforded to its employees under Administrative Code sections 7-805 (the New York City False Claims Act) and 12-113 (the Whistleblower Protection Expansion Act) for lawful acts taken in connection with the reporting of allegations of fraud, false claims, criminality or corruption in connection with the **Contract**.

35.3.4 For the purposes of this Article 35.3, "adverse personnel action" includes dismissal, demotion, suspension, disciplinary action, negative performance evaluation, any action resulting in loss of staff, office space, equipment or other benefit, failure to appoint, failure to promote, or any transfer or assignment or failure to transfer or assign against the wishes of the affected officer or employee.

35.3.5 This Article 35.3 is applicable to all of the **Contractor's Subcontractors** having subcontracts with a value in excess of \$100,000; accordingly, the **Contractor** shall include this rider in all subcontracts with a value in excess of \$100,000.

35.4 Article 35.3 is not applicable to this **Contract** if it is valued at \$100,000 or less. Articles 35.3.1, 35.3.2, 35.3.4, and 35.3.5 are not applicable to this **Contract** if it was solicited pursuant to a finding of an emergency.

ARTICLE 36. NO DISCRIMINATION

36.1 The **Contractor** specifically agrees, as required by Labor Law Section 220-e, as amended, that:

36.1.1 In the hiring of employees for the performance of **Work** under this **Contract** or any subcontract hereunder, neither the **Contractor**, **Subcontractor**, nor any person acting on behalf of such **Contractor** or **Subcontractor**, shall by reason of race, creed, color or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the **Work** to which the employment relates;

36.1.2 Neither the **Contractor**, **Subcontractor**, nor any person on its behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of **Work** under this **Contract** on account of race, creed, color or national origin;

36.1.3 There may be deducted from the amount payable to the **Contractor** by the **City** under this **Contract** a penalty of fifty (\$50.00) dollars for each person for each **Day** during which such person was discriminated against or intimidated in violation of the provisions of this **Contract**; and

36.1.4 This **Contract** may be cancelled or terminated by the **City** and all moneys due or to become due hereunder may be forfeited, for a second or any subsequent violation of the terms or conditions of this Article 36.

36.1.5 This Article 36 covers all construction, alteration and repair of any public building or public work occurring in the State of New York and the manufacture, sale, and distribution of materials, equipment, and supplies to the extent that such operations are performed within the State of New York pursuant to this **Contract**.

36.2 The **Contractor** specifically agrees, as required by Section 6-108 of the Administrative Code, as amended, that:

36.2.1 It shall be unlawful for any person engaged in the construction, alteration or repair of buildings or engaged in the construction or repair of streets or highways pursuant to a **Contract** with the **City** or engaged in the manufacture, sale or distribution of materials, equipment or supplies pursuant to a **Contract** with the **City** to refuse to employ or to refuse to continue in any employment any person on account of the race, color or creed of such person.

36.2.2 It shall be unlawful for any person or any servant, agent or employee of any person, described in Article 36.1.2, to ask, indicate or transmit, orally or in writing, directly or indirectly, the race, color or creed or religious affiliation of any person employed or seeking employment from such person, firm or corporation.

36.2.3 Breach of the foregoing provisions shall be deemed a violation of a material provision of this **Contract**.

36.2.4 Any person, or the employee, manager or owner of or officer of such firm or corporation who shall violate any of the provisions of this Article 36.2 shall, upon conviction thereof, be punished by a fine of not more than one hundred (\$100.00) dollars or by imprisonment for not more than thirty (30) **Days**, or both.

36.3 This **Contract** is subject to the requirements of Executive Order No. 50 (1980) ("E.O. 50"), as revised, and the rules and regulations promulgated thereunder. No contract will be awarded unless and until these requirements have been complied with in their entirety. By signing this **Contract**, the **Contractor** agrees that it:

36.3.1 Will not engage in any unlawful discrimination against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability, marital status or sexual orientation with respect to all employment decisions including, but not limited to, recruitment, hiring, upgrading, demotion, downgrading, transfer, training, rates of pay or other forms of compensation, layoff, termination, and all other terms and conditions of employment; and

36.3.2 Will not engage in any unlawful discrimination in the selection of **Subcontractors** on the basis of the owner's race, color, creed, national origin, sex, age, disability, marital status or sexual orientation; and

36.3.3 Will state in all solicitations or advertisements for employees placed by or on behalf of the **Contractor** that all qualified applicants will receive consideration for employment without unlawful discrimination based on race, creed, color, national origin, sex, age, citizens status, disability, marital status, sexual orientation, or that it is an equal employment opportunity employer; and

36.3.4 Will send to each labor organization or representative of workers with which it has a collective bargaining agreement or other contract or memorandum of understanding, written notification of its equal employment opportunity commitments under E.O. 50 and the rules and regulations promulgated thereunder; and

36.3.5 Will furnish, before the award of the **Contract**, all information and reports, including an employment report, that are required by E.O. 50, the rules and regulations promulgated thereunder, and orders of the City Department of Business Services, Division of Labor Services (**DLS**) and will permit access to its books, records, and accounts by the **DLS** for the purposes of investigation to ascertain compliance with such rules, regulations, and orders.

36.4 The **Contractor** understands that in the event of its noncompliance with the nondiscrimination clauses of this **Contract** or with any of such rules, regulations, or orders, such noncompliance shall constitute a material breach of this **Contract** and noncompliance with E.O. 50 and the rules and regulations promulgated thereunder. After a hearing held pursuant to the rules of the **DLS**, the Director of the **DLS** may direct the **Commissioner** to impose any or all of the following sanctions:

36.4.1 Disapproval of the **Contractor**; and/or

36.4.2 Suspension or termination of the **Contract**; and/or

36.4.3 Declaring the **Contractor** in default; and/or

36.4.4 In lieu of any of the foregoing sanctions, the Director of the **DLS** may impose an employment program.

In addition to any actions taken under this **Contract**, failure to comply with E.O. 50 and the rules and regulations promulgated thereunder, in one or more instances, may result in a **City Agency** declaring the **Contractor** to be non-responsible in future procurements. The **Contractor** further agrees that it will refrain from entering into any **Contract** or **Contract** modification subject to E.O. 50 and the rules and regulations promulgated thereunder with a **Subcontractor** who is not in compliance with the requirements of E.O. 50 and the rules and regulations promulgated thereunder.

36.5 The **Contractor** specifically agrees, as required by Section 6-123 of the Administrative Code, that:

36.5.1 The **Contractor** will not engage in any unlawful discriminatory practice in violation of Title 8 of the Administrative Code; and

36.5.2 Any failure to comply with this Article 36.5 may subject the **Contractor** to the remedies set forth in Section 6-123 of the Administrative Code, including, where appropriate, sanctions such as withholding of payment, imposition of an employment program, finding the **Contractor** to be in default, cancellation of the **Contract**, or any other sanction or remedy provided by **Law** or **Contract**.

ARTICLE 37. LABOR LAW REQUIREMENTS

37.1 The **Contractor** shall strictly comply with all applicable provisions of the Labor Law, as amended. Such compliance is a material term of this **Contract**.

37.2 The **Contractor** specifically agrees, as required by Labor Law Sections 220 and 220-d, as amended, that:

37.2.1 **Hours of Work:** No laborer, worker, or mechanic in the employ of the **Contractor**, **Subcontractor** or other person doing or contracting to do the whole or a part of the **Work** contemplated by this **Contract** shall be permitted or required to work more than eight (8) hours in any one (1) **Day**, or more than five (5) **Days** in any one (1) week, except as provided in the Labor Law and in cases of extraordinary emergency including fire, flood, or danger to life or property, or in the case of national emergency when so proclaimed by the President of the United States of America.

37.2.2 In situations in which there are not sufficient laborers, workers, and mechanics who may be employed to carry on expeditiously the **Work** contemplated by this **Contract** as a result of such restrictions upon the number of hours and **Days** of labor, and the immediate commencement or prosecution or completion without undue delay of the **Work** is necessary for the preservation of the **Site** and/or for the protection of the life and limb of the persons using the same, such laborers, workers, and mechanics shall be permitted or required to

work more than eight (8) hours in any one (1) **Day**; or five (5) **Days** in any one (1) week; provided, however, that upon application of any **Contractor**, the **Commissioner** shall have first certified to the Commissioner of Labor of the State of New York (hereinafter "Commissioner of Labor") that such public **Work** is of an important nature and that a delay in carrying it to completion would result in serious disadvantage to the public; and provided, further, that such Commissioner of Labor shall have determined that such an emergency does in fact exist as provided in Labor Law Section 220.2.

37.2.3 Failure of the **Commissioner** to make such a certification to the Commissioner of Labor shall not entitle the **Contractor** to damages for delay or for any cause whatsoever.

37.2.4 Prevailing Rate of Wages: The wages to be paid for a legal day's **Work** to laborers, workers, or mechanics employed upon the **Work** contemplated by this **Contract** or upon any materials to be used thereon shall not be less than the "prevailing rate of wage" as defined in Labor Law Section 220, and as fixed by the **Comptroller** in the attached Schedule of Wage Rates and in updated schedules thereof. The prevailing wage rates and supplemental benefits to be paid are those in effect at the time the **Work** is being performed.

37.2.5 Requests for interpretation or correction in the Information for Bidders includes all requests for clarification of the classification of trades to be employed in the performance of the **Work** under this **Contract**. In the event that a trade not listed in the **Contract** is in fact employed during the performance of this **Contract**, the **Contractor** shall be required to obtain from the **Agency** the prevailing wage rates and supplementary benefits for the trades used and to complete the performance of this **Contract** at the price at which the **Contract** was awarded.

37.2.6 Minimum Wages: Except for employees whose wage is required to be fixed pursuant to Labor Law Section 220, all persons employed by the **Contractor** and any **Subcontractor** in the manufacture or furnishing of the supplies, materials, or equipment, or the furnishing of work, labor, or services, used in the performance of this **Contract**, shall be paid, without subsequent deduction or rebate unless expressly authorized by **Law**, not less than the sum mandated by **Law**.

37.3 Working Conditions: No part of the **Work**, labor or services shall be performed or rendered by the **Contractor** in any plants, factories, buildings or surroundings or under working conditions which are unsanitary or hazardous or dangerous to the health and safety of employees engaged in the performance of this **Contract**. Compliance with the safety, sanitary, and factory inspection **Laws** of the state in which the **Work** is to be performed shall be prima facie evidence of compliance with this Article 37.3.

37.4 Prevailing Wage Enforcement: The **Contractor** agrees to pay for all costs incurred by the **City** in enforcing prevailing wage requirements, including the cost of any investigation conducted by or on behalf of the **Agency** or the **Comptroller**, where the **City** discovers a failure to comply with any of the requirements of this Article 37 by the **Contractor** or its **Subcontractor(s)**. The **Contractor** also agrees that, should it fail or refuse to pay for any such investigation, the **Agency** is hereby authorized to deduct from a **Contractor's** account an amount equal to the cost of such investigation.

37.4.1 The Labor Law Section 220 and Section 220-d, as amended, provide that this **Contract** shall be forfeited and no sum paid for any **Work** done hereunder on a second conviction for willfully paying less than:

37.4.1(a) The stipulated prevailing wage scale as provided in Labor Law section 220, as amended, or

37.4.1(b) The stipulated minimum hourly wage scale as provided in Labor Law section 220-d, as amended.

37.4.2 For any breach or violation of either working conditions (Article 37.3) or minimum wages (Article 37.2.6) provisions, the party responsible therefor shall be liable to the City for liquidated damages, which may be withheld from any amounts due on any contracts with the City of such party responsible, or may be recovered in actions brought by the City Corporation Counsel in the name of the City, in addition to damages for any other breach of this Contract, for a sum equal to the amount of any underpayment of wages due to any employee engaged in the performance of this Contract. In addition, the Commissioner shall have the right to cancel contracts and enter into other contracts for the completion of the original contract, with or without public letting, and the original Contractor shall be liable for any additional cost. All sums withheld or recovered as deductions, rebates, refunds, or underpayment of wages hereunder, shall be held in a special deposit account and shall be paid without interest, on order of the Comptroller, directly to the employees who have been paid less than minimum rates of pay as set forth herein and on whose account such sums were withheld or recovered, provided that no claims by employees for such payments shall be entertained unless made within two (2) years from the date of actual notice to the Contractor of the withholding or recovery of such sums by the City.

37.4.3 A determination by the Comptroller that a Contractor and/or its Subcontractor willfully violated Labor Law Section 220 will be forwarded to the City's five District Attorneys for review.

37.4.4 The Contractor's or Subcontractor's noncompliance with this Article 37.4 and Labor Law Section 220 may result in an unsatisfactory performance evaluation and the Comptroller may also find and determine that the Contractor or Subcontractor willfully violated the New York Labor Law.

37.4.4(a) An unsatisfactory performance evaluation for noncompliance with this Article 37.4 may result in a determination that the Contractor is a non-responsible bidder on subsequent procurements with the City and thus a rejection of a future award of a contract with the City, as well as any other sanctions provided for by Law.

37.4.4(b) Labor Law Section 220-b, as amended, provides that when two (2) final determinations have been rendered against a Contractor or Subcontractor within any consecutive six (6) year period determining that such Contractor or Subcontractor has willfully failed to pay the prevailing rate of wages or to provide supplements in accordance with the Labor Law and this Article 37.4, whether such failures were concurrent or consecutive and whether or not such final determinations concerning separate public works projects are rendered simultaneously, such Contractor or Subcontractor shall be ineligible to submit a bid on or be awarded any public works contract with the City for a period of five (5) years from the second final determination. If the final determination involves the falsification of payroll records or the kickback of wages or supplements, the Contractor or Subcontractor shall be ineligible to submit a bid on or be awarded any public works contract with the City for a period of five (5) years from the first final determination.

37.4.4(c) Labor Law Section 220, as amended, provides that the Contractor or Subcontractor found to have violated this Article 37.4 may be directed to make payment of wages or supplements including interest found to be due, and the Contractor or Subcontractor may be directed to make payment of a further sum as

a civil penalty in an amount not exceeding twenty-five (25%) percent of the total amount found to be due.

37.5 The **Contractor** and its **Subcontractors** shall within ten (10) **Days** after mailing of a Notice of Award or written order, post in prominent and conspicuous places in each and every plant, factory, building, and structure where employees of the **Contractor** and its **Subcontractors** engaged in the performance of this **Contract** are employed, notices furnished by the **City**, in relation to prevailing wages and supplements, minimum wages, and other stipulations contained in Sections 220 and 220-h of the Labor Law, and the **Contractor** and its **Subcontractors** shall continue to keep such notices posted in such prominent and conspicuous places until **Final Acceptance** of the supplies, materials, equipment, or **Work**, labor, or services required to be furnished or rendered under this **Contract**.

37.6 The **Contractor** shall strictly comply with all of the provisions of Articles 37.6.1 through 37.6.5, and provide for all workers, laborers or mechanics in its employ, the following:

37.6.1 **Notices Posted At Site:** Post, in a location designated by the **City**, schedules of prevailing wages and supplements for this **Project**, a copy of all re-determinations of such schedules for the **Project**, the Workers' Compensation Law Section 51 notice, all other notices required by Law to be posted at the **Site**, the **City** notice that this **Project** is a public works project on which each worker is entitled to receive the prevailing wages and supplements for the occupation at which he or she is working, and all other notices which the **City** directs the **Contractor** to post. The **Contractor** shall provide a surface for such notices which is satisfactory to the **City**. The **Contractor** shall maintain and keep current such notices in a legible manner and shall replace any notice or schedule which is damaged, defaced, illegible or removed for any reason. The **Contractor** shall post such notices before commencing any **Work** on the **Site** and shall maintain such notices until all **Work** on the **Site** is complete; and

37.6.2 **Daily Site Sign-in Sheets:** Maintain daily **Site** sign-in sheets, and require that **Subcontractors** maintain daily **Site** sign-in sheets for its employees, which include blank spaces for an employee's name to be both printed and signed, job title, date started and Social Security number, the time the employee began work and the time the employee left work, until **Final Acceptance** of the supplies, materials, equipment, or **Work**, labor, or services to be furnished or rendered under this **Contract** unless exception is granted by the **Comptroller** upon application by the **Agency**. In the alternative, subject to the approval of the **CCPO**, the **Contractor** and **Subcontractor** may maintain an electronic or biometric sign-in system, which provides the information required by this Article 37.6.2; and

37.6.3 **Individual Employee Information Notices:** Distribute a notice to each worker, laborer or mechanic employed under this **Contract**, in a form provided by the **Agency**, that this **Project** is a public works project on which each worker, laborer or mechanic is entitled to receive the prevailing rate of wages and supplements for the occupation at which he or she is working. If the total cost of the **Work** under this **Contract** is at least two hundred fifty thousand (\$250,000) dollars, such notice shall also include a statement that each worker, laborer or mechanic must be certified prior to performing any **Work** as having successfully completed a course in construction safety and health approved by the United States Department of Labor's Occupational Safety and Health Administration that is at least ten (10) hours in duration. Such notice shall be distributed to each worker before he or she starts performing any **Work** of this **Contract** and with the first paycheck after July first of each year. "Worker, laborer or mechanic" includes employees of the **Contractor** and all **Subcontractors** and all employees of suppliers entering the **Site**. At the time of distribution, the **Contractor** shall have each worker, laborer or mechanic sign a statement, in a form provided by the **Agency**, certifying that the worker has received the notice required by this

Article 37.6.3, which signed statement shall be maintained with the payroll records required by this **Contract**; and

37.6.3(a) The **Contractor** and each **Subcontractor** shall notify each worker, laborer or mechanic employed under this **Contract** in writing of the prevailing rate of wages for their particular job classification. Such notification shall be given to every worker, laborer, and mechanic on their first pay stub and with every pay stub thereafter; and

37.6.4 **Site Laminated Identification Badges:** The **Contractor** shall provide laminated identification badges which include a photograph of the worker's, laborer's or mechanic's face and indicate the worker's, laborer's or mechanic's name, trade, employer's name, and employment starting date (month/day/year). Further, the **Contractor** shall require as a condition of employment on the **Site**, that each and every worker, laborer or mechanic wear the laminated identification badge at all times and that it may be seen by any representative of the **City**. The **Commissioner** may grant a written waiver from the requirement that the laminated identification badge include a photograph if the **Contractor** demonstrates that the identity of an individual wearing a laminated identification badge can be easily verified by another method; and

37.6.5 **Language Other Than English Used On Site:** Provide the **ACCO** notice when three (3) or more employees (worker and/or laborer and/or mechanic) on the **Site**, at any time, speak a language other than English. The **ACCO** will then provide the **Contractor** the notices described in Article 37.6.1 in that language or languages as may be required. The **Contractor** is responsible for all distributions under this Article 37; and

37.6.6 **Provision of Records:** The **Contractor** and **Subcontractor(s)** shall produce within five (5) **Days** on the **Site** of the **Work** and upon a written order of the **Engineer**, the **Commissioner**, the **ACCO**, the **Agency EAO**, or the **Comptroller**, such records as are required to be kept by this Article 37.6; and

37.6.7 The **Contractor** and **Subcontractor(s)** shall pay employees by check or direct deposit. If this **Contract** is for an amount greater than one million (\$1,000,000) dollars, checks issued by the **Contractor** to covered employees shall be generated by a payroll service or automated payroll system (an in-house system may be used if approved by the **Agency**). For any subcontract for an amount greater than seven hundred fifty thousand (\$750,000) dollars, checks issued by a **Subcontractor** to covered employees shall be generated by a payroll service or automated payroll system (an in-house system may be used if approved by the **Agency**); and

37.6.8 The failure of the **Contractor** or **Subcontractor(s)** to comply with the provisions of Articles 37.6.1 through 37.6.7 may result in the **Commissioner** declaring the **Contractor** in default and/or the withholding of payments otherwise due under the **Contract**.

37.7 The **Contractor** and its **Subcontractors** shall keep such employment and payroll records as are required by Section 220 of the Labor Law. The failure of the **Contractor** or **Subcontractor(s)** to comply with the provisions of this Article 37.7 may result in the **Commissioner** declaring the **Contractor** in default and/or the withholding of payments otherwise due under the **Contract**.

37.8 At the time the **Contractor** makes application for each partial payment and for final payment, the **Contractor** shall submit to the **Commissioner** a written payroll certification, in the form provided by this **Contract**, of compliance with the prevailing wage, minimum wage, and other provisions and stipulations required by Labor Law Section 220 and of compliance with the training requirements of

Labor Law Section 220-h set forth in Article 35.2. This certification of compliance shall be a condition precedent to payment and no payment shall be made to the **Contractor** unless and until each such certification shall have been submitted to and received by the **Commissioner**.

37.9 This **Contract** is executed by the **Contractor** with the express warranty and representation that the **Contractor** is not disqualified under the provisions of Section 220 of the Labor Law from the award of the **Contract**.

37.10 Any breach or violation of any of the foregoing shall be deemed a breach or violation of a material provision of this **Contract**, and grounds for cancellation thereof by the **City**.

ARTICLE 38. PAYROLL REPORTS

38.1 The **Contractor** and its **Subcontractor(s)** shall maintain on the **Site** during the performance of the **Work** the original payrolls or transcripts thereof which the **Contractor** and its **Subcontractor(s)** are required to maintain and shall submit such original payrolls or transcripts, subscribed and affirmed by it as true, within thirty (30) **Days** after issuance of its first payroll, and every thirty (30) **Days** thereafter, pursuant to Labor Law Section 220(3-a)(a)(iii). The **Contractor** and **Subcontractor(s)** shall submit such original payrolls or transcripts along with each and every payment requisition. If payment requisitions are not submitted at least once a month, the **Contractor** and its **Subcontractor(s)** shall submit original payrolls and transcripts both along with its payment requisitions and independently of its payment requisitions.

38.2 The **Contractor** shall maintain payrolls or transcripts thereof for six (6) years from the date of completion of the **Work** on this **Contract**. If such payrolls and transcripts are maintained outside of New York City after the completion of the **Work** and their production is required pursuant to this Article 38, the **Contractor** shall produce such records in New York City upon request by the **City**.

38.3 The **Contractor** and **Subcontractor(s)** shall comply with any written order, direction, or request made by the **Engineer**, the **Commissioner**, the **ACCO**, the **Agency EAO**, the **Agency Labor Law Investigator(s)**, or the **Comptroller**, to provide to the requesting party any of the following information and/or records within five (5) **Days** of such written order, direction, or request:

38.3.1 Such original payrolls or transcripts thereof subscribed and affirmed by it as true and the statements signed by each worker pursuant to this Chapter VIII; and/or

38.3.2 Attendance sheets for each **Day** on which any employee of the **Contractor** and/or any of the **Subcontractor(s)** performed **Work** on the **Site**, which attendance sheet shall be in a form acceptable to the **Agency** and shall provide information acceptable to the **Agency** to identify each such employee; and/or

38.3.3 Any other information to satisfy the **Engineer**, the **Commissioner**, the **ACCO**, the **Agency EAO**, the **Agency Labor Law Investigator(s)** or the **Comptroller**, that this Chapter VIII and the Labor Law, as to the hours of employment and prevailing rates of wages and/or supplemental benefits, are being observed.

38.4 The failure of the **Contractor** or **Subcontractor(s)** to comply with the provisions of Articles 38.1 and/or 38.2 may result in the **Commissioner** declaring the **Contractor** in default and/or the withholding of payments otherwise due under the **Contract**.

ARTICLE 39. DUST HAZARDS

39.1 Should a harmful dust hazard be created in performing the **Work** of this **Contract**, for the elimination of which appliances or methods have been approved by the Board of Standards and Appeals of the City of New York, such appliances and methods shall be installed, maintained, and effectively operated during the continuance of such harmful dust hazard. Failure to comply with this provision after notice shall make this **Contract** voidable at the sole discretion of the **City**.

CHAPTER IX PARTIAL AND FINAL PAYMENTS

ARTICLE 40. CONTRACT PRICE

40.1 The **City** shall pay, and the **Contractor** agrees to accept, in full consideration for the **Contractor's** performance of the **Work** subject to the terms and conditions hereof, the lump sum price or unit prices for which this **Contract** was awarded, plus the amount required to be paid for any **Extra Work** ordered by the **Commissioner** under Article 25, less credit for any **Work** omitted pursuant to Article 29.

ARTICLE 41. BID BREAKDOWN ON LUMP SUM

41.1 Within fifteen (15) **Days** after the commencement date specified in the **Notice to Proceed** or **Order to Work**, unless otherwise directed by the **Resident Engineer**, the **Contractor** shall submit to the **Resident Engineer** a breakdown of its bid price, or of lump sums bid for items of the **Contract**, showing the various operations to be performed under the **Contract**, as directed in the progress schedule required under Article 9, and the value of each of such operations, the total of such items to equal the lump sum price bid. Said breakdown must be approved in writing by the **Resident Engineer**.

41.2 No partial payment will be approved until the **Contractor** submits a bid breakdown that is acceptable to the **Resident Engineer**.

41.3 The **Contractor** shall also submit such other information relating to the bid breakdown as directed by the **Resident Engineer**. Thereafter, the breakdown may be used only for checking the **Contractor's** applications for partial payments hereunder, but shall not be binding upon the **City**, the **Commissioner**, or the **Engineer** for any purpose whatsoever.

ARTICLE 42. PARTIAL PAYMENTS

42.1 From time to time as the **Work** progresses satisfactorily, but not more often than once each calendar month (except where the **Commissioner** approves in writing the submission of invoices on a more frequent basis and for invoices relating to **Work** performed pursuant to a change order), the **Contractor** may submit to the **Engineer** a requisition for a partial payment in the prescribed form, which shall contain an estimate of the quantity and the fair value of the **Work** done during the payment period.

42.2 Partial payments may be made for materials, fixtures, and equipment in advance of their actual incorporation in the **Work**, as the **Commissioner** may approve, and upon the terms and conditions set forth in the General Conditions.

42.3 The **Contractor** shall also submit to the **Commissioner** in connection with every application for partial payment a verified statement in the form prescribed by the **Comptroller** setting forth the information required under Labor Law Section 220-a.

42.4 Within thirty (30) **Days** after receipt of a satisfactory payment application, and within sixty (60) **Days** after receipt of a satisfactory payment application in relation to **Work** performed pursuant to a change order, the **Engineer** will prepare and certify, and the **Commissioner** will approve, a voucher for a partial payment in the amount of such approved estimate, less any and all deductions authorized to be made by the **Commissioner** under the terms of this **Contract** or by **Law**.

ARTICLE 43. PROMPT PAYMENT

43.1 The Prompt Payment provisions of the **PPB** Rules in effect at the time of the bid will be applicable to payments made under this **Contract**. The provisions require the payment to the **Contractor** of interest on payments made after the required payment date, except as set forth in the **PPB** Rules.

43.2 The **Contractor** shall submit a proper invoice to receive payment, except where the **Contract** provides that the **Contractor** will be paid at predetermined intervals without having to submit an invoice for each scheduled payment.

43.3 Determination of interest due will be made in accordance with the **PPB** Rules.

43.4 If the **Contractor** is paid interest, the proportionate share(s) of that interest shall be forwarded by the **Contractor** to its **Subcontractor(s)**.

43.5 The **Contractor** shall pay each **Subcontractor** or **Materialman** not later than seven (7) **Days** after receipt of payment out of amounts paid to the **Contractor** by the **City** for **Work** performed by the **Subcontractor** or **Materialman** under this **Contract**.

43.5.1 If **Contractor** fails to make any payment to any **Subcontractor** or **Materialman** within seven (7) **Days** after receipt of payment by the **City** pursuant to this Article 43.5, then the **Contractor** shall pay interest on amounts due to such **Subcontractor** or **Materialman** at the rate of interest in effect on the date such payment is made by the **Contractor** computed in accordance with Section 756-b (1)(b) of the New York General Business Law. Accrual of interest shall commence on the **Day** immediately following the expiration of the seventh **Day** following receipt of payment by the **Contractor** from the **City** and shall end on the date on which payment is made.

43.6 The **Contractor** shall include in each of its subcontracts a provision requiring each **Subcontractor** to make payment to each of its **Subcontractors** or **Materialmen** for **Work** performed under this **Contract** in the same manner and within the same time period set forth above.

ARTICLE 44. SUBSTANTIAL COMPLETION PAYMENT

44.1 The **Contractor** shall submit with the **Substantial Completion** requisition:

44.1.1 A final verified statement of any pending Article 27 disputes in accordance with the **PPB** Rules and this **Contract** and any and all alleged claims against the **City**, in any way connected with or arising out of this **Contract** (including those as to which details may have been furnished pursuant to Articles 11, 27, 28, and 30) setting forth with respect to each

such claim the total amount thereof, the various items of labor and materials included therein, and the alleged value of each item; and if the alleged claim be one for delay, the alleged cause of each such delay, the period or periods of time, giving the dates when the **Contractor** claims the performance of the **Work** or a particular part thereof was delayed, and an itemized statement and breakdown of the amount claimed for each such delay.

44.1.1(a) With respect to each such claim, the **Commissioner**, the **Comptroller** and, in the event of litigation, the **City Corporation Counsel** shall have the same right to inspect, and to make extracts or copies of, the **Contractor's** books, vouchers, records, etc., as is referred to in Articles 11, 27, 28, and 30. Nothing contained in this Article 44.1.1(a) is intended to or shall relieve the **Contractor** from the obligation of complying strictly with Articles 11, 27, 28, and 30. The **Contractor** is warned that unless such claims are completely set forth as herein required, the **Contractor** upon acceptance of the **Substantial Completion** payment pursuant to this Article 44, will have waived any such claims.

44.1.2 **A Final Approved Punch List.**

44.1.3 Where required, a request for an extension of time to achieve **Substantial Completion** or final extension of time.

44.2 The **Commissioner** shall issue a voucher calling for payment of any part or all of the balance due for **Work** performed under the **Contract**, including monies retained under Article 21, less any and all deductions authorized to be made by the **Commissioner**, under this **Contract** or by **Law**, and less twice the amount the **Commissioner** considers necessary to ensure the completion of the balance of the **Work** by the **Contractor**. Such a payment shall be considered a partial and not a final payment. No **Substantial Completion** payment shall be made under this Article 44 where the **Contractor** failed to complete the **Work** within the time fixed for such completion in the Schedule A of the General Conditions, or within the time to which completion may have been extended, until an extension or extensions of time for the completion of **Work** have been acted upon pursuant to Article 13.

44.3 No further partial payments shall be made to the **Contractor** after **Substantial Completion**, except the **Substantial Completion** payment and payment pursuant to any **Contractor's** requisition that were properly filed with the **Commissioner** prior to the date of **Substantial Completion**; however, the **Commissioner** may grant a waiver for further partial payments after the date of **Substantial Completion** to permit payments for change order **Work** and/or release of retainage and deposits pursuant to Articles 21 and 24. Such waiver shall be in writing.

44.4 The **Contractor** acknowledges that nothing contained in this Article 44 is intended to or shall in any way diminish the force and effect of Article 13.

ARTICLE 45. FINAL PAYMENT

45.1 After completion and **Final Acceptance** of the **Work**, the **Contractor** shall submit all required certificates and documents, together with a requisition for the balance claimed to be due under the **Contract**, less the amount authorized to be retained for maintenance under Article 24. Such submission shall be within 90 days of the date of the **Commissioner's** written determination of **Final Acceptance**, or within such additional time as may be granted by the **Commissioner** in writing. If the **Contractor** fails to submit all required certificates and documents within the time allowed, no payment of the balance claimed shall be made to the **Contractor** and the **Contractor** shall be deemed to have forfeited its right to

payment of any balance claimed. A verified statement similar to that required in connection with applications for partial payments shall also be submitted to the **Commissioner**.

45.2 Amended Verified Statement of Claims: The **Contractor** shall also submit with the final requisition any amendments to the final verified statement of any pending dispute resolution procedures in accordance with the **PPB Rules** and this **Contract** and any and all alleged claims against the **City**, in any way connected with or arising out of this **Contract** (including those as to which details may have been furnished pursuant to Articles 11, 27, 28, and 30) that have occurred subsequent to **Substantial Completion**, setting forth with respect to each such claim the total amount thereof, the various items of labor and materials included therein, and the alleged value of each such item; and if the alleged claim be one for delay, the alleged cause of each such delay, the period or periods of time, giving the dates when the **Contractor** claims the performance of the **Work** or a particular part thereof was delayed, and an itemized statement and breakdown of the amount claimed for each such delay. With reference to each such claim, the **Commissioner**, the **Comptroller** and, in the event of litigation, the **City Corporation Counsel** shall have the same right to inspect, and to make extracts or copies of, the **Contractor's** books, vouchers, records, etc., as is referred to in Articles 11, 27, 28, and 30. Nothing contained in this Article 45.2, is intended to or shall relieve the **Contractor** from the obligation of complying strictly with Articles 11, 27, 28, and 30. The **Contractor** is warned that unless such claims are completely set forth as herein required, the **Contractor**, upon acceptance of the Final Payment pursuant to Article 46, will have waived any such claims.

45.3 Preparation of Final Voucher: Upon determining the balance due hereunder other than on account of claims, the **Engineer** will prepare and certify, for the **Commissioner's** approval, a voucher for final payment in that amount less any and all deductions authorized to be made by the **Commissioner** under this **Contract** or by **Law**. In the case of a lump sum **Contract**, the **Commissioner** shall certify the voucher for final payment within thirty (30) **Days** from the date of completion and acceptance of the **Work**, provided all requests for extensions of time have been acted upon.

45.3.1 All prior certificates and vouchers upon which partial payments were made, being merely estimates made to enable the **Contractor** to prosecute the **Work** more advantageously, shall be subject to correction in the final voucher, and the certification of the **Engineer** thereon and the approval of the **Commissioner** thereof, shall be conditions precedent to the right of the **Contractor** to receive any money hereunder. Such final voucher shall be binding and conclusive upon the **Contractor**.

45.3.2 Payment pursuant to such final voucher, less any deductions authorized to be made by the **Commissioner** under this **Contract** or by **Law**, shall constitute the final payment, and shall be made by the **Comptroller** within thirty (30) **Days** after the filing of such voucher in his/her office.

45.4 The **Contractor** acknowledges that nothing contained in this Article 45 is intended to or shall in any way diminish the force and effect of Article 13.

ARTICLE 46. ACCEPTANCE OF FINAL PAYMENT

46.1 The acceptance by the **Contractor**, or by anyone claiming by or through it, of the final payment, whether such payment be made pursuant to any judgment of any court, or otherwise, shall constitute and operate as a release of the **City** from any and all claims of and liability to the **Contractor** for anything heretofore done or furnished for the **Contractor** relating to or arising out of this **Contract** and the **Work** done hereunder, and for any prior act, neglect or default on the part of the **City** or any of its officials, agents or employees, excepting only a claim against the **City** for the amounts deducted or retained in accordance with the terms and provisions of this **Contract** or by **Law**, and excepting any

claims, not otherwise waived, or any pending dispute resolution procedures which are contained in the verified statement filed with the **Contractor's** substantial and final requisitions pursuant to Articles 44 and 45.

46.2 The **Contractor** is warned that the execution by it of a release, in connection with the acceptance of the final payment, containing language purporting to reserve claims other than those herein specifically excepted from the operation of this Article 46, or those for amounts deducted by the **Commissioner** from the final requisition or from the final payment as certified by the **Engineer** and approved by the **Commissioner**, shall not be effective to reserve such claims, anything stated to the **Contractor** orally or in writing by any official, agent or employee of the **City** to the contrary notwithstanding.

46.3 Should the **Contractor** refuse to accept the final payment as tendered by the **Comptroller**, it shall constitute a waiver of any right to interest thereon.

46.4 The **Contractor**, however, shall not be barred by this Article 46 from commencing an action for breach of **Contract** to the extent permitted by **Law** and by the terms of the **Contract** for any claims that are contained in the verified statement filed with the **Contractor's** substantial and final requisitions pursuant to Articles 44 and 45 or that arose after submission of the final payment requisition, provided that a detailed and verified statement of claim is served upon the contracting **Agency** and **Comptroller** not later than forty (40) **Days** after the making of such final payment by electronic funds transfer (EFT) or the mailing of such final payment. The statement shall specify the items upon which the claim will be based and any such claim shall be limited to such items.

ARTICLE 47. APPROVAL BY PUBLIC DESIGN COMMISSION

47.1 All works of art, including paintings, mural decorations, stained glass, statues, bas-reliefs, and other sculptures, monuments, fountains, arches, and other structures of a permanent character intended for ornament or commemoration, and every design of the same to be used in the performance of this **Contract**, and the design of all bridges, approaches, buildings, gates, fences, lamps, or structures to be erected, pursuant to the terms of this **Contract**, shall be submitted to the Art Commission, d/b/a the Public Design Commission of the City of New York, and shall be approved by the Public Design Commission prior to the erection or placing in position of the same. The final payment shall not become due or payable under this **Contract** unless and until the Public Design Commission shall certify that the design for the **Work** herein contracted for has been approved by the said Public Design Commission, and that the same has been executed in substantial accordance with the design so approved, pursuant to the provisions of Chapter 37, Section 854 of the **City Charter**, as amended.

CHAPTER X CONTRACTOR'S DEFAULT

ARTICLE 48. COMMISSIONER'S RIGHT TO DECLARE CONTRACTOR IN DEFAULT

48.1 In addition to those instances specifically referred to in other Articles herein, the **Commissioner** shall have the right to declare the **Contractor** in default of this **Contract** if:

48.1.1 The **Contractor** fails to commence **Work** when notified to do so by the **Commissioner**; or
if

48.1.2 The **Contractor** shall abandon the **Work**; or if

48.1.3 The **Contractor** shall refuse to proceed with the **Work** when and as directed by the **Commissioner**; or if

48.1.4 The **Contractor** shall, without just cause, reduce its working force to a number which, if maintained, would be insufficient, in the opinion of the **Commissioner**, to complete the **Work** in accordance with the progress schedule; or if

48.1.5 The **Contractor** shall fail or refuse to increase sufficiently such working force when ordered to do so by the **Commissioner**; or if

48.1.6 The **Contractor** shall sublet, assign, transfer, convert or otherwise dispose of this **Contract** other than as herein specified; or sell or assign a majority interest in the **Contractor**; or if

48.1.7 The **Contractor** fails to secure and maintain all required insurance; or if

48.1.8 A receiver or receivers are appointed to take charge of the **Contractor's** property or affairs; or if

48.1.9 The **Commissioner** shall be of the opinion that the **Contractor** is or has been unnecessarily or unreasonably or willfully delaying the performance and completion of the **Work**, or the award of necessary subcontracts, or the placing of necessary material and equipment orders; or if

48.1.10 The **Commissioner** shall be of the opinion that the **Contractor** is or has been willfully or in bad faith violating any of the provisions of this **Contract**; or if

48.1.11 The **Commissioner** shall be of the opinion that the **Work** cannot be completed within the time herein provided therefor or within the time to which such completion may have been extended; provided, however, that the impossibility of timely completion is, in the **Commissioner's** opinion, attributable to conditions within the **Contractor's** control; or if

48.1.12 The **Work** is not completed within the time herein provided therefor or within the time to which the **Contractor** may be entitled to have such completion extended; or if

48.1.13 Any statement or representation of the **Contractor** in the **Contract** or in any document submitted by the **Contractor** with respect to the **Work**, the **Project**, or the **Contract** (or for purposes of securing the **Contract**) was untrue or incorrect when made; or if

48.1.14 The **Contractor** or any of its officers, directors, partners, five (5%) percent shareholders, principals, or other persons substantially involved in its activities, commits any of the acts or omissions specified as the grounds for debarment in the **PPB** Rules.

48.2 Before the **Commissioner** shall exercise his/her right to declare the **Contractor** in default, the **Commissioner** shall give the **Contractor** an opportunity to be heard, upon not less than two (2) **Days** notice.

ARTICLE 49. EXERCISE OF THE RIGHT TO DECLARE DEFAULT

49.1 The right to declare the **Contractor** in default for any of the grounds specified or referred to in Article 48 shall be exercised by sending the **Contractor** a notice, signed by the **Commissioner**, setting forth the ground or grounds upon which such default is declared (hereinafter referred to as a "Notice of Default").

49.2 The **Commissioner's** determination that the **Contractor** is in default shall be conclusive, final, and binding on the parties and such a finding shall preclude the **Contractor** from commencing a plenary action for any damages relating to the **Contract**. If the **Contractor** protests the determination of the **Commissioner**, the **Contractor** may commence an action in a court of competent jurisdiction of the State of New York under Article 78 of the New York Civil Practice Law and Rules.

ARTICLE 50. QUITTING THE SITE

50.1 Upon receipt of such notice the **Contractor** shall immediately discontinue all further operations under this **Contract** and shall immediately quit the **Site**, leaving untouched all plant, materials, equipment, tools, and supplies then on the **Site**.

ARTICLE 51. COMPLETION OF THE WORK

51.1 The **Commissioner**, after declaring the **Contractor** in default, may then have the **Work** completed by such means and in such manner, by contract with or without public letting, or otherwise, as he/she may deem advisable, utilizing for such purpose such of the **Contractor's** plant, materials, equipment, tools, and supplies remaining on the **Site**, and also such **Subcontractors**, as he/she may deem advisable.

51.2 After such completion, the **Commissioner** shall make a certificate stating the expense incurred in such completion, which shall include the cost of re-letting and also the total amount of liquidated damages (at the rate provided for in the **Contract**) from the date when the **Work** should have been completed by the **Contractor** in accordance with the terms hereof to the date of actual completion of the **Work**. Such certificate shall be binding and conclusive upon the **Contractor**, its sureties, and any person claiming under the **Contractor**, as to the amount thereof.

51.3 The expense of such completion, including any and all related and incidental costs, as so certified by the **Commissioner**, and any liquidated damages assessed against the **Contractor**, shall be charged against and deducted out of monies which are earned by the **Contractor** prior to the date of default. Should the expense of such completion, as certified by the **Commissioner**, exceed the total sum which would have been payable under the **Contract** if it had been completed by the **Contractor**, any excess shall be paid by the **Contractor**.

ARTICLE 52. PARTIAL DEFAULT

52.1 In case the **Commissioner** shall declare the **Contractor** in default as to a part of the **Work** only, the **Contractor** shall discontinue such part, shall continue performing the remainder of the **Work** in strict conformity with the terms of this **Contract**, and shall in no way hinder or interfere with any **Other**

Contractor(s) or persons whom the **Commissioner** may engage to complete the **Work** as to which the **Contractor** was declared in default.

52.2 The provisions of this Chapter relating to declaring the **Contractor** in default as to the entire **Work** shall be equally applicable to a declaration of partial default, except that the **Commissioner** shall be entitled to utilize for completion of the part of the **Work** as to which the **Contractor** was declared in default only such plant, materials, equipment, tools, and supplies as had been previously used by the **Contractor** on such part.

ARTICLE 53. PERFORMANCE OF UNCOMPLETED WORK

53.1 In completing the whole or any part of the **Work** under the provisions of this Chapter X, the **Commissioner** shall have the power to depart from or change or vary the terms and provisions of this **Contract**, provided, however, that such departure, change or variation is made for the purpose of reducing the time or expense of such completion. Such departure, change or variation, even to the extent of accepting a lesser or different performance, shall not affect the conclusiveness of the **Commissioner's** certificate of the cost of completion referred to in Article 51, nor shall it constitute a defense to an action to recover the amount by which such certificate exceeds the amount which would have been payable to the **Contractor** hereunder but for its default.

ARTICLE 54. OTHER REMEDIES

54.1 In addition to the right to declare the **Contractor** in default pursuant to this Chapter X, the **Commissioner** shall have the absolute right, in his/her sole discretion and without a hearing, to complete or cause to be completed in the same manner as described in Articles 51 and 53, any or all unsatisfactory or uncompleted punch list **Work** that remains after the completion date specified in the **Final Approved Punch List**. A written notice of the exercise of this right shall be sent to the **Contractor** who shall immediately quit the **Site** in accordance with the provisions of Article 50.

54.2 The expense of completion permitted under Article 54.1, including any and all related and incidental costs, as so certified by the **Commissioner**, shall be charged against and deducted out of monies which have been earned by the **Contractor** prior to the date of the exercise of the right set forth in Article 54.1; the balance of such monies, if any, subject to the other provisions of this **Contract**, to be paid to the **Contractor** without interest after such completion. Should the expense of such completion, as certified by the **Commissioner**, exceed the total sum which would have been payable under the **Contract** if it had been completed by the **Contractor**, any excess shall be paid by the **Contractor**.

54.3 The previous provisions of this Chapter X shall be in addition to any and all other remedies available under **Law** or in equity.

54.4 The exercise by the **City** of any remedy set forth herein shall not be deemed a waiver by the **City** of any other legal or equitable remedy contained in this **Contract** or provided under **Law**.

**CHAPTER XI
MISCELLANEOUS PROVISIONS**

ARTICLE 55. CONTRACTOR'S WARRANTIES

55.1 In consideration of, and to induce, the award of this **Contract** to the **Contractor**, the **Contractor** represents and warrants:

55.1.1 That it is financially solvent, sufficiently experienced and competent to perform the **Work**; and

55.1.2 That the facts stated in its bid and the information given by it pursuant to the Information for Bidders is true and correct in all respects; and

55.1.3 That it has read and complied with all requirements set forth in the **Contract**.

ARTICLE 56. CLAIMS AND ACTIONS THEREON

56.1 Any claim, that is not subject to dispute resolution under the **PPB Rules** or this **Contract**, against the **City** for damages for breach of **Contract** shall not be made or asserted in any action, unless the **Contractor** shall have strictly complied with all requirements relating to the giving of notice and of information with respect to such claims, as herein before provided.

56.2 Nor shall any action be instituted or maintained on any such claims unless such action is commenced within six (6) months after **Substantial Completion**; except that:

56.2.1 Any claims arising out of events occurring after **Substantial Completion** and before **Final Acceptance** of the **Work** shall be asserted within six (6) months of **Final Acceptance** of the **Work**;

56.2.2 Any claims for monies deducted, retained or withheld under the provisions of this **Contract** shall be asserted within six (6) months after the date when such monies otherwise become due and payable hereunder; and

56.2.3 If the **Commissioner** exercises his/her right to terminate the **Contract** pursuant to Article 64, any such action shall be commenced within six (6) months of the date the **Commissioner** exercises said right.

ARTICLE 57. INFRINGEMENT

57.1 The **Contractor** shall be solely responsible for and shall defend, indemnify, and hold the **City** harmless from any and all claims (even if the allegations of the lawsuit are without merit) and judgments for damages and from costs and expenses to which the **City** may be subject to or which it may suffer or incur allegedly arising out of or in connection with any infringement by the **Contractor** of any copyright, trade secrets, trademark or patent rights or any other property or personal right of any third party by the **Contractor** and/or its **Subcontractors** in the performance or completion of the **Work**. Insofar as the facts or **Law** relating to any claim would preclude the **City** from being completely indemnified by the **Contractor**, the **City** shall be partially indemnified by the **Contractor** to the fullest extent permitted by **Law**.

ARTICLE 58. NO CLAIM AGAINST OFFICIALS, AGENTS OR EMPLOYEES

58.1 No claim whatsoever shall be made by the **Contractor** against any official, agent or employee of the **City** for, or on account of, anything done or omitted to be done in connection with this **Contract**.

ARTICLE 59. SERVICE OF NOTICES

59.1 The **Contractor** hereby designates the business address, fax number, and email address specified in its bid, as the place where all notices, directions or other communications to the **Contractor** may be delivered, or to which they may be mailed. Any notice, direction, or communication from either party to the other shall be in writing and shall be deemed to have been given when (i) delivered personally; (ii) sent by certified mail, return receipt requested; (iii) delivered by overnight or same day courier service in a properly addressed envelope with confirmation; or (iv) sent by fax or email and, unless receipt of the fax or e-mail is acknowledged by the recipient by fax or e-mail, deposited in a post office box regularly maintained by the United States Postal Service in a properly addressed, postage pre-paid envelope.

59.2 **Contractor's** notice address, email address, or fax number may be changed at any time by an instrument in writing, executed and acknowledged by the **Contractor**, and delivered to the **Commissioner**.

59.3 Nothing herein contained shall, however, be deemed to preclude or render inoperative the service of any notice, direction or other communication upon the **Contractor** personally, or, if the **Contractor** is a corporation, upon any officer thereof.

ARTICLE 60. UNLAWFUL PROVISIONS DEEMED STRICKEN FROM CONTRACT

60.1 If this **Contract** contains any unlawful provision not an essential part of the **Contract** and which shall not appear to have been a controlling or material inducement to the making thereof, the same shall be deemed of no effect and shall, upon notice by either party, be deemed stricken from the **Contract** without affecting the binding force of the remainder.

ARTICLE 61. ALL LEGAL PROVISIONS DEEMED INCLUDED

61.1 It is the intent and understanding of the parties to this **Contract** that each and every provision of **Law** required to be inserted in this **Contract** shall be and is inserted herein. Furthermore, it is hereby stipulated that every such provision is to be deemed to be inserted herein, and if, through mistake or otherwise, any such provision is not inserted, or is not inserted in correct form, then this **Contract** shall forthwith upon the application of either party be amended by such insertion so as to comply strictly with the **Law** and without prejudice to the rights of either party hereunder.

ARTICLE 62. TAX EXEMPTION

62.1 The **City** is exempt from payment of Federal, State, and local taxes, including sales and compensating use taxes of the State of New York and its cities and counties on all tangible personal property sold to the **City** pursuant to the provisions of this **Contract**. These taxes are not to be included in bids. However, this exemption does not apply to tools, machinery, equipment or other property leased by or to the **Contractor**, **Subcontractor** or **Materialman** or to tangible personal property which, even

though it is consumed, is not incorporated into the completed **Work** (consumable supplies) and tangible personal property that the **Contractor** is required to remove from the **Site** during or upon completion of the **Work**. The **Contractor** and its **Subcontractors** and **Materialmen** shall be responsible for and pay any and all applicable taxes, including sales and compensating use taxes, on such leased tools, machinery, equipment or other property and upon all such consumable supplies and tangible personal property that the **Contractor** is required to remove from the **Site** during or upon completion of the **Work**.

62.2 The **Contractor** agrees to sell and the **City** agrees to purchase all tangible personal property, other than consumable supplies and other tangible personal property that the **Contractor** is required to remove from the **Site** during or upon completion of the **Work**, that is required, necessary or proper for or incidental to the construction of the **Project** covered by this **Contract**. The sum paid under this **Contract** for such tangible personal property shall be in full payment and consideration for the sale of such tangible personal property.

62.2.1 The **Contractor** agrees to construct the **Project** and to perform all **Work**, labor and services rendered, necessary, proper or incidental thereto for the sum shown in the bid for the performance of such **Work**, labor, and services, and the sum so paid pursuant to this **Contract** for such **Work**, labor, and services, shall be in full consideration for the performance by the **Contractor** of all its duties and obligations under this **Contract** in connection with said **Work**, labor, and services.

62.3 20 NYCRR Section 541.3(d) provides that a **Contractor's** purchases of tangible personal property that is either incorporated into real property owned by a governmental entity or purchased for and sold to a governmental entity are exempt from sales and use tax. The **City** shall not pay sales tax for any such tangible personal property that it purchases from the **Contractor** pursuant to the **Contract**. With respect to such tangible personal property, the **Contractor**, at the request of the **City**, shall furnish to the **City** such bills of sale and other instruments as may be required by the **City**, properly executed, acknowledged and delivered assuring to the **City** title to such tangible personal property, free of liens and/or encumbrances, and the **Contractor** shall mark or otherwise identify all such tangible personal property as the property of the **City**.

62.4 Title to all tangible personal property to be sold by the **Contractor** to the **City** pursuant to the provisions of the **Contract** shall immediately vest in and become the sole property of the **City** upon delivery of such tangible personal property to the **Site**. Notwithstanding such transfer of title, the **Contractor** shall have the full and continuing responsibility to install such tangible personal property in accordance with the provisions of this **Contract**, protect it, maintain it in a proper condition and forthwith repair, replace and make good any damage thereto, theft or disappearance thereof, and furnish additional tangible personal property in place of any that may be lost, stolen or rendered unusable, without cost to the **City**, until such time as the **Work** covered by the **Contract** is fully accepted by the **City**. Such transfer of title shall in no way affect any of the **Contractor's** obligations hereunder. In the event that, after title has passed to the **City**, any of the tangible personal property is rejected as being defective or otherwise unsatisfactory, title to all such tangible personal property shall be deemed to have been transferred back to the **Contractor**.

62.5 The purchase by **Subcontractors** or **Materialmen** of tangible personal property to be sold hereunder shall be a purchase or procurement for resale to the **Contractor** (either directly or through other **Subcontractors**) and therefore not subject to the aforesaid sales and compensating use taxes, provided that the subcontracts and purchase agreements provide for the resale of such tangible personal property and that such subcontracts and purchase agreements are in a form similar to this **Contract** with respect to the separation of the sale of consumable supplies and tangible personal property that the **Contractor** is required to remove from the **Site** during or upon completion of the **Work** from the **Work** and labor, services, and any other matters to be provided, and provided further that the subcontracts and

purchase agreements provide separate prices for tangible personal property and all other services and matters. Such separation shall actually be followed in practice, including the separation of payments for tangible personal property from the payments for other **Work** and labor and other things to be provided.

62.6 The **Contractor** and its **Subcontractors** and **Materialmen** shall furnish a **Contractor Exempt Purchase Certificate** to all persons, firms or corporations from which they purchase tangible personal property for the performance of the **Work** covered by this **Contract**.

62.7 In the event any of the provisions of this Article 62 shall be deemed to be in conflict with any other provisions of this **Contract** or create any ambiguity, then the provisions of this Article 62 shall control.

ARTICLE 63. INVESTIGATION(S) CLAUSE

63.1 The parties to this **Contract** agree to cooperate fully and faithfully with any investigation, audit or inquiry conducted by a United States, a State of New York (State) or a **City** governmental agency or authority that is empowered directly or by designation to compel the attendance of witnesses and to examine witnesses under oath, or conducted by the Inspector General of a governmental agency that is a party in interest to the transaction, submitted bid, submitted proposal, contract, lease, permit or license that is the subject of the investigation, audit or inquiry.

63.2 If any person who has been advised that his/her statement, and any information from such statement, will not be used against him/her in any subsequent criminal proceeding refuses to testify before a grand jury or other governmental agency or authority empowered directly or by designation to compel the attendance of witnesses and to examine witnesses under oath concerning the award of or performance under any transaction, agreement, lease, permit, contract, or license entered into with the **City**, the State, or any political subdivision or public authority thereof, or the Port Authority of New York and New Jersey, or any local development corporation within the **City**, or any public benefit corporation organized under the **Laws** of the State of New York, or;

63.3 If any person refuses to testify for a reason other than the assertion of his/her privilege against self incrimination in an investigation, audit or inquiry conducted by a **City** or State governmental agency or authority empowered directly or by designation to compel the attendance of witnesses and to take testimony under oath, or by the Inspector General of the governmental agency that is a party in interest in, and is seeking testimony concerning the award of, or performance under any transaction, agreement, lease, permit, contract, or license entered into with the **City**, the State, or any political subdivision thereof or any local development corporation within the **City**, then;

63.4 The **Commissioner** whose **Agency** is a party in interest to the transaction, submitted bid, submitted proposal, contract, lease, permit, or license shall convene a hearing, upon not less than five (5) **Days'** written notice to the parties involved to determine if any penalties should attach for the failure of a person to testify.

63.5 If any non-governmental party to the hearing requests an adjournment, the **Commissioner** who convened the hearing may, upon granting the adjournment, suspend any contract, lease, permit, or license, pending the final determination pursuant to Article 63.7 without the **City** incurring any penalty or damages for delay or otherwise.

63.6 The penalties which may attach after a final determination by the **Commissioner** may include but shall not exceed:

63.6.1 The disqualification for a period not to exceed five (5) years from the date of an adverse determination for any person, or any entity of which such person was a member at the time the testimony was sought, from submitting bids for, or transacting business with, or entering into or obtaining any contract, lease, permit or license with or from the City; and/or

63.6.2 The cancellation or termination of any and all such existing City contracts, leases, permits or licenses that the refusal to testify concerns and that have not been assigned as permitted under this Contract, nor the proceeds of which pledged, to an unaffiliated and unrelated institutional lender for fair value prior to the issuance of the notice scheduling the hearing, without the City incurring any penalty or damages on account of such cancellation or termination; monies lawfully due for goods delivered, work done, rentals, or fees accrued prior to the cancellation or termination shall be paid by the City.

63.7 The Commissioner shall consider and address in reaching his/her determination and in assessing an appropriate penalty the factors in Articles 63.7.1 and 63.7.2. The Commissioner may also consider, if relevant and appropriate, the criteria established in Articles 63.7.3 and 63.7.4, in addition to any other information which may be relevant and appropriate:

63.7.1 The party's good faith endeavors or lack thereof to cooperate fully and faithfully with any governmental investigation or audit, including but not limited to the discipline, discharge, or disassociation of any person failing to testify, the production of accurate and complete books and records, and the forthcoming testimony of all other members, agents, assignees or fiduciaries whose testimony is sought.

63.7.2 The relationship of the person who refused to testify to any entity that is a party to the hearing, including but not limited to, whether the person whose testimony is sought has an ownership interest in the entity and/or the degree of authority and responsibility the person has within the entity.

63.7.3 The nexus of the testimony sought to the subject entity and its contracts, leases, permits or licenses with the City.

63.7.4 The effect a penalty may have on an unaffiliated and unrelated party or entity that has a significant interest in an entity subject to penalties under Article 63.6, provided that the party or entity has given actual notice to the Commissioner upon the acquisition of the interest, or at the hearing called for in Article 63.4, gives notice and proves that such interest was previously acquired. Under either circumstance the party or entity shall present evidence at the hearing demonstrating the potential adverse impact a penalty will have on such person or entity.

63.8 Definitions:

63.8.1 The term "license" or "permit" as used in this Article 63 shall be defined as a license, permit, franchise or concession not granted as a matter of right.

63.8.2 The term "person" as used in this Article 63 shall be defined as any natural person doing business alone or associated with another person or entity as a partner, director, officer, principal or employee.

63.8.3 The term "entity" as used in this Article 63 shall be defined as any firm, partnership, corporation, association, joint venture, or person that receives monies, benefits, licenses, leases, or permits from or through the City or otherwise transacts business with the City.

63.8.4 The term "member" as used in this Article 63 shall be defined as any person associated with another person or entity as a partner, director, officer, principal or employee.

63.9 In addition to and notwithstanding any other provision of this **Contract**, the **Commissioner** may in his/her sole discretion terminate this **Contract** upon not less than three (3) **Days**' written notice in the event the **Contractor** fails to promptly report in writing to the **Commissioner** of the Department of Investigations ("DOI") of the **City** any solicitation of money, goods, requests for future employment or other benefit or thing of value, by or on behalf of any employee of the **City** or other person, firm, corporation or entity for any purpose which may be related to the procurement or obtaining of this **Contract** by the **Contractor**, or affecting the performance of this **Contract**.

ARTICLE 64. TERMINATION BY THE CITY

64.1 In addition to termination pursuant to any other article of this **Contract**, the **Commissioner** may, at any time, terminate this **Contract** by written notice to the **Contractor**. In the event of termination, the **Contractor** shall, upon receipt of such notice, unless otherwise directed by the **Commissioner**:

64.1.1 Stop **Work** on the date specified in the notice;

64.1.2 Take such action as may be necessary for the protection and preservation of the **City's** materials and property;

64.1.3 Cancel all cancelable orders for material and equipment;

64.1.4 Assign to the **City** and deliver to the **Site** or another location designated by the **Commissioner**, any non-cancelable orders for material and equipment that is not capable of use except in the performance of this **Contract** and has been specifically fabricated for the sole purpose of this **Contract** and not incorporated in the **Work**;

64.1.5 Take no action which will increase the amounts payable by the **City** under this **Contract**.

64.2 In the event of termination by the **City** pursuant to this Article 64, payment to the **Contractor** shall be in accordance with Articles 64.2.1, 64.2.2 or 64.2.3, to the extent that each respective article applies.

64.2.1 Lump Sum Contracts or Items: On all lump sum **Contracts**, or on lump sum items in a **Contract**, the **City** will pay the **Contractor** the sum of the amounts described in Articles 64.2.1(a) and 64.2.1(b), less all payments previously made pursuant to this **Contract**. On lump sum **Contracts** only, the **City** will also pay the **Contractor** an additional sum as provided in Article 64.2.1(c).

64.2.1(a) For **Work** completed prior to the notice of termination, the **Contractor** shall be paid a pro rata portion of the lump sum bid amount, plus approved change orders, based upon the percent completion of the **Work**, as determined by the **Commissioner**. For the purpose of determining the pro rata portion of the lump sum bid amount to which the **Contractor** is entitled, the bid breakdown submitted in accordance with Article 41 shall be considered, but shall not be dispositive. The **Commissioner's** determination hereunder shall be final, binding, and conclusive.

64.2.1(b) For non-cancelable material and equipment that is not capable of use except in the performance of this **Contract** and has been specifically fabricated for the sole purpose of this **Contract**, but not yet incorporated in the **Work**, the **Contractor** shall be paid the lesser of the following, less salvage value:

64.2.1(b)(i) The Direct Cost, as defined in Article 64.2.4; or

64.2.1(b)(ii) The fair and reasonable value, if less than Direct Cost, of such material and equipment, plus necessary and reasonable delivery costs.

64.2.1(b)(iii) In addition, the **Contractor** shall be paid five (5%) percent of the amount described in Article 64.2.1(b)(i) or Article 64.2.1(b)(ii), whichever applies.

64.2.1(c) Except as otherwise provided in Article 64.2.1(d), on all lump sum **Contracts**, the **Contractor** shall be paid the percentage indicated below applied to the difference between the total lump sum bid amount and the total of all payments made prior to the notice of termination plus all payments allowed pursuant to Articles 64.2.1(a) and 64.2.1(b):

64.2.1(c)(i) Five (5%) percent of the first five million (\$5,000,000) dollars; and

64.2.1(c)(ii) Three (3%) percent of any amount between five million (\$5,000,000) dollars and fifteen million (\$15,000,000) dollars; plus

64.2.1(c)(iii) One (1%) percent of any amount over fifteen million (\$15,000,000) dollars.

64.2.1(d) In the event the **City** terminates a lump sum **Contract** pursuant to this Article 64 within ninety (90) **Days** after registration of the **Contract** with the **Comptroller**, the **Contractor** shall be paid one (1%) percent of the difference between the lump sum bid amount and the total of all payments made pursuant to this Article 64.2.

64.2.2 Unit Price Contracts or Items: On all unit price **Contracts**, or on unit price items in a **Contract**, the **City** will pay the **Contractor** the sum of the amounts described in Articles 64.2.2(a) and 64.2.2(b), less all payments previously made pursuant to this **Contract**:

64.2.2(a) For all completed units, the unit price stated in the **Contract**, and

64.2.2(b) For units that have been ordered but are only partially completed, the **Contractor** will be paid:

64.2.2(b)(i) A pro rata portion of the unit price stated in the **Contract** based upon the percent completion of the unit and

64.2.2(b)(ii) For non-cancelable material and equipment, payment will be made pursuant to Article 64.2.1(b).

64.2.3 Time and Materials Contracts or Items Based on Time and Material Records: On all **Contracts** or items in a **Contract** where payment for the **Work** is based on time and

material records, the **Contractor** shall be paid in accordance with Article 26, less all payments previously made pursuant to this **Contract**.

64.2.4 Direct Costs: Direct Costs as used in this Article 64.2 shall mean:

64.2.4(a) The actual purchase price of material and equipment, plus necessary and reasonable delivery costs,

64.2.4(b) The actual cost of labor involved in construction and installation at the **Site**, and

64.2.4(c) The actual cost of necessary bonds and insurance purchased pursuant to requirements of this **Contract** less any amounts that have been or should be refunded by the **Contractor's** sureties or insurance carriers.

64.2.4(d) Direct Costs shall not include overhead.

64.3 In no event shall any payments under this Article 64 exceed the **Contract** price for such items.

64.4 All payments pursuant to Article 64 shall be in the nature of liquidated damages and shall be accepted by the **Contractor** in full satisfaction of all claims against the **City**.

64.5 The **City** may deduct or set off against any sums due and payable pursuant to this Article 64, any deductions authorized by this **Contract** or by **Law** (including but not limited to liquidated damages) and any claims it may have against the **Contractor**. The **City's** exercise of the right to terminate the **Contract** pursuant to this Article 64 shall not impair or otherwise effect the **City's** right to assert any claims it may have against the **Contractor** in a plenary action.

64.6 Where the **Work** covered by the **Contract** has been substantially completed, as determined in writing by the **Commissioner**, termination of the **Work** shall be handled as an omission of **Work** pursuant to Articles 29 and 33, in which case a change order will be issued to reflect an appropriate reduction in the **Contract** sum, or if the amount is determined after final payment, such amount shall be paid by the **Contractor**.

ARTICLE 65. CHOICE OF LAW, CONSENT TO JURISDICTION AND VENUE

65.1 This **Contract** shall be deemed to be executed in the **City** regardless of the domicile of the **Contractor**, and shall be governed by and construed in accordance with the **Laws** of the State of New York and the **Laws** of the United States, where applicable.

65.2 The parties agree that any and all claims asserted against the **City** arising under this **Contract** or related thereto shall be heard and determined in the courts of the State of New York ("New York State Courts") located in the **City** and County of New York. To effect this **Contract** and intent, the **Contractor** agrees:

65.2.1 If the **City** initiates any action against the **Contractor** in Federal court or in a New York State Court, service of process may be made on the **Contractor** either in person, wherever such **Contractor** may be found, or by registered mail addressed to the **Contractor** at its address as set forth in this **Contract**, or to such other address as the **Contractor** may provide to the **City** in writing; and

65.2.2 With respect to any action between the **City** and the **Contractor** in a New York State Court, the **Contractor** hereby expressly waives and relinquishes any rights it might otherwise have:

65.2.2(a) To move to dismiss on grounds of forum non conveniens;

65.2.2(b) To remove to Federal Court; and

65.2.2(c) To move for a change of venue to a New York State Court outside New York County.

65.2.3 With respect to any action brought by the **City** against the **Contractor** in a Federal Court located in the **City**, the **Contractor** expressly waives and relinquishes any right it might otherwise have to move to transfer the action to a Federal Court outside the **City**.

65.2.4 If the **Contractor** commences any action against the **City** in a court located other than in the **City** and County of New York, upon request of the **City**, the **Contractor** shall either consent to a transfer of the action to a New York State Court of competent jurisdiction located in the **City** and County of New York or, if the Court where the action is initially brought will not or cannot transfer the action, the **Contractor** shall consent to dismiss such action without prejudice and may thereafter reinstate the action in a New York State Court of competent jurisdiction in New York County.

65.3 If any provision(s) of this Article 65 is held unenforceable for any reason, each and all other provision(s) shall nevertheless remain in full force and effect.

ARTICLE 66. PARTICIPATION IN AN INTERNATIONAL BOYCOTT

66.1 The **Contractor** agrees that neither the **Contractor** nor any substantially owned affiliated company is participating or shall participate in an international boycott in violation of the provisions of the Federal Export Administration Act of 1979, as amended, or the regulations of the United States Department of Commerce (Commerce Department) promulgated thereunder.

66.2 Upon the final determination by the Commerce Department or any other agency of the United States as to, or conviction of the **Contractor** or a substantially-owned affiliated company thereof for participation in an international boycott in violation of the provisions of the Export Administration Act of 1979, as amended, or the regulations promulgated thereunder, the **Comptroller** may, at his/her option, render forfeit and void this **Contract**.

66.3 The **Contractor** shall comply in all respects, with the provisions of Section 6-114 of the Administrative Code and the rules and regulations issued by the **Comptroller** thereunder.

ARTICLE 67. LOCALLY BASED ENTERPRISE PROGRAM

67.1 This **Contract** is subject to the requirements of Section 6-108.1 of the Administrative Code and regulations promulgated thereunder. No construction contract shall be awarded unless and until these requirements have been complied with in their entirety; however, compliance with this Article 67 is not required if the Agency sets Subcontractor Participation Goals for Minority- and Women-Owned Business Enterprises (M/WBEs).

67.2 Unless specifically waived by the **Commissioner** with the approval of the Division of Economic and Financial Opportunity of the **City** Department of Business Services, if any portion of the **Contract** is subcontracted, not less than ten (10%) percent of the total dollar amount of the **Contract** shall be awarded to locally based enterprises (LBEs); except that where less than ten (10%) percent of the total dollar amount of the **Contract** is subcontracted, such lesser percentage shall be so awarded.

67.3 The **Contractor** shall not require performance and payment bonds from LBE **Subcontractors**.

67.4 If the **Contractor** has indicated prior to award that no **Work** will be subcontracted, no **Work** shall be subcontracted without the prior approval of the **Commissioner**, which shall be granted only if the **Contractor** makes a good faith effort beginning at least six (6) weeks before the **Work** is to be performed to obtain LBE **Subcontractors** to perform the **Work**.

67.5 If the **Contractor** has not identified sufficient LBE **Subcontractors** prior to award, it shall sign a letter of compliance stating that it complies with Section 6-108.1 of the Administrative Code, recognizes that achieving the LBE requirement is a condition of its **Contract**, and shall submit documentation demonstrating its good faith efforts to obtain LBEs. After award, the **Contractor** shall begin to solicit LBE's to perform subcontracted **Work** at least six (6) weeks before the date such **Work** is to be performed and shall demonstrate that a good faith effort has been made to obtain LBEs on each subcontract until it meets the required percentage.

67.6 Failure of the **Contractor** to comply with the requirements of Section 6-108.1 of the Administrative Code and the regulations promulgated thereunder shall constitute a material breach of this **Contract**. Remedy for such breach may include the imposition of any or all of the following sanctions:

67.6.1 Reducing the **Contractor's** compensation by an amount equal to the dollar value of the percentage of the LBE subcontracting requirement not complied with;

67.6.2 Declaring the **Contractor** in default;

67.6.3 If the **Contractor** is an LBE, de-certifying and declaring the **Contractor** ineligible to participate in the LBE program for a period of up to three (3) years.

ARTICLE 68. ANTITRUST

68.1 The **Contractor** hereby assigns, sells, and transfers to the **City** all right, title, and interest in and to any claims and causes of action arising under the antitrust **Laws** of New York State or of the United States relating to the particular goods or services purchased or procured by the **City** under this **Contract**.

ARTICLE 69. MacBRIDE PRINCIPLES PROVISIONS

69.1 Notice To All Prospective **Contractors**:

69.1.1 Local Law No. 34 of 1991 became effective on September 10, 1991 and added Section 6-115.1 of the Administrative Code. The local **Law** provides for certain restrictions on **City Contracts** to express the opposition of the people of the **City** to employment discrimination practices in Northern Ireland to promote freedom of work-place opportunity.

69.1.2 Pursuant to Section 6-115.1, prospective **Contractors** for **Contracts** to provide goods or services involving an expenditure of an amount greater than ten thousand

(\$10,000.) dollars, or for construction involving an amount greater than fifteen thousand (\$15,000.) dollars, are asked to sign a rider in which they covenant and represent, as a material condition of their **Contract**, that any business operations in Northern Ireland conducted by the **Contractor** and any individual or legal entity in which the **Contractor** holds a ten (10%) percent or greater ownership interest in the **Contractor** will be conducted in accordance with the MacBride Principles of nondiscrimination in employment.

69.1.3 Prospective **Contractors** are not required to agree to these conditions. However, in the case of **Contracts** let by competitive sealed bidding, whenever the lowest responsible bidder has not agreed to stipulate to the conditions set forth in this notice and another bidder who has agreed to stipulate to such conditions has submitted a bid within five (5%) percent of the lowest responsible bid for a **Contract** to supply goods, services or construction of comparable quality, the **Agency** shall refer such bids to the Mayor, the Speaker or other officials, as appropriate, who may determine, in accordance with applicable **Law**, that it is in the best interest of the **City** that the **Contract** be awarded to other than the lowest responsible pursuant to Section 313(b)(2) of the **City Charter**.

69.1.4 In the case of **Contracts** let by other than competitive sealed bidding, if a prospective **Contractor** does not agree to these conditions, no **Agency**, elected official or the **City Council** shall award the **Contract** to that bidder unless the **Agency** seeking to use the goods, services or construction certifies in writing that the **Contract** is necessary for the **Agency** to perform its functions and there is no other responsible **Contractor** who will supply goods, services or construction of comparable quality at a comparable price.

69.2 In accordance with Section 6-115.1 of the Administrative Code, the **Contractor** stipulates that such **Contractor** and any individual or legal entity in which the **Contractor** holds a ten (10%) percent or greater ownership interest in the **Contractor** either:

69.2.1 Have no business operations in Northern Ireland, or

69.2.2 Shall take lawful steps in good faith to conduct any business operations they have in Northern Ireland in accordance with the MacBride Principles, and shall permit independent monitoring of their compliance with such principles.

69.3 For purposes of this Article, the following terms shall have the following meanings:

69.3.1 "MacBride Principles" shall mean those principles relating to nondiscrimination in employment and freedom of work-place opportunity which require employers doing business in Northern Ireland to:

69.3.1(a) increase the representation of individuals from under-represented religious groups in the workforce, including managerial, supervisory, administrative, clerical and technical jobs;

69.3.1(b) take steps to promote adequate security for the protection of employees from under-represented religious groups both at the work-place and while traveling to and from **Work**;

69.3.1(c) ban provocative religious or political emblems from the workplace;

69.3.1(d) publicly advertise all job openings and make special recruitment efforts to attract applicants from under-represented religious groups;

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 ONE THRU EIGHT.

ARTICLE 75. COMPENSATION TO BE PAID TO CONTRACTOR

75.1 The City will pay and the Contractor will accept in full consideration for the performance of the Contract, subject to additions and deductions as provided herein, the total sum of: SEE BELOW Dollars, (\$ 18,926,507.60), 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. EIGHTEEN MILLION, NINE HUNDRED TWENTY SIX THOUSAND, FIVE HUNDRED SEVEN DOLLAR SIXTY

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

69.3.1(e) establish layoff, recall, and termination procedures which do not in practice favor a particular religious group;

69.3.1(f) abolish all job reservations, apprenticeship restrictions and different employment criteria which discriminate on the basis of religion;

69.3.1(g) develop training programs that will prepare substantial numbers of current employees from under-represented religious groups for skilled jobs, including the expansion of existing programs and the creation of new programs to train, upgrade, and improve the skills of workers from under-represented religious groups;

69.3.1(h) establish procedures to assess, identify, and actively recruit employees from under-represented religious groups with potential for further advancement; and

69.3.1(i) appoint a senior management staff member to oversee affirmative action efforts and develop a timetable to ensure their full implementation.

69.4 The **Contractor** agrees that the covenants and representations in Article 69.2 are material conditions to this **Contract**. In the event the **Agency** receives information that the **Contractor** who made the stipulation required by this Article 69 is in violation thereof, the **Agency** shall review such information and give the **Contractor** an opportunity to respond. If the **Agency** finds that a violation has occurred, the **Agency** shall have the right to declare the **Contractor** in default and/or terminate this **Contract** for cause and procure supplies, services or **Work** from another source in the manner the **Agency** deems proper. In the event of such termination, the **Contractor** shall pay to the **Agency**, or the **Agency** in its sole discretion may withhold from any amounts otherwise payable to the **Contractor**, the difference between the **Contract** price for the uncompleted portion of this **Contract** and the cost to the **Agency** of completing performance of this **Contract** either itself or by engaging another **Contractor** or **Contractors**. In the case of a requirement **Contract**, the **Contractor** shall be liable for such difference in price for the entire amount of supplies required by the **Agency** for the uncompleted term of **Contractor's Contract**. In the case of a construction **Contract**, the **Agency** shall also have the right to hold the **Contractor** in partial or total default in accordance with the default provisions of this **Contract**, and/or may seek debarment or suspension of the **Contractor**. The rights and remedies of the **Agency** hereunder shall be in addition to, and not in lieu of, any rights and remedies the **Agency** has pursuant to this **Contract** or by operation of Law.

ARTICLE 70. ELECTRONIC FILING/NYC DEVELOPMENT HUB

70.1 The **Contractor** shall electronically file all alteration type-2 and alteration type-3 applications via the New York City Development Hub Web site, except applications for the following types of minor alterations: enlargements, curb cuts, legalizations, fire alarms, builders pavement plans, and jobs filed on Landmark Preservation Commission calendared properties. All such filings must be professionally certified. Information about electronic filing via the New York City Development Hub is available on the City Department of Buildings Web site at www.nyc.gov/buildings.

ARTICLE 71. PROHIBITION OF TROPICAL HARDWOODS

71.1 Tropical hardwoods, as defined in Section 165 of the New York State Finance Law (Finance Law), shall not be utilized in the performance of this **Contract** except as expressly permitted by Section 165 of the Finance Law.

which the Agency may waive the requirements of this Article 76 for payment in the following circumstances: (i) for individuals or classes of individuals for whom compliance imposes a hardship; (ii) for classifications or types of checks; or (iii) in other circumstances as may be necessary in the interest of the City.

ARTICLE 77. RECORDS RETENTION

77.1 The Contractor agrees to retain all books, records, and other documents relevant to this Contract for six years after the final payment or termination of this Contract, whichever is later. City, state, and federal auditors and any other persons duly authorized by the City shall have full access to and the right to examine any such books, records, and other documents during the retention period.

ARTICLE 78. PARTICIPATION BY MINORITY-OWNED AND WOMEN-OWNED BUSINESS ENTERPRISES IN CITY PROCUREMENT

NOTICE TO ALL PROSPECTIVE CONTRACTORS

ARTICLE I. M/WBE PROGRAM

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

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

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

PART A

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

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

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

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

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

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

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

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

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

C. THE BIDDER/PROPOSER MUST COMPLETE THE SCHEDULE B INCLUDED HEREIN (SCHEDULE B, PART II). A SCHEDULE B SUBMITTED BY THE BIDDER/PROPOSER WHICH DOES NOT INCLUDE THE VENDOR CERTIFICATION AND REQUIRED AFFIRMATIONS (SEE SECTION V OF PART II) WILL BE DEEMED TO BE NON-RESPONSIVE, UNLESS A FULL WAIVER OF THE PARTICIPATION GOALS IS GRANTED (SCHEDULE B, PART III). IN THE EVENT THAT THE CITY DETERMINES THAT THE BIDDER/PROPOSER HAS SUBMITTED A SCHEDULE B WHERE THE VENDOR CERTIFICATION AND REQUIRED AFFIRMATIONS ARE COMPLETED BUT OTHER ASPECTS OF THE SCHEDULE B ARE NOT COMPLETE, OR CONTAIN A COPY OR COMPUTATION ERROR THAT IS AT ODDS WITH THE VENDOR CERTIFICATION AND AFFIRMATIONS, THE BIDDER/PROPOSER WILL BE NOTIFIED BY THE AGENCY AND WILL BE GIVEN FOUR (4) CALENDAR DAYS FROM RECEIPT OF NOTIFICATION TO CURE THE SPECIFIED DEFICIENCIES AND RETURN A COMPLETED SCHEDULE B TO THE AGENCY. FAILURE TO DO SO WILL RESULT IN A DETERMINATION THAT THE BID/PROPOSAL IS NON-RESPONSIVE. RECEIPT OF NOTIFICATION IS DEFINED AS THE DATE NOTICE IS E-MAILED OR FAXED (IF THE BIDDER/PROPOSER HAS PROVIDED AN E-MAIL ADDRESS OR FAX NUMBER), OR NO LATER THAN FIVE (5) CALENDAR DAYS FROM THE DATE OF MAILING OR UPON DELIVERY, IF DELIVERED.

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

6. MBE and WBE firms must be certified by DSBS in order for the Contractor to credit such firms' participation toward the attainment of the **Participation Goals**. Such certification must occur prior to the

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

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

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

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

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

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

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

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

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

- (i) The Contractor advertised opportunities to participate in the Contract, where appropriate, in general circulation media, trade and professional association publications and small business media, and publications of minority and women's business organizations;
- (ii) The Contractor provided notice of specific opportunities to participate in the Contract, in a timely manner, to minority and women's business organizations;
- (iii) The Contractor sent written notices, by certified mail or facsimile, in a timely manner, to advise MBEs or WBEs that their interest in the Contract was solicited;
- (iv) The Contractor made efforts to identify portions of the work that could be substituted for portions originally designated for participation by MBEs and/or WBEs in the **M/WBE Utilization Plan**, and for which the Contractor claims an inability to retain MBEs or WBEs;
- (v) The Contractor held meetings with MBEs and/or WBEs prior to the date their bids or proposals were due, for the purpose of explaining in detail the scope and requirements of the work for which their bids or proposals were solicited;
- (vi) The Contractor made efforts to negotiate with MBEs and/or WBEs as relevant to perform specific subcontracts, or act as suppliers or service providers;
- (vii) Timely written requests for assistance made by the Contractor to Agency's **M/WBE liaison officer** and to **DSBS**;
- (viii) Description of how recommendations made by **DSBS** and Agency were acted upon and an explanation of why action upon such recommendations did not lead to the desired level of participation of MBEs and/or WBEs.

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

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

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

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

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

PART B: MISCELLANEOUS

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

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

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

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

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

ARTICLE II. ENFORCEMENT

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

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

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

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

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

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

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


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

IN WITNESS WHEREOF, the 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: En-Tech Corp

By: 
(Member of Firm or Officer of Corporation)

Title: PRESIDENT

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


Secretary

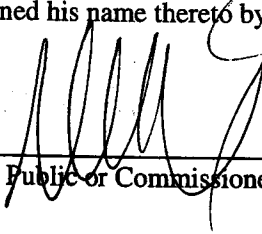
(Seal)

ACKNOWLEDGEMENT OF PRINCIPAL, IF A CORPORATION

State of New York County of Queens ss:

On this 17th day of March 2014 before me personally came Nada Comali^o to me known to being by me duly sworn did depose and say that he resides at BELLEIR, FL 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.

VICTORIA AYO-VAUGHAN
Notary Public, State of New York
Registration #01AY5014042
Qualified in Queens County
Commission Expires July 15, 2015



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 17th day of March 2015 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 15, 2015

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

*Eighteen Million, Nine Hundred
Twenty six Thousand, Five Hundred
Seven dollars 607,00*
Dollars (\$ 18,926,507.60)

is chargeable to the fund of the Department of Design and Construction entitled Code

VARIOUS

Department of Design and Construction

I hereby certify that the specifications contained herein comply with the terms and conditions of the BUDGET.

[Signature]
Deputy Commissioner

COMPTROLLER'S CERTIFICATE

The City of New York _____

Pursuant to the provisions of Section 6-101 of the Administrative Code of the City of New York, I hereby certify that there remains unapplied and unexpended a balance of the above mentioned fund applicable to this Contract sufficient to pay the estimated expense of executing the same viz:

\$ _____

Comptroller

Performance Bond #2 (Pages 96 to 99): Use if the total contract price is more than \$5 Million.

Bond Number 015047213

PERFORMANCE BOND #2 (Page 1)

PERFORMANCE BOND #2

KNOW ALL PERSONS BY THESE PRESENTS:

That we, En-Tech Corp.

91 Ruckman Road, Closter, NJ 07624

hereinafter referred to as the "Principal,"
and,

Liberty Mutual Insurance Company

1200 MacArthur Blvd., Mahwah, NJ 07430

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 Eighteen Million Nine Hundred Twenty-Six Thousand Five Hundred Seven and 60/100

(\$ 18,926,507.60) 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.

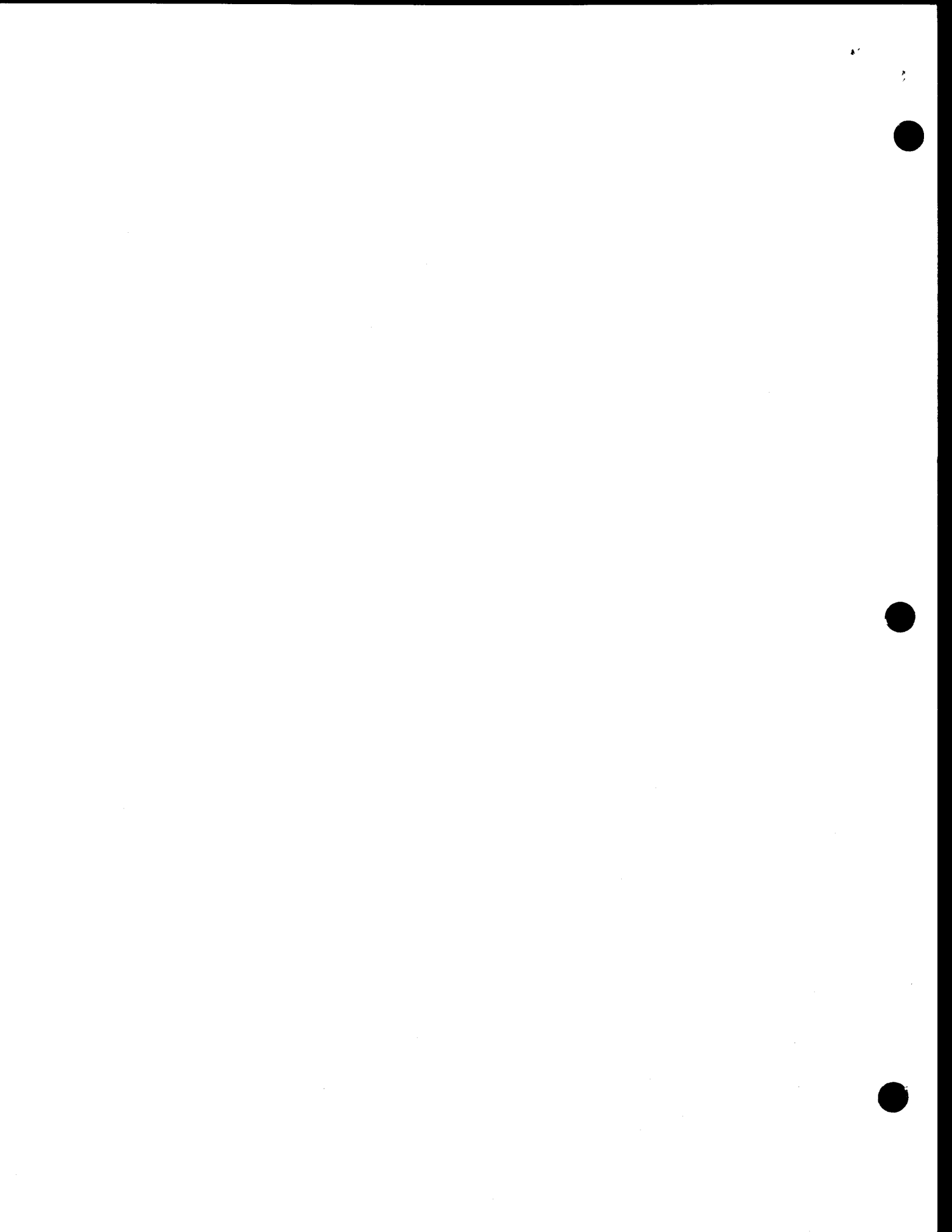
WHEREAS, the Principal is about to enter, or has entered, into a Contract in writing with the City for

FMS ID: PS-312KR E-PIN: 85014B0099001 DDC PIN: 8502013E0026C rehabilitation of

interceptor sewers and appurtenances in: Various Locations-Boroughs of Brooklyn and Staten Island

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, his or its representatives or assigns, shall well and faithfully perform the said Contract and all modifications, amendments, additions and alterations thereto that may hereafter be made, according to its terms and its true intent and meaning, including repair and or replacement of defective work and guarantees of maintenance for the periods stated in the Contract, and shall fully indemnify and save harmless the City from all cost and damage which it may suffer by reason of the Principal's default of the Contract, and shall fully reimburse and repay the City for all outlay and expense which the City may incur in making



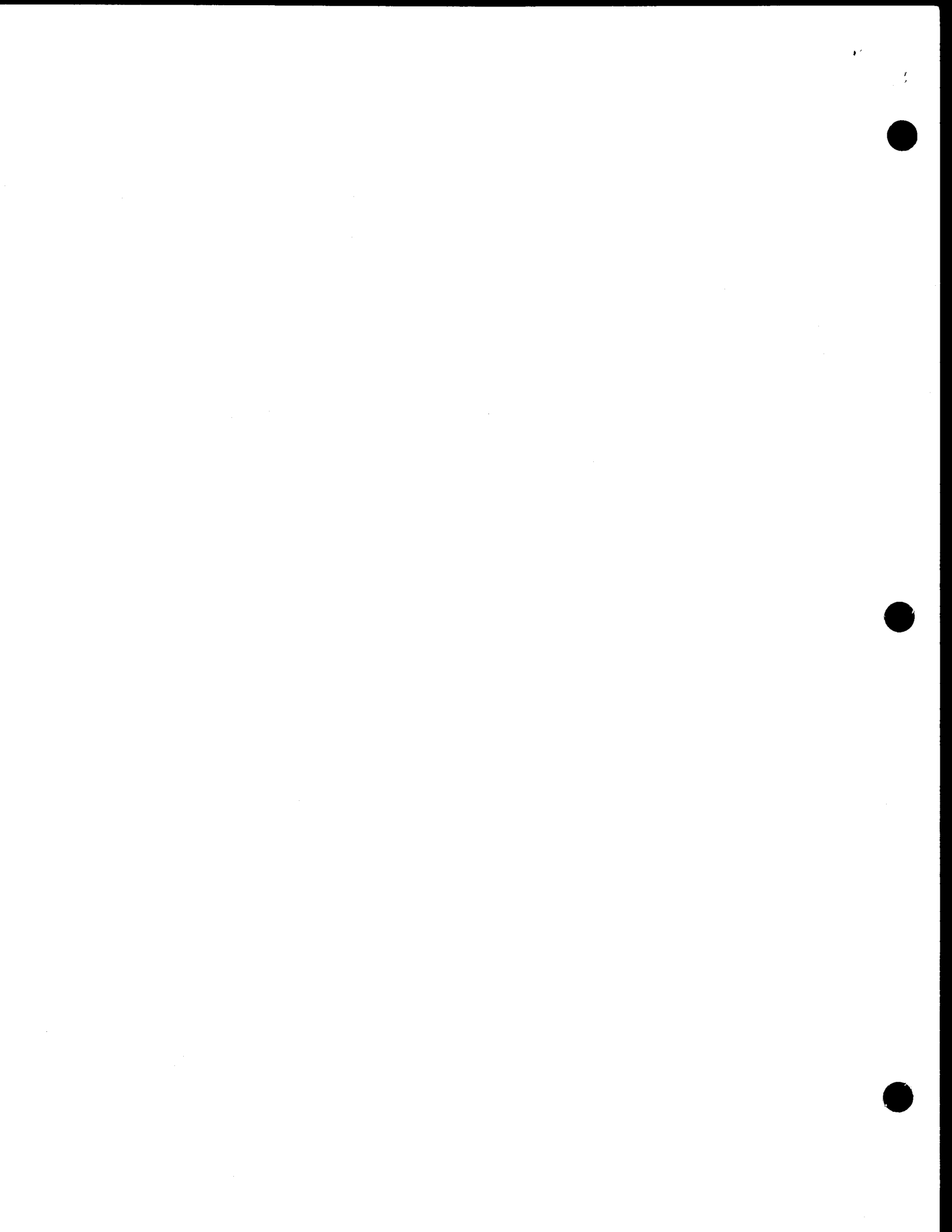
Performance Bond #2 (Pages 96 to 99): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 2)

good any such default and shall protect the said City of New York against, and pay any and all amounts, damages, cost and judgments which may or shall be recovered against said City or its officers or agents or which the said City of New York may be called upon to pay any person or corporation by reason of any damages arising or growing out of the Principal's default of the Contract, then this obligation shall be null and void, otherwise to remain in full force and effect.

The Surety (Sureties), for value received, hereby stipulates and agrees, upon written notice from the City that the City has determined that the Principal is in default of the Contract, to either (1) pay the full amount of the above penal sum in complete discharge and exoneration of this bond and of all the liabilities of the Surety relating to this bond, or (2) fully perform and complete the Work to be performed under the Contract, pursuant to the terms, conditions, and covenants thereof. The Surety (Sureties) further agrees, at its option, either to tender the penal sum or to commence and diligently perform the Work specified in the Contract, including physical site work, within twenty-five (25) business days after written notice thereof from the City and to complete all Work within the time set forth in the Contract or such other time as agreed to between the City and Surety in accordance with the Contract. The Surety and the City reserve all rights and defenses each may have against the other; provided, however, that the Surety expressly agrees that its reservation of rights shall not provide a basis for non-performance of its obligation to commence and to complete all Work as provided herein.

The Surety (Sureties), for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety (Sureties) and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition, or change in or to the said Contract or the Work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any Work to be performed or any moneys due or to become due thereunder; and said Surety (Sureties) does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers, and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to said Surety (Sureties) as though done or omitted to be done by or in relation to said Principal.



Performance Bond #2 (Pages 96 to 99): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 3)

IN WITNESS WHEREOF, The Principal and the Surety (Sureties) have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereunto affixed and these presents to be signed by their proper officers, this

9th day of March 20 15
(Seal)

En-Tech Corp. (L.S.)

Principal

By: [Signature]

(Seal)

Nada Camali, President

Surety

Liberty Mutual Insurance Company

By: [Signature]
Pamela J. Boyle, Attorney-in-fact

(Seal)

Surety

By: _____

(Seal)

Surety

By: _____

(Seal)

Surety

By: _____

(Seal)

Surety

By: _____

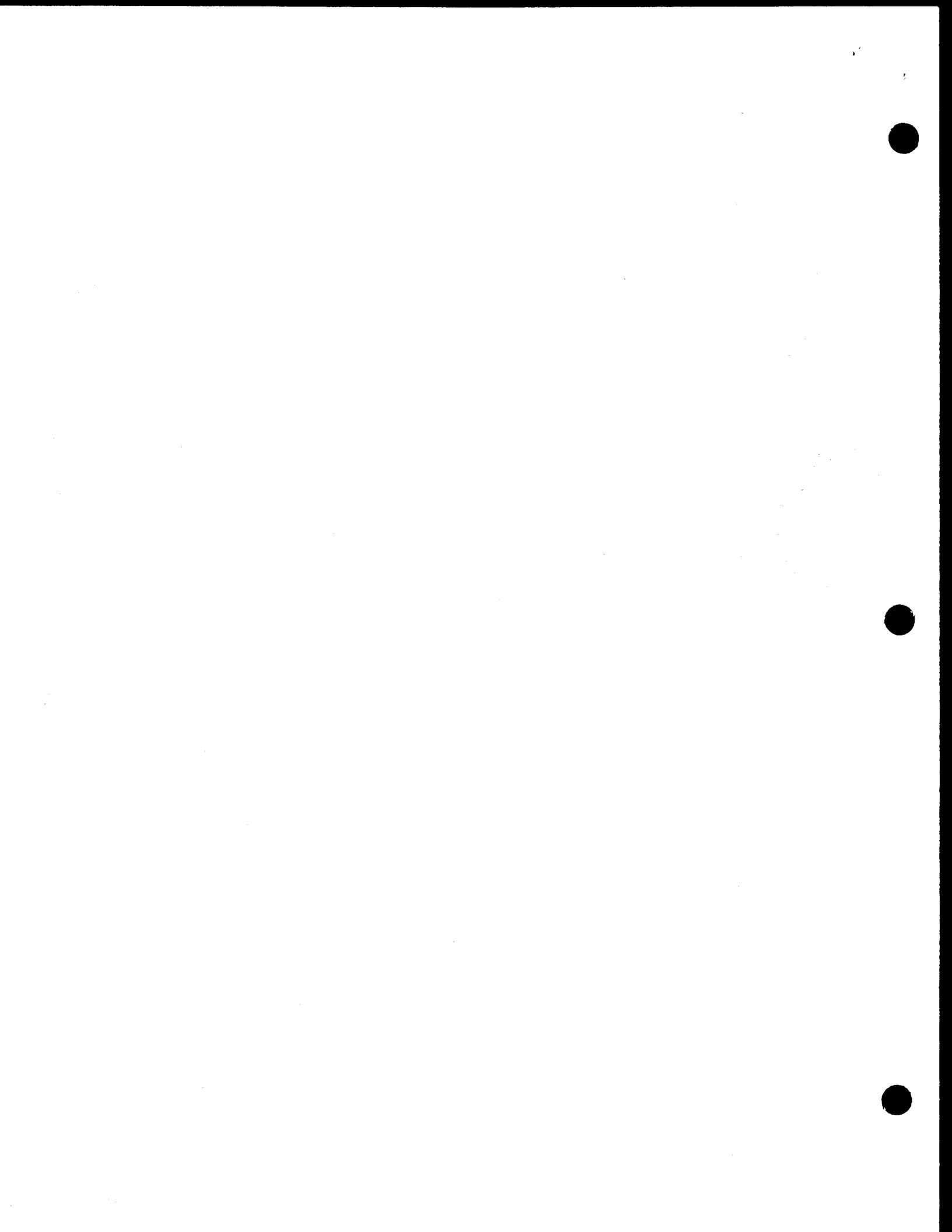
Bond Premium Rate 17/10/7.5/7/6.5

Bond Premium Cost \$139,022.00

If the Contractor (Principal) is a partnership, the bond should be signed by each of the individuals who are partners.

If the Contractor (Principal) is a corporation, the bond should be signed in its correct corporate name by a duly authorized officer, agent, or attorney-in-fact.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Contract.



Performance Bond #2 (Pages 96 to 99): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 4)

ACKNOWLEDGMENT OF PRINCIPAL IF A CORPORATION

State of New York County of Rockland ss:

On this 10th day of MARCH, 20 15 before me personally came NADA E. CAMAI

to me known, who, being by me duly sworn did depose and say that he resides at 1020 GOLF BLVD

Belle Air Stokes Fla; that he/she is the President of the corporation described in and which executed the foregoing instrument; that he/she signed his/her name to the foregoing instrument by order of the directors of said corporation as the duly authorized and binding act thereof.

Robert Borst
Notary Public or Commissioner of Deeds.

ROBERT BORST
NOTARY PUBLIC
REG. NO. 01BO6003533
QUALIFIED IN QUEENS COUNTY
TERM EXPIRES MARCH 9 2018

ACKNOWLEDGMENT OF PRINCIPAL IF A PARTNERSHIP

State of _____ County of _____ ss:

On this _____ day of _____, 20 _____ before me personally came _____

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

_____ ; that he/she is _____ partner of _____, a limited/general partnership existing under the laws of the State of _____, the partnership described in and which executed the foregoing instrument; and that he/she signed his/her name to the foregoing instrument as the duly authorized and binding act of said partnership.

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL IF AN INDIVIDUAL

State of _____ County of _____ ss:

On this _____ day of _____, 20 _____ before me personally came _____

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

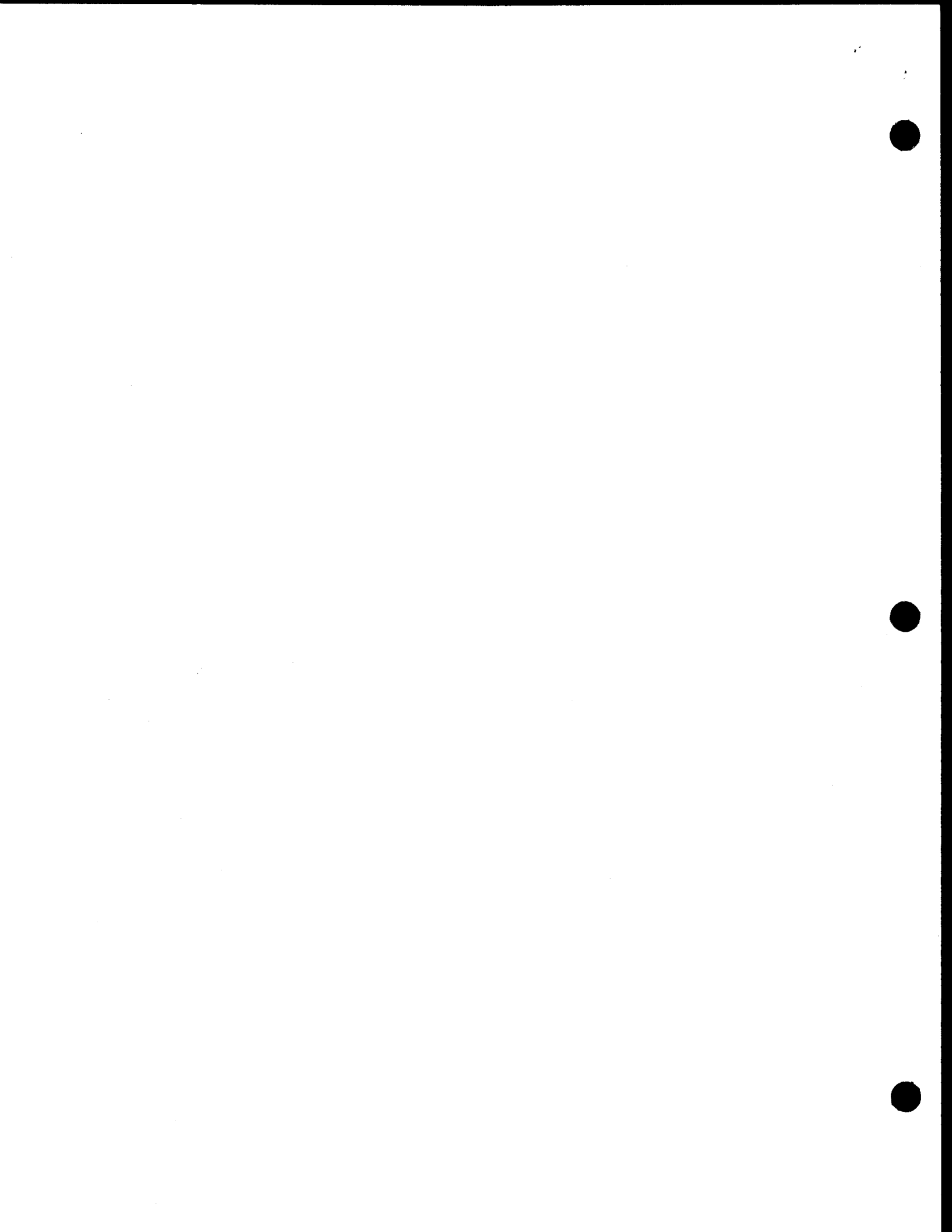
_____ and that he/she is the individual whose name is subscribed to the within instrument and acknowledged to me that by his/her signature on the instrument, said individual executed the instrument.

Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties; (b) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer or other representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions of Surety under which Power of Attorney or other certificate of authority of its agent, officer or representative was issued, and (d) certified copy of latest published financial statement of assets and liabilities of Surety.

Affix Acknowledgments and Justification of Sureties.





THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 6744076

American Fire and Casualty Company
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Joseph W. Mallory; Lisa Nosal; Louis A. Vlahakes; Pamela J. Boyle; Robert E. Culnen

all of the city of Totowa, state of NJ each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 17th day of October, 2014.

American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

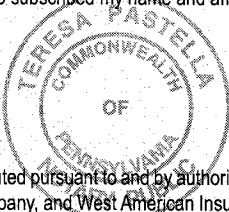
By: David M. Carey
David M. Carey, Assistant Secretary



STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 17th day of October, 2014, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.



Notarial Seal
Teresa Pastella, Notary Public
Plymouth Twp., Montgomery County
My Commission Expires March 28, 2017
Member, Pennsylvania Association of Notaries

By: Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

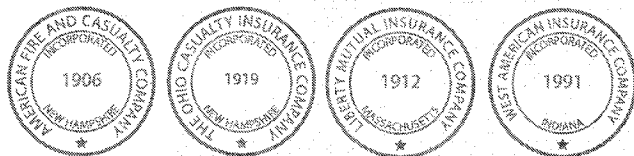
ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Gregory W. Davenport, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

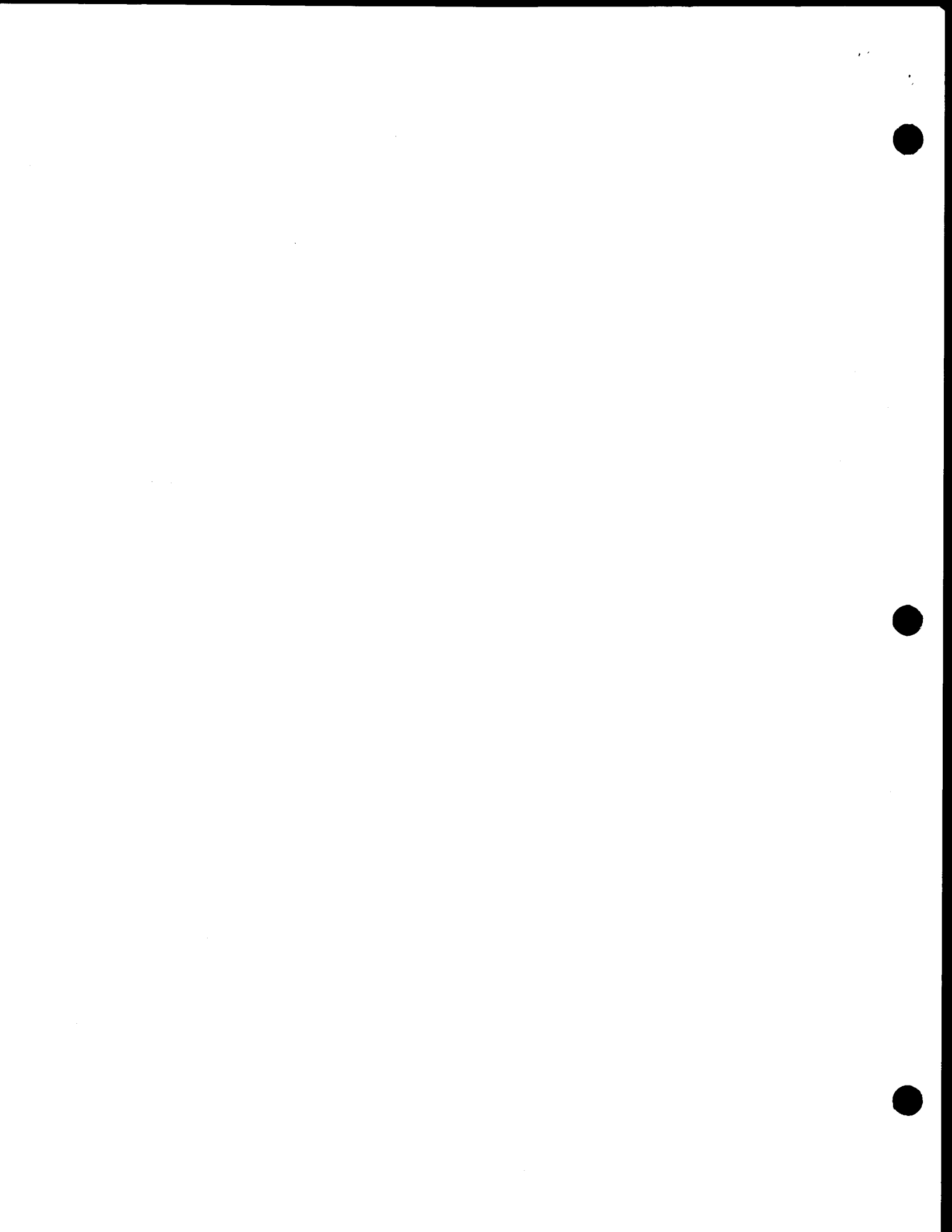
IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 9th day of March, 2015.



By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

Not valid for mortgage, note, letter of credit, currency rate, interest rate or annual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.





LIBERTY MUTUAL INSURANCE COMPANY
 FINANCIAL STATEMENT — DECEMBER 31, 2013

Assets	Liabilities
Cash and Bank Deposits..... \$1,118,180,550	Unearned Premiums..... \$5,940,431,054
*Bonds — U.S Government..... 1,888,225,943	Reserve for Claims and Claims Expense..... 17,305,063,560
*Other Bonds..... 12,039,490,815	Funds Held Under Reinsurance Treaties..... 212,659,311
*Stocks..... 9,030,962,112	Reserve for Dividends to Policyholders..... 1,226,236
Real Estate..... 251,301,907	Additional Statutory Reserve..... 63,348,980
Agents' Balances or Uncollected Premiums..... 4,781,042,931	Reserve for Commissions, Taxes and
Accrued Interest and Rents..... 149,855,386	Other Liabilities..... <u>5,826,683,629</u>
Other Admitted Assets..... <u>15,216,749,451</u>	Total..... \$29,349,412,770
Total Admitted Assets..... <u>\$44,475,809,095</u>	Special Surplus Funds..... \$55,686,852
	Capital Stock..... 11,250,000
	Paid in Surplus..... 7,898,288,167
	Unassigned Surplus..... 7,161,171,306
	Surplus to Policyholders..... <u>15,126,396,325</u>
	Total Liabilities and Surplus..... <u>\$44,475,809,095</u>



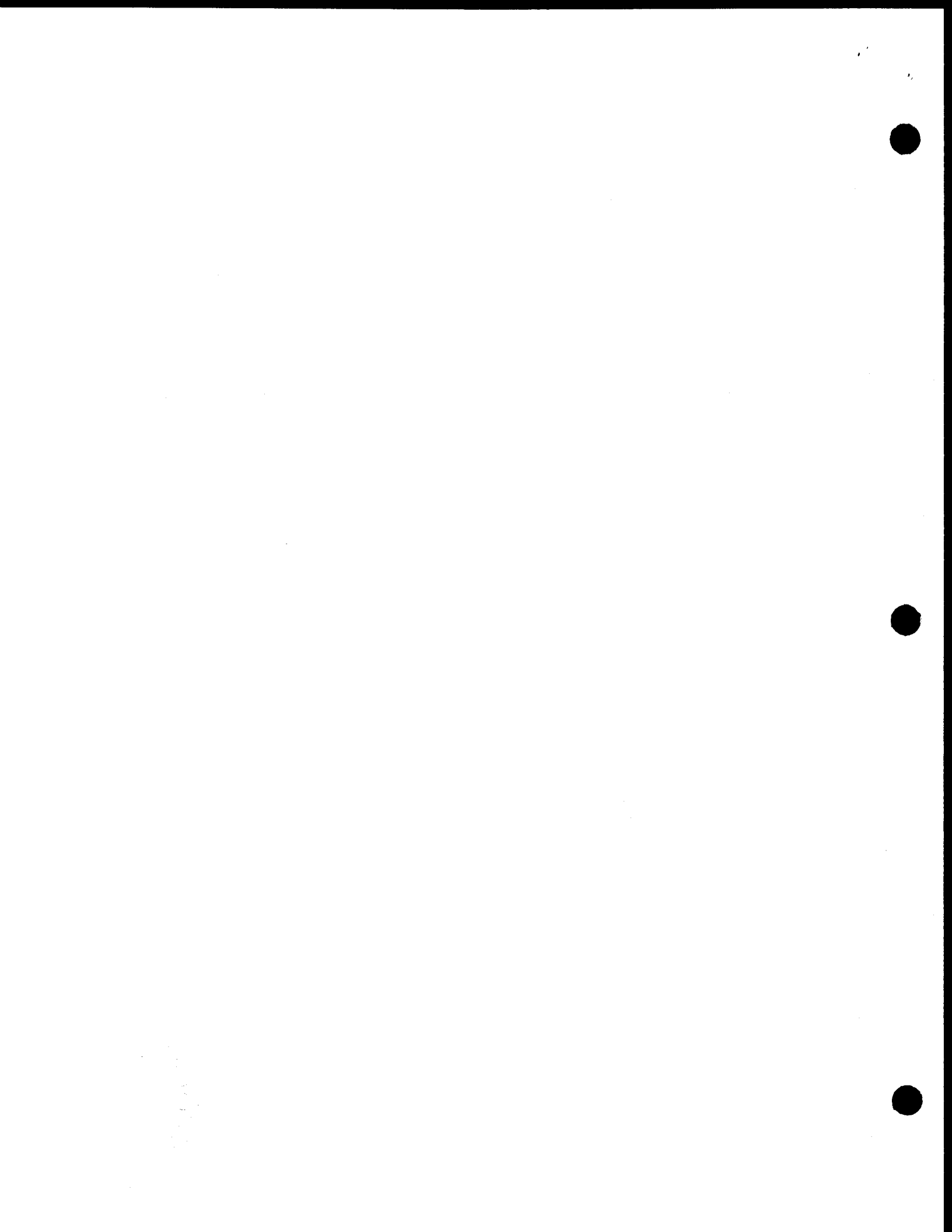
* Bonds are stated at amortized or investment value; Stocks at Association Market Values.
 The foregoing financial information is taken from Liberty Mutual Insurance Company's financial statement filed with the state of Massachusetts Department of Insurance.

I, TIM MIKOLAJEWSKI, Assistant Secretary of Liberty Mutual Insurance Company, do hereby certify that the foregoing is a true, and correct statement of the Assets and Liabilities of said Corporation, as of December 31, 2013, to the best of my knowledge and belief.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation at Seattle, Washington, this 20th day of March, 2014.

T. Mikolajewski

Assistant Secretary



Payment Bond (Pages 100 to 103): Use for any contract for which a Payment Bond is required.

Bond Number 015047213

PAYMENT BOND (Page 1)

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS, That we, _____
En-Tech Corp.

91 Ruckman Road, Closter, NJ 07624

hereinafter referred to as the "Principal", and _____
Liberty Mutual Insurance Company

1200 MacArthur Blvd., Mahwah, NJ 07430

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
Eighteen Million Nine Hundred Twenty-Six Thousand Five Hundred Seven and 60/100

(\$ 18,926,507.60) 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: PS-312KR E-PINL 85014B0099001 DDC PIN: 8502013SE0026C rehabilitation of
interceptor sewers and appurtenances in: Various Locations-Boroughs of Brooklyn and Staten Island

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, his or its
representatives or assigns and other Subcontractors to whom Work under this Contract is sublet and his or their
successors and assigns shall promptly pay or cause to be paid all lawful claims for

(a) Wages and compensation for labor performed and services rendered by all persons engaged in
the prosecution of the Work under said Contract, and any amendment or extension thereof or addition thereto,
whether such persons be agents servants or employees of the Principal or any such Subcontractor, including all
persons so engaged who perform the work of laborers or mechanics at or in the vicinity of the site



Payment Bond (Pages 100 to 103): Use for any contract for which a Payment Bond is required.**PAYMENT BOND (Page 2)**

of the Project regardless of any contractual relationship between the Principal or such Subcontractors, or his or their successors or assigns, on the one hand and such laborers or mechanics on the other, but not including office employees not regularly stationed at the site of the project; and

(b) Materials and supplies (whether incorporated in the permanent structure or not), as well as teams, fuels, oils, implements or machinery furnished, used or consumed by said Principal or any subcontractor at or in the vicinity of the site of the Project in the prosecution of the Work under said Contract and any amendment or extension thereof or addition thereto; then this obligation shall be void, otherwise to remain in full force and effect.

This bond is subject to the following additional conditions, limitations and agreements:

(a) The Principal and Surety (Sureties) agree that this bond shall be for the benefit of any materialmen or laborer having a just claim, as well as the City itself.....

(b) All persons who have performed labor, rendered services or furnished materials and supplies, as aforesaid, shall have a direct right of action against the Principal and his, its or their successors and assigns, and the Surety (Sureties) herein, or against either or both or any of them and their successors and assigns. Such persons may sue in their own name, and may prosecute the suit to judgment and execution without the necessity of joining with any other persons as party plaintiff.

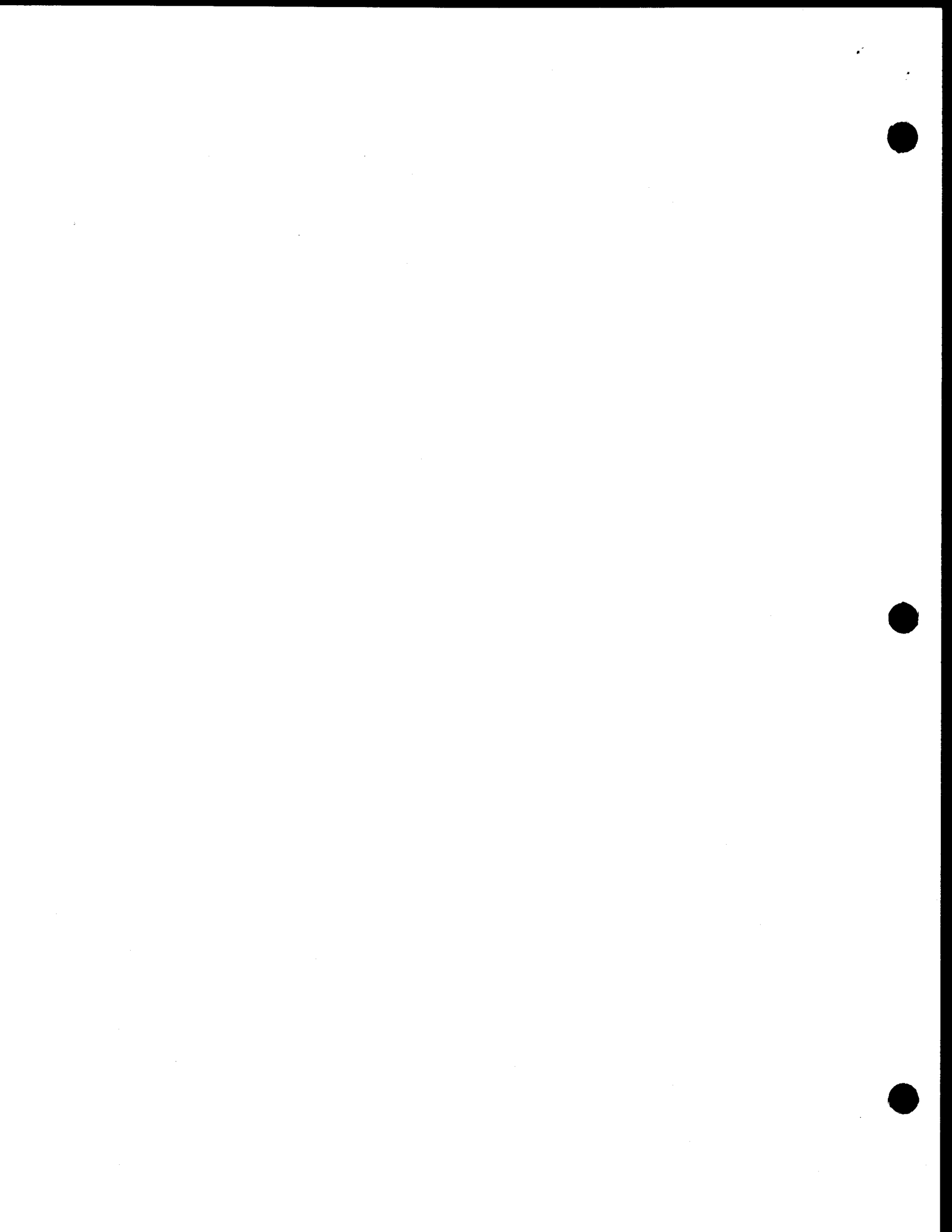
(c) The Principal and Surety (Sureties) agree that neither of them will hold the City liable for any judgment for costs of otherwise, obtained by either or both of them against a laborer or materialman in a suit brought by either a laborer or materialman under this bond for moneys allegedly due for performing work or furnishing material.

(d) The Surety (Sureties) or its successors and assigns shall not be liable for any compensation recoverable by an employee or laborer under the Workmen's Compensation Law.

(e) In no event shall the Surety (Sureties), or its successors or assigns, be liable for a greater sum than the penalty of this bond or be subject to any suit, action or proceeding hereon that is instituted by any person, firm, or corporation hereunder later than two years after the complete performance of said Contract and final settlement thereof.

The Principal, for himself and his successors and assigns, and the Surety (Sureties), for itself and its successors and assigns, do hereby expressly waive any objection that might be interposed as to the right of the City to require a bond containing the foregoing provisions, and they do hereby further expressly waive any defense which they or either of them might interpose to an action brought hereon by any person, firm or corporation, including subcontractors, materialmen and third persons, for work, labor, services, supplies or material performed rendered, or furnished as aforesaid upon the ground that there is no law authorizing the City to require the foregoing provisions to be place in this bond.

And the Surety (Sureties), for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety (Sureties), and its bonds shall be in no way impaired or affected by any extension of time, modification, omission, addition, or change in or of the said Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any part thereof, or of any Work to be performed, or any moneys due to become due thereunder and said Surety (Sureties) does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers, and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, Subcontractors, and other transferees shall have the same effect as to said Surety (Sureties) as though done or omitted to be done or in relation to said Principal.



Payment Bond (Pages 100 to 103): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 3)

IN WITNESS WHEREOF, the Principal and the Surety (Sureties) have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereunto affixed and these presents to be signed by their proper officers, this 9th day of March, 15 .

(Seal)

En-Tech Corp. (L.S.)

Principal

By: *Nada Camali*

Nada Camali, President

(Seal)

Liberty Mutual Insurance Company

Surety

By: *Pamela J. Boyle*

Pamela J. Boyle, Attorney-in-fact

(Seal)

Surety

By: _____

(Seal)

Surety

By: _____

(Seal)

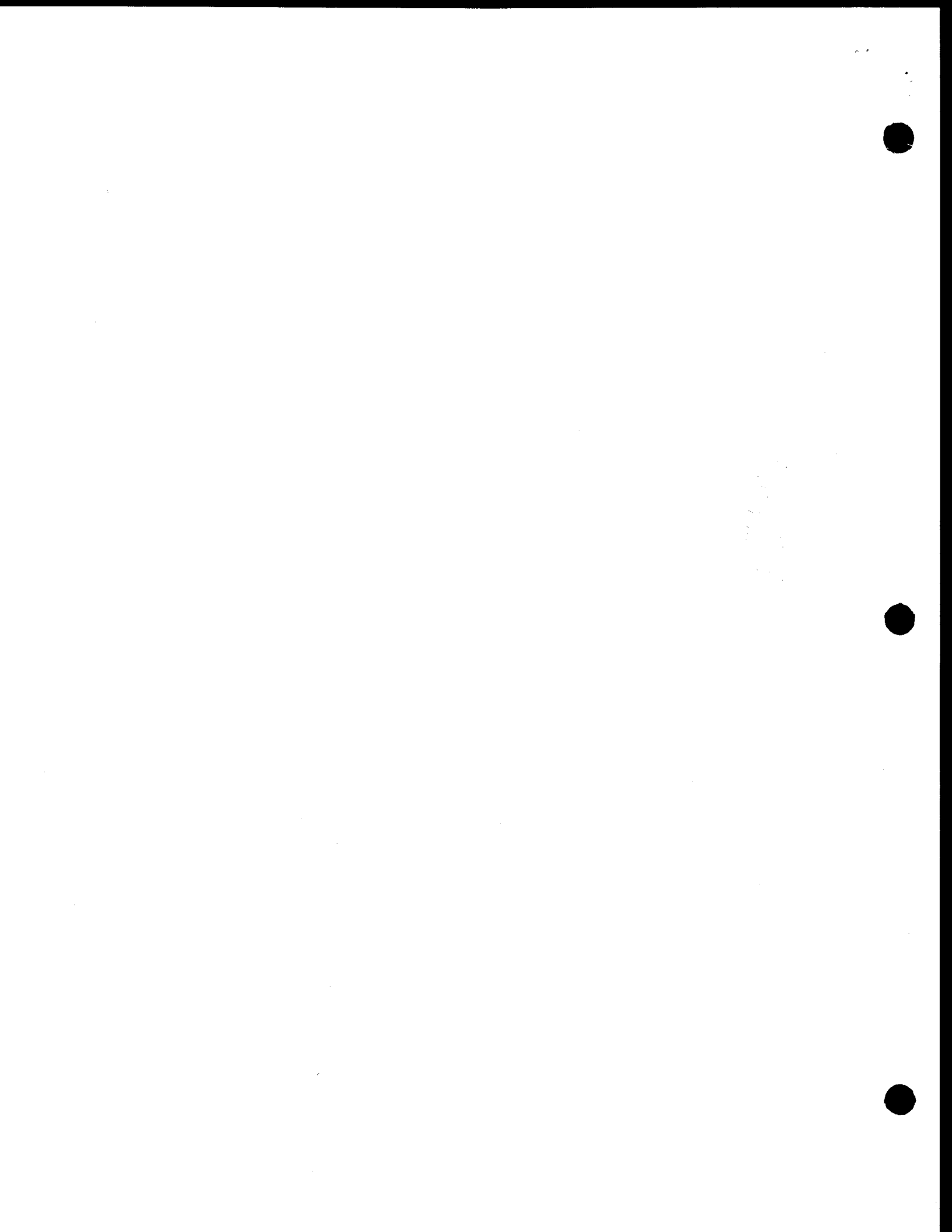
Surety

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 100 to 103): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 4)

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of New York County of Rockland ss:

On this 10th day of MARCH, 2015, before me personally came NADA E. CAMALI to me known, who, being by me duly sworn did depose and say that he resides at 1020 GULF BLVD Belle Air Shores Fla. 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.

Robert Borst
Notary Public or Commissioner of Deeds

ROBERT BORST
NOTARY PUBLIC
REG. NO. 01BO6003533
QUALIFIED IN QUEENS COUNTY
TERM EXPIRES MARCH 9 20 18

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.





THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 6744077

American Fire and Casualty Company
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Joseph W. Mallory; Lisa Nosal; Louis A. Vlahakes; Pamela J. Boyle; Robert E. Culnen

all of the city of Totowa, state of NJ each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 17th day of October, 2014.



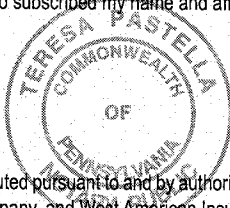
American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: David M. Carey
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 17th day of October, 2014, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.



Notarial Seal
Teresa Pastella, Notary Public
Plymouth Twp., Montgomery County
My Commission Expires March 28, 2017
Member: Pennsylvania Association of Notaries

By: Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Gregory W. Davenport, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

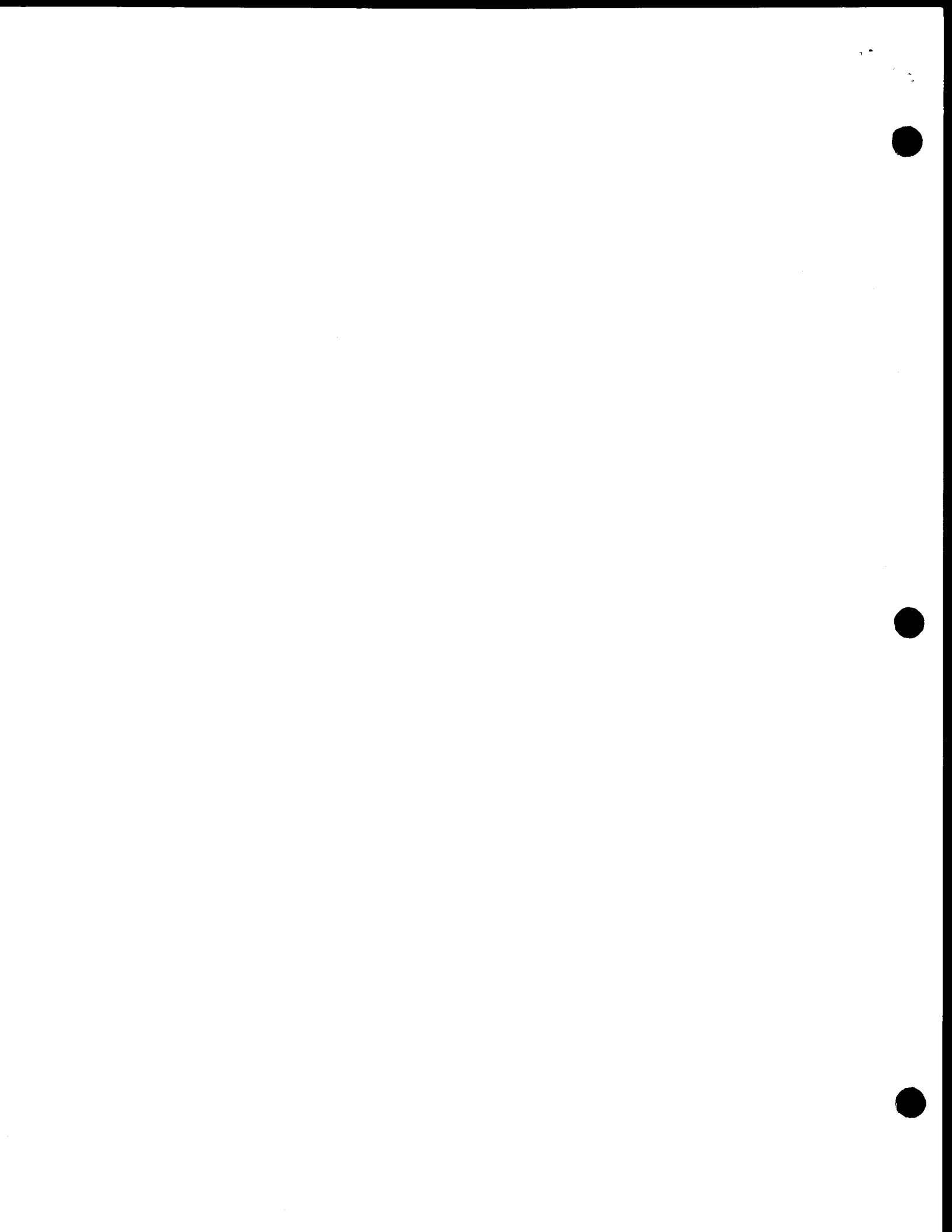
IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 9th day of March, 2015.



By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

Not valid for mortgage, note, letter of credit, currency rate, interest rate or financial value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.





LIBERTY MUTUAL INSURANCE COMPANY
 FINANCIAL STATEMENT — DECEMBER 31, 2013

Assets		Liabilities	
Cash and Bank Deposits.....	\$1,118,180,550	Unearned Premiums.....	\$5,940,431,054
*Bonds — U.S Government.....	1,888,225,943	Reserve for Claims and Claims Expense.....	17,305,063,560
*Other Bonds.....	12,039,490,815	Funds Held Under Reinsurance Treaties.....	212,659,311
*Stocks.....	9,030,962,112	Reserve for Dividends to Policyholders.....	1,226,236
Real Estate.....	251,301,907	Additional Statutory Reserve.....	63,348,980
Agents' Balances or Uncollected Premiums.....	4,781,042,931	Reserve for Commissions, Taxes and	
Accrued Interest and Rents.....	149,855,386	Other Liabilities.....	<u>5,826,683,629</u>
Other Admitted Assets.....	<u>15,216,749,451</u>	Total.....	<u>\$29,349,412,770</u>
		Special Surplus Funds.....	\$55,686,852
		Capital Stock.....	11,250,000
		Paid in Surplus.....	7,898,288,167
		Unassigned Surplus.....	7,161,171,306
		Surplus to Policyholders.....	<u>15,126,396,325</u>
Total Admitted Assets.....	<u>\$44,475,809,095</u>	Total Liabilities and Surplus.....	<u>\$44,475,809,095</u>



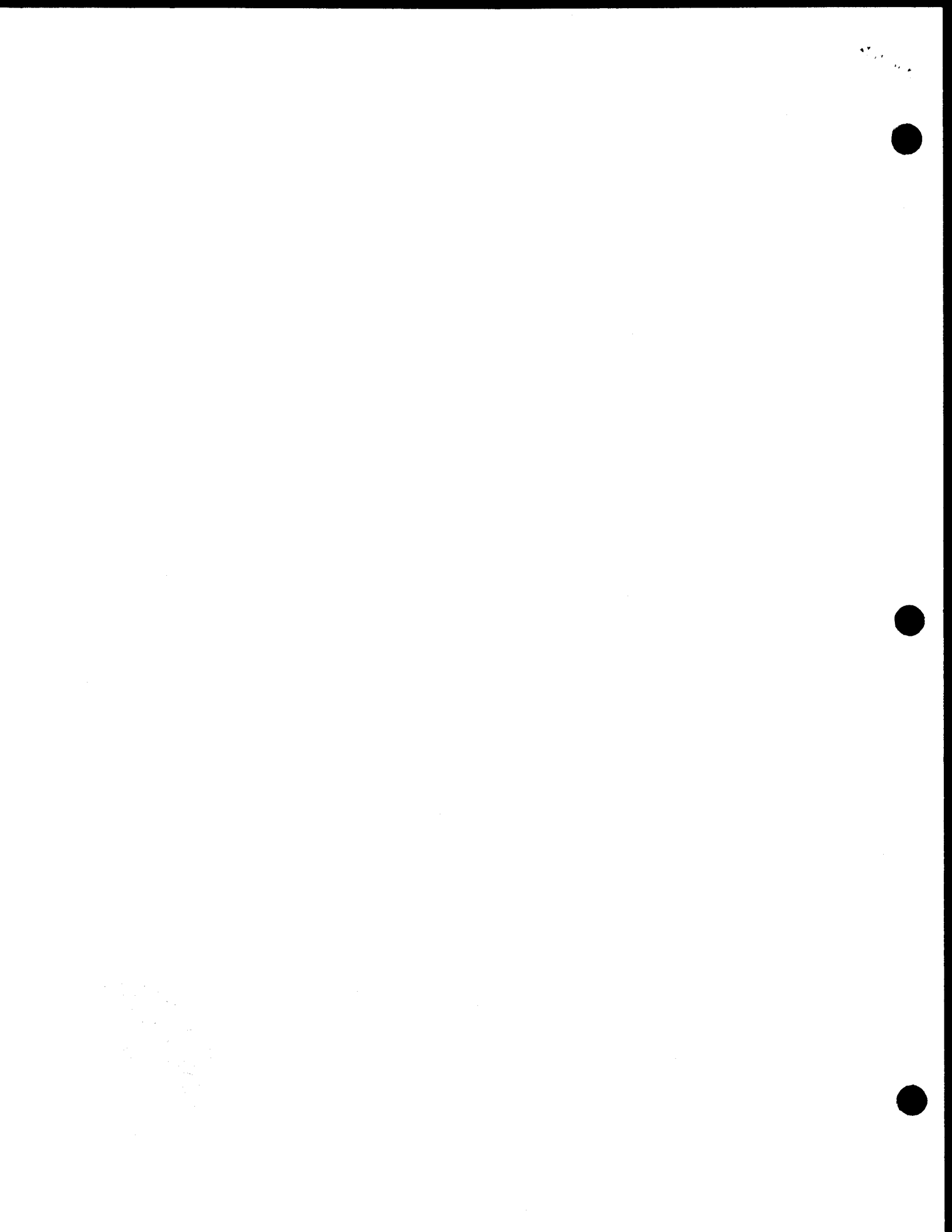
* Bonds are stated at amortized or investment value; Stocks at Association Market Values.
 The foregoing financial information is taken from Liberty Mutual Insurance Company's financial statement filed with the state of Massachusetts Department of Insurance.

I, TIM MIKOLAJEWSKI, Assistant Secretary of Liberty Mutual Insurance Company, do hereby certify that the foregoing is a true, and correct statement of the Assets and Liabilities of said Corporation, as of December 31, 2013, to the best of my knowledge and belief.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation at Seattle, Washington, this 20th day of March, 2014.

TAMIKOLAJEWSKI

Assistant Secretary





SCHEDULE "A"
(GENERAL CONDITIONS TO CONSTRUCTION CONTRACT)
(GENERAL CONDITIONS RELATING TO ARTICLE 22 - INSURANCE)

PART III. BROKER'S CERTIFICATION

Pursuant to Article 22.3.3 of the Contract, every Certificate Of Insurance must be accompanied by either the following certification by the broker setting forth the following text and required information and signatures or certified copies of all policies referenced in the Certificate Of Insurance.

CERTIFICATION BY BROKER

The undersigned insurance broker represents to the City of New York that the attached Certificate Of Insurance is accurate in all material respects, and that the described insurance is effective as of the date of this Certification.

C&H Agency, Inc.

[Name Of Broker (Typewritten)]

783 Riverview Drive, Totowa, NJ 07512

[Address Of Broker (Typewritten)]

jintiso@chagency.com

[E-Mail Address Of Broker (Typewritten)]

973-890-0900

[Phone Number/Fax Number Of Broker (Typewritten)]



[Signature Of Authorized Official Or Broker]

Jo-Ann Intiso, Account Executive

[Name And Title Of Authorized Official (Typewritten)]

State of NJ)
County of PASSAIC) ss.:

Sworn to before me this 9th day of March , 20 15



NOTARY PUBLIC FOR THE STATE OF NJ





New York State Insurance Fund

Workers' Compensation & Disability Benefits Specialists Since 1914

199 CHURCH STREET, NEW YORK, N.Y. 10007-1100
Phone: (888) 997-3863

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

***** 112806461
LOVELL SAFETY MGMT CO., LLC
110 WILLIAM STREET 12TH FLR
NEW YORK NY 10038

POLICYHOLDER
EN-TECH CORP
91 RUCKMAN ROAD
CLOSTER NJ 07624

CERTIFICATE HOLDER
NYC DEPARTMENT OF DESIGN &
CONSTRUCTION
30-30 THOMSON AVENUE
LONG ISLAND CITY NY 11101

POLICY NUMBER	CERTIFICATE NUMBER	PERIOD COVERED BY THIS CERTIFICATE	DATE
G 1419 683-6	16610	04/01/2013 TO 04/01/2015	3/3/2014

THIS IS TO CERTIFY THAT THE POLICYHOLDER NAMED ABOVE IS INSURED WITH THE NEW YORK STATE INSURANCE FUND UNDER POLICY NO. 1419 683-6 UNTIL 04/01/2015, COVERING THE ENTIRE OBLIGATION OF THIS POLICYHOLDER FOR WORKERS' COMPENSATION UNDER THE NEW YORK WORKERS' COMPENSATION LAW WITH RESPECT TO ALL OPERATIONS IN THE STATE OF NEW YORK, EXCEPT AS INDICATED BELOW.

IF SAID POLICY IS CANCELLED, OR CHANGED PRIOR TO 04/01/2015 IN SUCH MANNER AS TO AFFECT THIS CERTIFICATE, 30 DAYS WRITTEN NOTICE OF SUCH CANCELLATION WILL BE GIVEN TO THE CERTIFICATE HOLDER ABOVE. NOTICE BY REGULAR MAIL SO ADDRESSED SHALL BE SUFFICIENT COMPLIANCE WITH THIS PROVISION. THE NEW YORK STATE INSURANCE FUND DOES NOT ASSUME ANY LIABILITY IN THE EVENT OF FAILURE TO GIVE SUCH NOTICE.

THIS CERTIFICATE DOES NOT APPLY TO THOSE JOB SITES WHICH ARE COVERED BY OTHER INSURANCE AND ARE SPECIFICALLY EXCLUDED BY ENDORSEMENT.

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS NOR INSURANCE COVERAGE UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICY.

NEW YORK STATE INSURANCE FUND

DIRECTOR, INSURANCE FUND UNDERWRITING

This certificate can be validated on our web site at <https://www.nysif.com/cert/certval.asp> or by calling (888) 875-5790
VALIDATION NUMBER: 237250298



STATE OF NEW YORK
WORKERS' COMPENSATION BOARD

CERTIFICATE OF INSURANCE COVERAGE UNDER THE NYS DISABILITY BENEFITS LAW

PART 1. To be completed by Disability Benefits Carrier or Licensed Insurance Agent of that Carrier

<p>1a. Legal Name and Address of Insured (Use street address only) En-tech Corp. 91 Ruckman Road Closter, NJ 07624</p>	<p>1b. Business Telephone Number of Insured (201) 784-1034 x</p> <p>1c. NYS Unemployment Insurance Employer Registration Number of Insured Pending</p> <p>1d. Federal Employer Identification Number of Insured or Social Security Number 11-2806461</p>
<p>2. Name and Address of the Entity Requesting Proof of Coverage (Entity Being Listed as the Certificate Holder) New York City Department of Design and Construction 30-30 Thomson Avenue Long Island City, NY 11101</p>	<p>3a. Name of Insurance Carrier STANDARD SECURITY LIFE INSURANCE CO., OF NY</p> <p>3b. Policy Number of entity listed in box "1a": R91043-000</p> <p>3c. Policy effective period: 1/1/2015 to 3/8/2016</p>

4. Policy covers:

a. All of the employer's employees eligible under the New York Disability Benefits Law

b. Only the following class or classes of the employer's employees:

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 Benefits Insurance coverage as described above.

Date Signed 3/9/2015 By *Beth A. Schmail*
(Signature of insurance carrier's authorized representative or NYS Licensed Insurance Agent of that insurance carrier)

Telephone Number (212) 355-4141 Title SUPERVISOR/POLICY SERVICES

IMPORTANT: If box "4a" is 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.
 If box "4b" is checked, this certificate is NOT COMPLETE for purposes of Section 220, Subd. 8 of the Disability Benefits Law. It must be mailed for completion to the Workers' Compensation Board, DB Plans Acceptance Unit, 20 Park Street, Albany, New York 12207.

PART 2. To be completed by NYS Workers' Compensation Board (Only if box "4b" of Part 1 has been checked)

State Of New York
Workers' Compensation Board

According to information maintained by the NYS Workers' Compensation Board, the above-named employer has complied with the NYS Disability Benefits Law with respect to all of his/her employees.

Date Signed _____ By _____
(Signature of NYS Workers' Compensation Board Employee)

Telephone Number _____ Title _____



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 "1a" for disability benefits under the New York State Disability 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". *This Certificate is valid for the earlier of one year after this form is approved by the insurance carrier or its licensed agent, or the policy expiration date listed in box "3c".*

Please Note: Upon the cancellation of the disability 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 Benefits Coverage or other authorized proof that the business is complying with the mandatory coverage requirements of the New York State Disability Benefits Law.

DISABILITY 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 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 for all employees has been secured as provided by this article.





CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
3/9/2015

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 be endorsed. If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER C&H AGENCY 783 Riverview Drive P.O. Box 324 Totowa NJ 07511		CONTACT NAME: Jo-Ann Intiso PHONE (A/C No. Ext): (973) 890-0900 FAX (A/C. No): (973) 812-9860 E-MAIL ADDRESS: jintiso@chagency.com PRODUCER CUSTOMER ID #: 00000530	
INSURED En-Tech Corp. 91 Ruckman Road Closter, NJ 07624		INSURER(S) AFFORDING COVERAGE INSURER A: Hanover Insurance Co. NAIC # 22292 INSURER B: INSURER C: INSURER D: INSURER E: INSURER F:	

COVERAGES **CERTIFICATE NUMBER:** 14-15 PROP -09/09 **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	ADDC. SUBR INSR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR					EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$
	GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC					
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS					COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$ \$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DEDUCTIBLE RETENTION \$					EACH OCCURRENCE \$ AGGREGATE \$ \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY 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 N/A				WC STATUTORY LIMITS OTHER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
A	Commercial Property (Special Form)		RHY9542430-02	5/9/2014	5/9/2015	Location: 2071 Clove Road Staten Island, NY

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
RE: En-Tech Job #15-004 EMS ID #PS-312KR E-PIN#85014B0099001 DDC PIN#8502013SE002626C.
Rehabilitation of Interceptor Sewers and Appurtenances in Various Locations - Brooklyn and Staten Island.
Engineers Field Office - \$40,000 Contents Located at 2071 Clove Road, Staten Island, NY.

CERTIFICATE HOLDER New York City Department of Design and Construction 30-30 Thomson Avenue Long Island City, NY 11101	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE Daniel Culnen/LORIP
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SCHEDULE OF WORKMEN, MECHANICS AND LABORERS

The following is a list of classifications for workmen, mechanics and laborers which are anticipated to be employed in the performance of work under this contract, followed by a schedule of the prevailing wage rates and supplemental benefits for all classifications as established by the Comptroller of the City of New York.

Request for interpretation or correction under Subsection A of Section No. 3 in the Information for Bidders includes all requests for clarification of the classification of trades to be employed in the performance of the work under this contract.

In the event that a trade not listed in the classification of trades required to be used at the time of the award of the contract is in fact employed during the performance of this contract, the Contractor shall be required to obtain from the agency the prevailing wage rates and supplementary benefits for the trades used and to complete the performance of this contract at the price at which the contract was awarded.

<u>CODE</u>	<u>CLASSIFICATION</u>
15 42 001	Rigger
15 42 002	Sign Erector
16 11 001	Gardener
16 11 002	Tree Pruner
16 11 003	Tree Remover
16 11 011	Asphalt Raker (Highway & Paving)
16 11 012	Tamper (Highway & Paving)
16 11 013	Curbsetter (Highway & Paving)
16 11 014	Formsetter (Highway & Paving)
16 11 015	Rammerman (Highway & Paving)
16 11 016	Laborer (Highway & Paving)
16 11 017	ALL OTHER TITLES (Highway & Paving)
16 23 001	Laborer
16 23 002	Operating Engineer (Heavy Construction-Maintenance)
16 23 003	Junior Operating Engineer
16 23 004	Junior Operating Engineer
16 23 005	Junior Operating Engineer
16 23 006	Fireman (Heavy Construction)
16 23 007	Oiler (Heavy Construction)
16 23 051	Surveyor-Heavy Construction
16 23 052	Surveyor-Heavy Construction-Instrument Man
16 23 053	Surveyor-Heavy Construction-Rodman
16 23 057	Surveyor-Land Surveying-Party Chief
16 23 058	Surveyor-Land Surveying-Instrument Man
16 23 059	Surveyor-Land Surveying-Rodman

<u>CODE</u>	<u>CLASSIFICATION</u>
16 23 061	Operating Engineer-Road & Heavy Construction
16 23 062	Operating Engineer-Paving
16 23 063	Operating Engineer-Concrete
16 23 071	Teamster-Heavy Equipment Trailer Driver
16 23 072	Teamster-Dump Truck Driver
16 23 073	Teamster-Flat Bed Trailer Driver (3-Axle)
16 23 074	Teamster-Redi-Mix (Sand and Gravel)
16 29 011	Drill Runners
17 11 001	Plumbers
17 21 001	Painter (Brush & Roller)
17 31 001	Electrician
17 41 001	Bricklayer
17 41 002	Mason Tender
17 41 004	Cement Mason
17 42 002	Metallic Lather
17 51 001	Carpenter
17 51 002	Dock Builder
17 71 001	Cement & Concrete Worker
17 91 001	Structural Iron Worker
17 95 001	Barman
17 96 021	Derrickmen & Riggers
17 99 001	Ornamental Iron Worker
17 99 002	Sandblaster
17 99 005	Pointers (Waterproofer)
17 99 011	Welders

Each classification may include trainees depending upon project staffing schedules and as required by the terms of this contract.

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

LABOR LAW §220 PREVAILING WAGE SCHEDULE

Workers, Laborers and Mechanics employed on a public work project must receive not less than the prevailing rate of wage and benefits for the classification of work performed by each upon such public work. Pursuant to Labor Law §220 the Comptroller of the City of New York has promulgated this schedule solely for Workers, Laborers and Mechanics engaged by private contractors on New York City public work contracts.

Contracting agencies anticipating doing work which requires the employment of a trade or classification not included in this schedule must request the Comptroller to establish a proper classification for the work pursuant to Labor Law §220 (3-a) (a). The prevailing rate schedule as promulgated by the Comptroller, must, in compliance with law, be annexed to and form part of the contract.

Contractors are solely responsible for maintaining original payroll records which delineate, among other things, the hours each employee worked within a given classification. Contractors using rates and/or classifications not promulgated by the Comptroller do so at their own risk. Additionally, prior to bid, Agency Chief Contracting Officers must contact the Bureau of Labor Law when the need arises for a work classification not published in this schedule.

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 for work performed during the effective period, unless otherwise noted. You will be notified of any changes to this schedule by addenda published on our web site at www.comptroller.nyc.gov. The rate of wages and supplemental benefits to be paid or provided are those that prevail at the time the work is being performed. Preliminary schedules for future one-year periods are published annually in the City Record on or about June 1st of each succeeding year. Final schedules are published on or about July 1st in the City Record and on our web site at 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.

Answers to questions concerning prevailing trade practices may be obtained from the Classification Unit by calling (212) 669-7974. Please direct all other compliance issues to: Bureau of Labor Law, Attn: Wasyl Kinach, P.E., Office of the Comptroller, 1 Centre Street, Room 1122, New York, N.Y. 10007; Fax (212) 669-4002.

Prevailing 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.

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

Contractors are advised to review the applicable Collective Bargaining Agreements and the Comptroller's Prevailing Wage Schedule before bidding on Public Work. If there are any questions concerning prevailing wages, benefits, overtime, Holiday pay, shift differentials or any prevailing practice, please contact this office.

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.

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.

In order to meet their obligation to provide prevailing supplemental benefits to each covered employee, employers must either:

- 1) Provide bona-fide benefits which cost the employer no less than the prevailing supplemental benefits rate; or
- 2) Supplement the employee's hourly wage by an amount no less than the prevailing supplemental benefits rate; or
- 3) Provide a combination of bona-fide benefits and wage supplements which cost the employer no less than the prevailing supplemental benefits rate in total.

Particular attention should be given to the supplemental benefits requirement. Although in most instances the payment or provision for supplemental benefits is for each hour worked, some classifications require the payment or provision of supplemental benefits for each hour paid. Consequently, some prevailing practices require benefits to be purchased at the overtime, shift differential, Holiday, Saturday, Sunday or other premium time rate.

Benefits are paid for EACH HOUR WORKED unless otherwise noted.

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

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

220 SCHEDULE OF PREVAILING WAGES AND SUPPLEMENTAL BENEFITS ADDENDUM
EFFECTIVE PERIOD JANUARY 20, 2014 THROUGH JUNE 30, 2014

List of Amended Classifications

1. ASBESTOS HANDLER
2. BRICKLAYER
3. CARPENTER - BUILDING COMMERCIAL
4. CEMENT & CONCRETE WORKER
5. CORE DRILLER
6. ELECTRICIAN
7. FLOOR COVERER
8. HEAT AND FROST INSULATOR
9. HOUSE WRECKER
10. IRON WORKER - ORNAMENTAL
11. IRON WORKER - STRUCTURAL
12. MARBLE MECHANIC
13. MASON TENDER
14. MASON TENDER (INTERIOR DEMOLITION WORKER)
15. MOSAIC MECHANIC
16. PAINTER - STRUCTURAL STEEL
17. PLASTERER
18. PLASTERER - TENDER
19. PLUMBER
20. PLUMBER (MECHANICAL EQUIPMENT AND SERVICE)
21. PLUMBER (RESIDENTIAL RATES FOR 1, 2 AND 3 FAMILY HOME CONSTRUCTION)
22. PLUMBER: PUMP & TANK
23. ROOFER
24. STEAMFITTER
25. STEAMFITTER - REFRIGERATION AND AIR CONDITIONER
26. STONE MASON - SETTER
27. TILE FINISHER
28. TILE LAYER - SETTER

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

TABLE OF CONTENTS

<u>CLASSIFICATION</u>	<u>PAGE</u>
ASBESTOS HANDLER	6
BLASTER.....	6
BOILERMAKER.....	8
BRICKLAYER	9
CARPENTER - BUILDING COMMERCIAL	10
CARPENTER - HEAVY CONSTRUCTION WORK	11
CEMENT & CONCRETE WORKER	12
CEMENT MASON	13
CORE DRILLER.....	14
DERRICKPERSON AND RIGGER	15
DIVER.....	16
DOCKBUILDER - PILE DRIVER	17
DRIVER: TRUCK (TEAMSTER).....	18
ELECTRICIAN	20
ELECTRICIAN - ALARM TECHNICIAN	24
ELECTRICIAN-STREET LIGHTING WORKER.....	25
ELEVATOR CONSTRUCTOR	26
ELEVATOR REPAIR & MAINTENANCE	27
ENGINEER.....	27
ENGINEER - CITY SURVEYOR AND CONSULTANT.....	32
ENGINEER - FIELD (BUILDING CONSTRUCTION).....	33
ENGINEER - FIELD (HEAVY CONSTRUCTION).....	34
ENGINEER - FIELD (STEEL ERECTION).....	35
ENGINEER - OPERATING	36
FLOOR COVERER	44
GLAZIER.....	45
GLAZIER - REPAIR & MAINTENANCE	46
HEAT AND FROST INSULATOR.....	46
HOUSE WRECKER	47
IRON WORKER - ORNAMENTAL	48
IRON WORKER - STRUCTURAL	49
LABORER.....	50
LANDSCAPING	51
MARBLE MECHANIC.....	53
MASON TENDER	54
MASON TENDER (INTERIOR DEMOLITION WORKER).....	55
METALLIC LATHER.....	56
MILLWRIGHT.....	57
MOSAIC MECHANIC.....	58
PAINTER.....	59
PAINTER - SIGN.....	60
PAINTER - STRIPER.....	61

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

Painter - Structural Steel	62
Paperhanger.....	63
Paver and Roadbuilder.....	63
Plasterer.....	65
Plasterer - Tender.....	66
Plumber.....	67
Plumber (Mechanical Equipment and Service).....	68
Plumber (Residential Rates for 1, 2 and 3 Family Home Construction).....	68
Plumber: Pump & Tank.....	69
Pointer - Waterproofing, Caulker Mechanic (Exterior Building Renovation)	70
Roofer	71
Sandblaster - Steamblaster.....	72
Sheet Metal Worker.....	72
Sheet Metal Worker - Specialty	73
Sign Erector	74
Steamfitter	75
Steamfitter - Refrigeration and Air Conditioner	77
Stone Mason - Setter	79
Taper	80
Telecommunication Worker.....	81
Tile Finisher.....	82
Tile Layer - Setter	83
Timberperson.....	83
Tunnel Worker.....	84
Welder.....	86

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

ASBESTOS HANDLER

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

Asbestos Handler

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$35.90**

Supplemental Benefit Rate per Hour: **\$15.05**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$36.00**

Supplemental Benefit Rate per Hour: **\$15.45**

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$44.40**

Supplemental Benefit Rate per Hour: **\$38.44**

Blaster (Hydraulic)

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

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$45.17
Supplemental Benefit Rate per Hour: \$38.44

Blaster - Trac Drill Hydraulic

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$40.04
Supplemental Benefit Rate per Hour: \$38.44

Blaster - Wagon: Air Trac: Quarry Bar: Drillrunners

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$39.30
Supplemental Benefit Rate per Hour: \$38.44

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: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$38.32
Supplemental Benefit Rate per Hour: \$38.44

Blaster - Powder Carriers

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$34.66
Supplemental Benefit Rate per Hour: \$38.44

Blaster - Hydraulic Trac Drill Chuck Tender

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$33.46
Supplemental Benefit Rate per Hour: \$38.44

Blaster - Chuck Tender & Nipper

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$32.75
Supplemental Benefit Rate per Hour: \$38.44

Blaster - Magazine Keepers: (Watch Person)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$19.76
Supplemental Benefit Rate per Hour: \$38.44

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 eight hours of work on Saturday and for Make-up Time. Double time for all hours over eight Monday through Friday (except make-up hours) and for all hours worked on Sunday and Holidays.

Overtime

Double time 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

Presidential Election 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: 7/1/2013 - 12/31/2013

Wage Rate per Hour: **\$49.47**

Supplemental Benefit Rate per Hour: **\$39.78**

Supplemental Note: For time and one half overtime - \$59.08; For double overtime - \$78.37.

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: **\$50.45**

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

Supplemental Benefit Rate per Hour: **\$41.31**

Supplemental Note: For time and one half overtime - \$61.37; For double overtime - \$81.43.

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: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$46.44**

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

Supplemental Benefit Rate per Hour: \$27.53

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$47.78

Supplemental Benefit Rate per Hour: \$28.03

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

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: 7/1/2013 – 1/19/2014

Wage Rate per Hour: \$48.08

Supplemental Benefit Rate per Hour: \$41.10

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$48.88

Supplemental Benefit Rate per Hour: \$42.70

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.

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
Washington's Birthday
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: 7/1/2013 - 7/17/2013

Wage Rate per Hour: \$46.74

Supplemental Benefit Rate per Hour: \$42.37

Effective Period: 7/18/2013 - 6/30/2014

Wage Rate per Hour: \$46.82

Supplemental Benefit Rate per Hour: \$44.97

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

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
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)

CEMENT & CONCRETE WORKER

Cement & Concrete Worker

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$42.33**

Supplemental Benefit Rate per Hour: **\$26.17**

Supplemental Note: \$28.92 on Saturdays; \$31.67 on Sundays & Holidays

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$42.38**

Supplemental Benefit Rate per Hour: **\$26.17**

Supplemental Note: \$28.92 on Saturdays; \$31.67 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

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

Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$38.63

Supplemental Benefit Rate per Hour: \$39.05

Supplemental Note: Overtime supplemental benefit rate per hour: \$57.55

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.

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

(Local #780)

CORE DRILLER

Core Driller

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$35.44**

Supplemental Benefit Rate per Hour: **\$19.75**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$35.71**

Supplemental Benefit Rate per Hour: **\$21.69**

Core Driller Helper

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$28.60**

Supplemental Benefit Rate per Hour: **\$19.75**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$28.60**

Supplemental Benefit Rate per Hour: **\$21.69**

Core Driller Helper(Third year in the industry)

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$25.74**

Supplemental Benefit Rate per Hour: **\$19.75**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$25.74**

Supplemental Benefit Rate per Hour: **\$21.69**

Core Driller Helper (Second year in the industry)

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$22.88**

Supplemental Benefit Rate per Hour: **\$19.75**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$22.88**

Supplemental Benefit Rate per Hour: **\$21.69**

Core Driller Helper (First year in the industry)

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$20.02**

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

Supplemental Benefit Rate per Hour: \$19.75

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$20.02

Supplemental Benefit Rate per Hour: \$21.69

Overtime Description

Time and one half the regular rate for work on a holiday plus Holiday pay when worked.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Time and one half the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day

Memorial Day

Independence Day

Labor Day

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$41.00

Supplemental Benefit Rate per Hour: \$46.07

Supplemental Note: The above supplemental rate applies for work performed in Manhattan, Bronx, Brooklyn and Queens. \$47.49 - For work performed in Staten Island.

Derrick Person & Rigger - Site Work

For site work where no rigging is involved.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$30.00

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

Supplemental Benefit Rate per Hour: \$31.32

Overtime Description

The first two hours of overtime on weekdays and the first seven hours of work on Saturdays are paid at time and one half for wages and supplemental benefits. All additional overtimes is paid at double time for wages and supplemental benefits. Deduct \$1.42 from the Staten Island hourly benefits rate before computing overtime.

Overtime

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Washington's Birthday
Good Friday
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

(Local #197)

DIVER

Diver (Marine)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$59.40

Supplemental Benefit Rate per Hour: \$44.97

Diver Tender (Marine)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$42.05

Supplemental Benefit Rate per Hour: \$44.97

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

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

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

When three shifts are utilized each shift shall work seven and one half-hours (7 1/2 hours) and paid for 8 hours, allowing for one half hour for lunch.

(Carpenters District Council)

DOCKBUILDER - PILE DRIVER

Dockbuilder - Pile Driver

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$46.82

Supplemental Benefit Rate per Hour: \$44.97

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

Off shift work commencing between 5:00 P.M. and 11:00 P.M. shall work eight and one half hours allowing for one half hour for lunch. The wage rate shall be 113% of the straight time hourly wage rate.

(Carpenters District Council)

DRIVER: TRUCK (TEAMSTER)

Driver - Automobile Chauffeur (Dump Truck)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$38.11

Supplemental Benefit Rate per Hour: \$40.20

Driver - Heavy Equipment Trailer Driver

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$39.61

Supplemental Benefit Rate per Hour: \$40.20

Note: For time and one half overtime Wage Rate - \$57.16; for double time overtime Wage Rate - \$76.21

Driver - Euclid & Turnapull Operator

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$38.67

Supplemental Benefit Rate per Hour: \$40.20

Driver - Six Wheeler(3 Axle) Tractors & Trailers

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$39.11

Supplemental Benefit Rate per Hour: \$40.20

Note: For time and one half overtime Wage Rate - \$58.01; for double time overtime Wage Rate - \$77.34

Driver - Boom Truck

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$39.36

Supplemental Benefit Rate per Hour: \$40.20

Note: For time and one half overtime Wage Rate - \$58.01; for double time overtime Wage Rate - \$77.34

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

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.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Driver - Redi-Mix Driver (Sand & Gravel)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$35.71

Supplemental Benefit Rate per Hour: \$37.27

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

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

Triple time the regular rate for work on the following holiday(s).

New Year's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Election Day
Thanksgiving Day
Christmas Day

(Local #282)

ELECTRICIAN

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

Electrician "A" (Regular Day)

Effective Period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$52.00
Supplemental Benefit Rate per Hour: \$46.13

Effective Period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$53.00
Supplemental Benefit Rate per Hour: \$47.54

Electrician "A" (Regular Day Overtime)

Effective Period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$78.00
Supplemental Benefit Rate per Hour: \$49.39

Effective Period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$79.50
Supplemental Benefit Rate per Hour: \$50.86

Electrician "A" (Day Shift)

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

Effective Period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: **\$52.00**
Supplemental Benefit Rate per Hour: **\$46.13**

Effective Period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: **\$53.00**
Supplemental Benefit Rate per Hour: **\$47.54**

Electrician "A" (Day Shift Overtime After 8 hours)

Effective Period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: **\$78.00**
Supplemental Benefit Rate per Hour: **\$49.39**

Effective Period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: **\$79.50**
Supplemental Benefit Rate per Hour: **\$50.86**

Electrician "A" (Swing Shift)

Effective Period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: **\$61.01**
Supplemental Benefit Rate per Hour: **\$52.47**

Effective Period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: **\$62.19**
Supplemental Benefit Rate per Hour: **\$54.07**

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

Effective Period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: **\$91.52**
Supplemental Benefit Rate per Hour: **\$56.30**

Effective Period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: **\$93.29**
Supplemental Benefit Rate per Hour: **\$57.97**

Electrician "A" (Graveyard Shift)

Effective Period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: **\$68.34**
Supplemental Benefit Rate per Hour: **\$57.83**

Effective Period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: **\$69.66**
Supplemental Benefit Rate per Hour: **\$59.59**

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

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

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$102.51

Supplemental Benefit Rate per Hour: \$62.11

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$104.49

Supplemental Benefit Rate per Hour: \$63.96

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

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 \$22.86 effective 1/20/2014 and \$23.63 effective 5/14/2014.

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: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$26.50

Supplemental Benefit Rate per Hour: \$19.56

First and Second Year "M" Wage Rate Per Hour - Hired on or before 5/10/07: \$25.80

First and Second Year "M" Supplemental Rate- Hired on or before 5/10/07: \$19.21

First and Second Year "M" Wage Rate Per Hour - Hired after 5/10/07: \$22.00

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

First and Second Year "M" Supplemental Rate- Hired after 5/10/07: \$17.30

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$27.00

Supplemental Benefit Rate per Hour: \$20.32

First and Second Year "M" Wage Rate Per Hour - Hired on or before 5/10/07: \$26.30

First and Second Year "M" Supplemental Rate- Hired on or before 5/10/07: \$19.96

First and Second Year "M" Wage Rate Per Hour - Hired after 5/10/07: \$22.50

First and Second Year "M" Supplemental Rate- Hired after 5/10/07: \$18.06

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: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$39.75

Supplemental Benefit Rate per Hour: \$21.23

First and Second Year "M" Wage Rate Per Hour - Hired on or before 5/10/07: \$38.70

First and Second Year "M" Supplemental Rate- Hired on or before 5/10/07: \$20.83

First and Second Year "M" Wage Rate Per Hour - Hired after 5/10/07: \$33.00

First and Second Year "M" Supplemental Rate- Hired after 5/10/07: \$18.68

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$40.50

Supplemental Benefit Rate per Hour: \$21.01

First and Second Year "M" Wage Rate Per Hour - Hired on or before 5/10/07: \$39.45

First and Second Year "M" Supplemental Rate- Hired on or before 5/10/07: \$21.61

First and Second Year "M" Wage Rate Per Hour - Hired after 5/10/07: \$33.75

First and Second Year "M" Supplemental Rate- Hired after 5/10/07: \$19.47

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

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

(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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$30.40**

Supplemental Benefit Rate per Hour: **\$13.90**

Supplemental Note: \$12.40 only after 8 hours worked in a day

Overtime Description

Time and one half the regular rate for work on the following holidays: Columbus Day, Veterans Day, Day after Thanksgiving.

Double time the regular rate for work on the following holidays: New Year's day, Martin Luther King Jr. Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Paid Holidays

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Shift Rates

Night Differential is based upon a ten percent (10%) differential between the hours of 4:00 P.M. and 12:30 A.M. and a fifteen percent (15%) differential for the hours 12:00 A.M. to 8:00 A.M.

Vacation

At least 1 year of employment.....ten (10) days

5 years or more of employment.....fifteen (15) days

10 years of employment.....twenty (20) days

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

Plus one Personal Day per year

Sick Days:
One day per Year

(Local #3)

ELECTRICIAN-STREET LIGHTING WORKER

Electrician - Electro Pole Electrician

Effective Period: 7/1/2013 - 5/20/2014
Wage Rate per Hour: **\$52.00**
Supplemental Benefit Rate per Hour: **\$47.90**

Effective Period: 5/21/2014 - 6/30/2014
Wage Rate per Hour: **\$53.00**
Supplemental Benefit Rate per Hour: **\$49.34**

Electrician - Electro Pole Foundation Installer

Effective Period: 7/1/2013 - 5/20/2014
Wage Rate per Hour: **\$39.42**
Supplemental Benefit Rate per Hour: **\$36.46**

Effective Period: 5/21/2014 - 6/30/2014
Wage Rate per Hour: **\$40.18**
Supplemental Benefit Rate per Hour: **\$37.73**

Electrician - Electro Pole Maintainer

Effective Period: 7/1/2013 - 5/20/2014
Wage Rate per Hour: **\$33.75**
Supplemental Benefit Rate per Hour: **\$32.83**

Effective Period: 5/21/2014 - 6/30/2014
Wage Rate per Hour: **\$34.40**
Supplemental Benefit Rate per Hour: **\$34.00**

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

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

Time and one half the regular rate for work on the following holiday(s).

New Year's Day
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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$57.01

Supplemental Benefit Rate per Hour: \$34.48

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

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

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$45.14

Supplemental Benefit Rate per Hour: \$33.02

Overtime Description

For Service Work: Double time - all work 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

For Modernization Work (4pm to 12:30am) - regularly hourly rate plus a (15%) fifteen percent differential.

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

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

Engineer - Heavy Construction Operating Engineer I

Cherrypickers 20 tons and over and Loaders (rubber tired and/or tractor type with a manufacturer's minimum rated capacity of six cubic yards and over).

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$61.05

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$97.68

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$59.24

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$94.78

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$56.22

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$89.95

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

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

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$58.97**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: **\$94.35**

Engineer - Heavy Construction Maintenance Engineer II

On Base Mounted Tower Cranes

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$77.30**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: **\$123.68**

Engineer - Heavy Construction Maintenance Engineer III

On Generators, Light Towers

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$39.10**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: **\$62.56**

Engineer - Heavy Construction Maintenance Engineer IV

On Pumps and Mixers including mud sucking

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$40.11**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: **\$64.18**

Engineer - Heavy Construction Oilers I

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

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$53.22**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: **\$85.15**

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

Engineer - Heavy Construction Oilers II

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

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$36.97**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: **\$59.15**

Engineer - Steel Erection Maintenance Engineers

Derrick, Travelers, Tower, Crawler Tower and Climbing Cranes

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$57.05**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: **\$91.28**

Engineer - Steel Erection Oiler I

On a Truck Crane

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$53.43**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: **\$85.49**

Engineer - Steel Erection Oiler II

On a Crawler Crane

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$40.84**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: **\$65.34**

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.

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

Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
Lincoln's Birthday
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

Engineer - Building Work Maintenance Engineers I

Installing, repairing, maintaining, dismantling (of all equipment including: Steel Cutting and Bending Machines, Mechanical Heaters, Mine Hoists, Climbing Cranes, Tower Cranes, Linden Peine, Lorain, Liebherr, Mannes, or machines of a similar nature, Well Point Systems, Deep Well Pumps, Concrete Mixers with loading Device, Concrete Plants, Motor Generators when used for temporary power and lights), skid steer machines of a similar nature including bobcat.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$54.04**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

Engineer - Building Work Maintenance Engineers II

On Pumps, Generators, Mixers and Heaters

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$42.10**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$51.40**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

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

Engineer - Building Work Oilers II

Oilers on Crawler Cranes, Backhoes, Trenching Machines, Gunite Machines, Compressors (three or more in Battery).

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$38.31

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$35.55

Supplemental Benefit Rate per Hour: \$17.65

Instrument Person

Effective Period: 7/1/2013 - 6/30/2014

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

Wage Rate per Hour: **\$29.41**
Supplemental Benefit Rate per Hour: **\$17.65**

Rodperson

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$25.54**
Supplemental Benefit Rate per Hour: **\$17.65**

Overtime Description

Overtime Benefit Rate - \$23.63 per hour (time & one half) \$29.95 per hour (double time).
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: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$55.40**
Supplemental Benefit Rate per Hour: **\$30.62**
Supplemental Note: Overtime Benefit Rate - \$42.73 per hour (time & one half) \$54.84 per hour (double time).

Field Engineer - BC Instrument Person

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$43.10**
Supplemental Benefit Rate per Hour: **\$30.62**
Supplemental Note: Overtime Benefit Rate - \$42.73 per hour (time & one half) \$54.84 per hour (double time).

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

Field Engineer - BC Rodperson

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$27.96

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime Benefit Rate - \$42.73 per hour (time & one half) \$54.84 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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$62.61

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 per hour (double time).

Field Engineer - HC Instrument Person

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$46.00

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 per hour (double time).

Field Engineer - HC Rodperson

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

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$38.61**

Supplemental Benefit Rate per Hour: **\$30.62**

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$58.50**

Supplemental Benefit Rate per Hour: **\$30.62**

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 per hour (double time).

Field Engineer - Steel Erection Instrument Person

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$45.53**

Supplemental Benefit Rate per Hour: **\$30.62**

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 per hour (double time).

Field Engineer - Steel Erection Rodperson

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$30.43**

Supplemental Benefit Rate per Hour: **\$30.62**

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 per hour (double time).

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

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$67.70

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$108.32

Operating Engineer - Road & Heavy Construction II

Backhoes, Power Shovels, Hydraulic Clam Shells, Steel Erection, Moles and machines of a similar nature.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$70.10

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: 51.75 overtime hours

Shift Wage Rate: \$112.16

Operating Engineer - Road & Heavy Construction III

Mine Hoists, Cranes, etc. (Used as Mine Hoists)

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

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$72.34**
Supplemental Benefit Rate per Hour: **\$28.60**
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: **\$115.74**

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: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$70.63**
Supplemental Benefit Rate per Hour: **\$28.60**
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: **\$113.01**

Operating Engineer - Road & Heavy Construction V

Pile Drivers & Rigs (employing Dock Builder foreperson): Derrick Boats, Tunnel Shovels.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$69.23**
Supplemental Benefit Rate per Hour: **\$28.60**
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: **\$110.77**

Operating Engineer - Road & Heavy Construction VI

Mixers (Concrete with loading attachment), Concrete Pavers, Cableways, Land Derricks, Power Houses (Low Air Pressure Units).

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$65.76**
Supplemental Benefit Rate per Hour: **\$28.60**
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: **\$105.22**

Operating Engineer - Road & Heavy Construction VII

Barrier Movers , Barrier Transport and Machines of a Similar Nature.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$53.08**
Supplemental Benefit Rate per Hour: **\$28.60**
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: **\$84.93**

Operating Engineer - Road & Heavy Construction VIII

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

Utility Compressors

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$41.18**
Supplemental Benefit Rate per Hour: **\$28.60**
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: **\$51.93**

Operating Engineer - Road & Heavy Construction IX

Horizontal Boring Rig

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$62.53**
Supplemental Benefit Rate per Hour: **\$28.60**
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: **\$100.05**

Operating Engineer - Road & Heavy Construction X

Elevators (manually operated as personnel hoist).

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$57.46**
Supplemental Benefit Rate per Hour: **\$28.60**
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: **\$91.94**

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: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$44.63**
Supplemental Benefit Rate per Hour: **\$28.60**
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: **\$71.41**

Operating Engineer - Road & Heavy Construction XII

All Drills and Machines of a similar nature.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$66.45**
Supplemental Benefit Rate per Hour: **\$28.60**
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: **\$106.32**

Operating Engineer - Road & Heavy Construction XIII

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

Concrete Pumps, Concrete Plant, Stone Crushers, Double Drum Hoist, Power Houses (other than above).

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$64.34**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: **\$102.94**

Operating Engineer - Road & Heavy Construction XIV

Concrete Mixer

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$61.53**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: **\$98.45**

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$41.44**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: **\$66.30**

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$58.74**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: **\$93.98**

Operating Engineer - Road & Heavy Construction XVII

On-Site concrete plant engineer, On-site Asphalt Plant Engineer, and Vibratory console.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$59.21**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: **\$94.74**

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

Operating Engineer - Road & Heavy Construction XVIII

Tower Crane

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$85.00**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: **\$51.75** overtime hours

Shift Wage Rate: **\$136.00**

Operating Engineer - Paving I

Asphalt Spreaders, Autogrades (C.M.I.), Roto/Mil

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$65.76**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: **\$51.75** overtime hours

Shift Wage Rate: **\$105.22**

Operating Engineer - Paving II

Asphalt Roller

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$64.04**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: **\$51.75** overtime hours

Shift Wage Rate: **\$102.46**

Operating Engineer - Paving III

Asphalt Plants

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$54.17**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: **\$51.75** overtime hours

Shift Wage Rate: **\$86.67**

Operating Engineer - Concrete I

Cranes

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$70.32**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: **\$51.75** overtime hours

Operating Engineer - Concrete II

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

Compressors

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$41.76**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: \$51.75 overtime hours

Operating Engineer - Concrete III

Micro-traps (Negative Air Machines), Vac-All Remediation System.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$56.16**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: \$51.75 overtime hours

Operating Engineer - Steel Erection I

Three Drum Derricks

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$73.37**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: **\$117.39**

Operating Engineer - Steel Erection II

Cranes, 2 Drum Derricks, Hydraulic Cranes, Fork Lifts and Boom Trucks.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$70.50**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: **\$112.80**

Operating Engineer - Steel Erection III

Compressors, Welding Machines.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$41.84**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: **\$66.94**

Operating Engineer - Steel Erection IV

Compressors - Not Combined with Welding Machine.

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

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$39.85
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$63.76

Operating Engineer - Building Work I

Forklifts, Plaster (Platform machine), Plaster Bucket, Concrete Pump and all other equipment used for hoisting material.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$57.82
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 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: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$43.28
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours

Operating Engineer - Building Work III

Double Drum

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$65.83
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours

Operating Engineer - Building Work IV

Stone Derrick, Cranes, Hydraulic Cranes Boom Trucks.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$69.74
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours

Operating Engineer - Building Work V

Dismantling and Erection of Cranes, Relief Engineer.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$64.26

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

Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours

Operating Engineer - Building Work VI

4 Pole Hoist, Single Drum Hoists.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$63.58
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours

Operating Engineer - Building Work VII

Rack & Pinion and House Cars

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$50.53
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
For New House Car projects started after 7/1/11 only: Wage Rate per Hour \$40.31

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).

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.

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

(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: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$46.15**

Supplemental Benefit Rate per Hour: **\$38.50**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$48.88**

Supplemental Benefit Rate per Hour: **\$42.70**

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

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: 7/1/2013 - 10/31/2013

Wage Rate per Hour: **\$42.00**

Supplemental Benefit Rate per Hour: **\$33.24**

Supplemental Note: Supplemental Benefit Overtime Rate: **\$41.24**

Effective Period: 11/1/2013 - 6/30/2014

Wage Rate per Hour: **\$42.00**

Supplemental Benefit Rate per Hour: **\$34.09**

Supplemental Note: Supplemental Benefit Overtime Rate: **\$42.59**

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

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)

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

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 \$105,000. 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: 7/1/2013 - 4/30/2014

Wage Rate per Hour: **\$23.50**

Supplemental Benefit Rate per Hour: **\$18.54**

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: **\$23.60**

Supplemental Benefit Rate per Hour: **\$19.04**

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: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$56.48**

Supplemental Benefit Rate per Hour: **\$33.31**

Effective Period: 1/20/2014 - 6/30/2014

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

Wage Rate per Hour: \$56.98

Supplemental Benefit Rate per Hour: \$34.81

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)

HOUSE WRECKER (TOTAL DEMOLITION)

House Wrecker - Tier A

On all work sites the first, second, eleventh and every third House Wrecker thereafter shall be Tier A House Wreckers (i.e. 1st, 2nd, 11th, 14th etc). The 10th and 20th House Wrecker shall be apprentices. Other House Wreckers shall be Tier B House Wreckers.

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

Effective Period: 7/1/2013 – 1/19/2014
Wage Rate per Hour: **\$34.01**
Supplemental Benefit Rate per Hour: **\$25.14**

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: **\$34.51**
Supplemental Benefit Rate per Hour: **\$25.59**

House Wrecker - Tier B

On all work sites the first, second, eleventh and every third House Wrecker thereafter shall be Tier A House Wreckers (i.e. 1st, 2nd, 11th, 14th etc). The 10th and 20th House Wrecker shall be apprentices. Other House Wreckers shall be Tier B House Wreckers.

Effective Period: 7/1/2013 – 1/19/2014
Wage Rate per Hour: **\$23.75**
Supplemental Benefit Rate per Hour: **\$18.62**

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: **\$24.02**
Supplemental Benefit Rate per Hour: **\$19.12**

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: 7/1/2013 – 1/19/2014

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

Wage Rate per Hour: **\$42.30**

Supplemental Benefit Rate per Hour: **\$43.54**

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$42.70**

Supplemental Benefit Rate per Hour: **\$44.57**

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: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$46.75**

Supplemental Benefit Rate per Hour: **\$62.48**

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

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$47.25

Supplemental Benefit Rate per Hour: \$64.43

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

Overtime Description

Monday through Friday- the first eight hours are paid at straight time, the 9th and 10th hours are paid at time and one-half the regular rate, all additional weekday overtime is paid at double the regular rate. Saturdays- the first eight hours are paid at time and one-half the regular rate, double time thereafter. Sunday-all shifts are paid at double time.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

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

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

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$39.25

Supplemental Benefit Rate per Hour: \$33.25

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).

New Year's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election 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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$24.25

Supplemental Benefit Rate per Hour: \$12.30

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

Landscaper (3 - 6 years experience)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$23.25

Supplemental Benefit Rate per Hour: \$12.30

Landscaper (up to 3 years experience)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$20.75

Supplemental Benefit Rate per Hour: \$12.30

Groundperson

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$20.75

Supplemental Benefit Rate per Hour: \$12.30

Tree Remover / Pruner

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$29.25

Supplemental Benefit Rate per Hour: \$12.30

Landscaper Sprayer (Pesticide Applicator)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$19.25

Supplemental Benefit Rate per Hour: \$12.30

Watering - Plant Maintainer

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$14.25

Supplemental Benefit Rate per Hour: \$12.30

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

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

Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Shift Rates

Work performed on a 4pm to 12am shift has a 15% differential. Work performed on a 12am to 8am shift has a 20% differential.

(Local #175)

MARBLE MECHANIC

Marble Setter

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$49.19**

Supplemental Benefit Rate per Hour: **\$32.24**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$50.57**

Supplemental Benefit Rate per Hour: **\$33.82**

Marble Finisher

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$39.05**

Supplemental Benefit Rate per Hour: **\$31.43**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$39.71**

Supplemental Benefit Rate per Hour: **\$33.10**

Marble Polisher

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$34.73**

Supplemental Benefit Rate per Hour: **\$24.60**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$35.64**

Supplemental Benefit Rate per Hour: **\$25.64**

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.

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

Overtime

Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

(Local #7)

MASON TENDER

Mason Tender

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$35.00**

Supplemental Benefit Rate per Hour: **\$25.74**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$35.53**

Supplemental Benefit Rate per Hour: **\$26.31**

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

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

Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

The Employer may work two (2) shifts with the first shift at the straight time wage rate and the second shift receiving eight (8) hours paid for seven (7) hours work at the straight time wage rate.

(Local #79)

MASON TENDER (INTERIOR DEMOLITION WORKER)

(The erection, building, moving, servicing and dismantling of enclosures, scaffolding, barricades, protection and site safety structures etc., on Interior Demolition jobs.)

Mason Tender Tier A

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$34.07**

Supplemental Benefit Rate per Hour: **\$19.77**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$34.59**

Supplemental Benefit Rate per Hour: **\$20.75**

Mason Tender Tier B

On Interior Demolition job sites 33 1/3 % of the employees shall be classified as Tier A Interior Demolition Workers and 66 2/3 % shall be classified as Tier B Interior Demolition Workers; provided that the employer may employ more than 33 1/3 % Tier A Interior Demolition Workers on the job site. Where the number of employees on a job site is not divisible by 3, the first additional employee (above the number of employees divisible by three) shall be a Tier B Interior Demolition Worker, and the second additional employee shall be a Tier A Interior Demolition Worker.

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$23.27**

Supplemental Benefit Rate per Hour: **\$14.08**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$23.78**

Supplemental Benefit Rate per Hour: **\$15.07**

Overtime

Time and one half the regular rate after an 8 hour day.

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

Time and one half the regular rate for 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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$41.43**

Supplemental Benefit Rate per Hour: **\$40.15**

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
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.

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

1/2 day on New Year's Eve if work is performed in the A.M.

Shift Rates

There shall be either two (2) or three (3) shifts, each shift shall be eight (8) hours with nine (9) hours pay, including one half (1/2) hour for lunch. Off-Hour Start shall commence after 3:30 P.M. and shall conclude by 6:00 A.M. The first consecutive seven (7) hours shall be at straight time with a differential of twelve dollars (\$12.00) per hour. Fringes shall be paid at the straight time rate.

(Local #46)

MILLWRIGHT

Millwright

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$47.69**

Supplemental Benefit Rate per Hour: **\$48.87**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

1/2 day on New Year's Eve if work is performed in the A.M.

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.

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

(Local #740)

MOSAIC MECHANIC

Mosaic Mechanic - Mosaic & Terrazzo Mechanic

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$44.39**

Supplemental Benefit Rate per Hour: **\$35.11**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$46.08 per hour.

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$44.64**

Supplemental Benefit Rate per Hour: **\$35.83**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$46.80 per hour.

Mosaic Mechanic - Mosaic & Terrazzo Finisher

Effective Period: 7/1/2013 - 1/19/2014

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

Supplemental Benefit Rate per Hour: **\$35.11**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$46.08 per hour.

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$43.03**

Supplemental Benefit Rate per Hour: **\$35.82**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$46.79 per hour.

Mosaic Mechanic - Machine Operator Grinder

Effective Period: 7/1/2013 - 1/19/2014

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

Supplemental Benefit Rate per Hour: **\$35.11**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$46.08 per hour.

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$43.03**

Supplemental Benefit Rate per Hour: **\$35.82**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$46.79 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

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

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: 7/1/2013 - 4/30/2014

Wage Rate per Hour: \$37.50

Supplemental Benefit Rate per Hour: \$25.62

Supplemental Note: \$30.25 on overtime

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: \$39.50

Supplemental Benefit Rate per Hour: \$26.12

Supplemental Note: \$30.75 on overtime

Spray & Scaffold / Decorative / Sandblast

Effective Period: 7/1/2013 - 4/30/2014

Wage Rate per Hour: \$40.50

Supplemental Benefit Rate per Hour: \$25.62

Supplemental Note: \$30.25 on overtime

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: \$42.50

Supplemental Benefit Rate per Hour: \$26.12

Supplemental Note: \$30.75 on overtime

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

President's Day

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

Memorial Day
Independence Day
Labor Day
Columbus Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

(District Council of Painters #9)

PAINTER - SIGN

Designer

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$36.15

Supplemental Benefit Rate per Hour: \$9.66

Journey person

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$33.62

Supplemental Benefit Rate per Hour: \$9.66

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.

Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Election Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Shift Rates

All work performed outside the regular 8 hour work day (either 7:00 A.M to 3:30 P.M or 8:00 A.M. to 4:30 P.M) shall be paid at time and one half the regular hourly rate.

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

(Local #8A-28A)

PAINTER - STRIPER

Striper (paint)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$33.50**

Supplemental Benefit Rate per Hour: **\$11.62**

Supplemental Note: Overtime Supplemental Benefit rate - \$7.42; New Hire Rate (0-3 months) - \$0.00

Lineperson (thermoplastic)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$37.50**

Supplemental Benefit Rate per Hour: **\$11.62**

Supplemental Note: Overtime Supplemental Benefit rate - \$7.42; New Hire Rate (0-3 months) - \$0.00

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Time and one half the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day

Good Friday

Memorial Day

Independence Day

Labor Day

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)

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

PAINTER - STRUCTURAL STEEL

Painters on Structural Steel

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$47.00**

Supplemental Benefit Rate per Hour: **\$32.08**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$47.00**

Supplemental Benefit Rate per Hour: **\$33.58**

Painter - Power Tool

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$53.00**

Supplemental Benefit Rate per Hour: **\$32.08**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$53.00**

Supplemental Benefit Rate per Hour: **\$33.58**

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)

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

PAPERHANGER

Paperhanger

Effective Period: 7/1/2013 - 4/30/2014

Wage Rate per Hour: **\$39.00**

Supplemental Benefit Rate per Hour: **\$29.23**

Supplemental Note: Supplemental benefits are to be paid at the appropriate straight time and overtime rate.

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: **\$41.08**

Supplemental Benefit Rate per Hour: **\$29.23**

Supplemental Note: Supplemental benefits are to be paid at the appropriate straight time and overtime rate.

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

Shift Rates

Evening shift - 4:30 P.M. to 12:00 Midnight (regular rate of pay); any work performed before 7:00 A.M. shall be at time and one half the regular base rate of pay.

(District Council of Painters #9)

PAVER AND ROADBUILDER

Paver & Roadbuilder - Formsetter

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$43.54**

Supplemental Benefit Rate per Hour: **\$33.55**

Paver & Roadbuilder - Laborer

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

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$39.67**

Supplemental Benefit Rate per Hour: **\$33.55**

Production Paver & Roadbuilder - Screed Person

(Production paving is asphalt paving when using a paving machine or on a project where a paving machine is traditionally used)

Adjustment of paving machinery on production paving jobs.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$45.12**

Supplemental Benefit Rate per Hour: **\$33.55**

Production Paver & Roadbuilder - Raker

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$44.61**

Supplemental Benefit Rate per Hour: **\$33.55**

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$41.32**

Supplemental Benefit Rate per Hour: **\$33.55**

Overtime Description

Veteran's Day is a Paid Holiday for employees working on production paving.

If an employee works New Year's Day or Christmas Day, they receive the single time rate plus 25%.

Employees who work on a holiday listed below receive the straight time rate plus one day's pay for the holiday.

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

Memorial Day

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

Independence Day
Labor Day
Presidential Election 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 20% over the single time rate for the screed person, rakers and shovelers directly involved only. All other workers will be exempt. Hours worked over eight (8) hours during said shift shall be paid for at the time and one-half rate.

(Local #1010)

PLASTERER

Plasterer

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$41.13**

Supplemental Benefit Rate per Hour: **\$24.95**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$41.78**

Supplemental Benefit Rate per Hour: **\$27.95**

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
Martin Luther King Jr. Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

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

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 #530)

PLASTERER - TENDER

Plasterer - Tender

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$35.00**

Supplemental Benefit Rate per Hour: **\$25.74**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$35.53**

Supplemental Benefit Rate per Hour: **\$26.31**

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

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

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: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$52.36**

Supplemental Benefit Rate per Hour: **\$37.34**

Supplemental Note: Overtime supplemental benefit rate per hour: **\$74.40**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$64.87**

Supplemental Benefit Rate per Hour: **\$25.18**

Supplemental Note: Overtime supplemental benefit rate per hour: **\$50.08**

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.

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

(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.)

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$33.46

Supplemental Benefit Rate per Hour: \$16.93

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$38.27

Supplemental Benefit Rate per Hour: \$12.84

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.

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: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$37.11

Supplemental Benefit Rate per Hour: \$25.56

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$44.91

Supplemental Benefit Rate per Hour: \$18.37

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

Overtime

Double time the regular rate after an 8 hour day.
Double time the regular time rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

Shift Rates

30% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shifts Monday to Friday.
50% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shift work performed on weekends. For shift work on holidays, double time wages and fringe benefits shall be paid.

(Plumbers Local #1)

**PLUMBER: PUMP & TANK
(Installation and Maintenance)**

Plumber - Pump & Tank

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: \$53.01

Supplemental Benefit Rate per Hour: \$31.86

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$62.83

Supplemental Benefit Rate per Hour: \$21.37

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.

Overtime Holidays

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

Time and one half the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

Shift Rates

All work outside the regular workday (8:00 A.M. to 3:30 P.M.) is to be paid at time and one half the regular hourly rate

(Plumbers Local #1)

POINTER - WATERPROOFER, CAULKER MECHANIC (EXTERIOR BUILDING RENOVATION)

Pointer - Waterproofer, Caulker Mechanic

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$45.41**

Supplemental Benefit Rate per Hour: **\$23.29**

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

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

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)

ROOFER

Roofer

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: \$39.00

Supplemental Benefit Rate per Hour: \$27.37

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$40.00

Supplemental Benefit Rate per Hour: \$27.87

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

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

Second shift - Regular hourly rate plus a 10% differential. Third shift - Regular hourly rate plus a 15% differential.

(Local #8)

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

SANDBLASTER - STEAMBLASTER
(Exterior Building Renovation)

Sandblaster / Steamblaster

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$45.41**

Supplemental Benefit Rate per Hour: **\$23.29**

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)

SHEET METAL WORKER

Sheet Metal Worker

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$45.96**

Supplemental Benefit Rate per Hour: **\$43.19**

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

Sheet Metal Worker - Duct Cleaner

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

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$12.90

Supplemental Benefit Rate per Hour: \$8.07

Sheet Metal Worker - Fan Maintenance

(The temporary operation of fans or blowers in new or existing buildings for heating and/or ventilation, and/or air conditioning prior to the completion of the project.)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$36.77

Supplemental Benefit Rate per Hour: \$43.19

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

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 (seven 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. No journeyman engaged in fan maintenance shall work in excess of forty (40) hours in any work week.

(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: 7/1/2013 - 7/31/2013

Wage Rate per Hour: **\$41.28**

Supplemental Benefit Rate per Hour: **\$22.88**

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

Effective Period: 8/1/2013 - 6/30/2014

Wage Rate per Hour: **\$40.78**

Supplemental Benefit Rate per Hour: **\$23.38**

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)

SIGN ERECTOR
(Sheet Metal, Plastic, Electric, and Neon)

Sign Erector

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$42.80**

Supplemental Benefit Rate per Hour: **\$42.17**

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

Overtime

Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.
Time and one half the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
Washington's Birthday
Memorial Day
Independence Day
Labor Day
Columbus Day
Election Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Shift Rates

Time and one half the regular hourly rate is to be paid for all hours worked outside the regular workday either (7:00 A.M. through 2:30 P.M.) or (8:00 A.M. through 3:30 P.M.)

(Local #137)

STEAMFITTER

Steamfitter I

Effective Period: 7/1/2013 – 1/19/2014
Wage Rate per Hour: **\$52.50**
Supplemental Benefit Rate per Hour: **\$50.54**
Supplemental Note: Overtime supplemental benefit rate: \$100.34

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: **\$53.25**
Supplemental Benefit Rate per Hour: **\$51.04**
Supplemental Note: Overtime supplemental benefit rate: \$101.34

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

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

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: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$52.50**

Supplemental Benefit Rate per Hour: **\$50.54**

Supplemental Note: Overtime supplemental benefit rate: **\$100.34**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$53.25**

Supplemental Benefit Rate per Hour: **\$51.04**

Supplemental Note: Overtime supplemental benefit rate: **\$101.34**

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

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

Shift Rates

May be performed outside of the regular workday except Saturday, Sunday and Holidays. A shift shall consist of eight working hours. All work performed in excess of eight hours shall be paid at double time. No shift shall commence after 7:00 P.M. on Friday or 7:00 P.M. the day before holidays. All work performed after 12:01 A.M. Saturday or 12:01 A.M. the day before a Holiday will be paid at double time. When shift work is performed the wage rate for regular time worked is a thirty percent premium together with fringe benefits.

On Transit Authority projects, where work is performed in the vicinity of tracks all shift work on weekends and holidays may be performed at the regular shift rates.

Local #638

**STEAMFITTER - REFRIGERATION AND AIR CONDITIONER
(Maintenance and Installation Service Person)**

Refrigeration and Air Conditioner Mechanic

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$38.05**

Supplemental Benefit Rate per Hour: **\$12.26**

Effective Period: 1/20/2014 – 6/30/2014

Wage Rate per Hour: **\$38.30**

Supplemental Benefit Rate per Hour: **\$12.76**

Refrigeration and Air Conditioner Service Person V

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$31.26**

Supplemental Benefit Rate per Hour: **\$11.13**

Effective Period: 1/20/2014 – 6/30/2014

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

Supplemental Benefit Rate per Hour: **\$11.55**

Refrigeration and Air Conditioner Service Person IV

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$25.90**

Supplemental Benefit Rate per Hour: **\$10.16**

Effective Period: 1/20/2014 – 6/30/2014

Wage Rate per Hour: **\$26.07**

Supplemental Benefit Rate per Hour: **\$10.52**

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

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: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$22.23

Supplemental Benefit Rate per Hour: \$9.44

Effective Period: 1/20/2014 – 6/30/2014

Wage Rate per Hour: \$22.38

Supplemental Benefit Rate per Hour: \$9.76

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: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$18.44

Supplemental Benefit Rate per Hour: \$8.78

Effective Period: 1/20/2014 – 6/30/2014

Wage Rate per Hour: \$18.56

Supplemental Benefit Rate per Hour: \$9.06

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: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$13.48

Supplemental Benefit Rate per Hour: \$8.10

Effective Period: 1/20/2014 – 6/30/2014

Wage Rate per Hour: \$13.57

Supplemental Benefit Rate per Hour: \$8.30

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Independence Day

Labor Day

Veteran's Day

Thanksgiving Day

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

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 - Setters

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$47.72**

Supplemental Benefit Rate per Hour: **\$35.28**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$46.56**

Supplemental Benefit Rate per Hour: **\$36.40**

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Washington's Birthday
Good Friday
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

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

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: 7/1/2013 - 12/31/2013

Wage Rate per Hour: **\$44.32**

Supplemental Benefit Rate per Hour: **\$21.66**

Effective Period: 1/1/2014 - 6/24/2014

Wage Rate per Hour: **\$44.82**

Supplemental Benefit Rate per Hour: **\$21.66**

Effective Period: 6/25/2014 - 6/30/2014

Wage Rate per Hour: **\$45.32**

Supplemental Benefit Rate per Hour: **\$21.66**

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Thanksgiving Day

Christmas Day

Paid Holidays

Any worker who reports to work on Christmas Eve or New Year's Eve pursuant to his employer's instruction shall be entitled to three (3) hours afternoon pay without working.

Shift Rates

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

Time and one half the regular rate outside the regular work hours (8:00 A.M. through 3:30 P.M.)

(Local #1974)

TELECOMMUNICATION WORKER
(Voice Installation Only)

Telecommunication Worker

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$35.94**

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

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

Shift Rates

For any workday that starts before 8A.M. or ends after 6P.M. there is a 10% differential for the applicable worker's hourly rate.

Vacation

After 6 months.....one week.
After 12 months but less than 7 years.....two weeks.
After 7 or more but less than 15 years.....three weeks.
After 15 years or more but less than 25 years.....four weeks.

(C.W.A.)

TILE FINISHER

Tile Finisher

Effective Period: 7/1/2013 – 1/19/2014
Wage Rate per Hour: **\$38.49**
Supplemental Benefit Rate per Hour: **\$27.40**

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: **\$38.80**
Supplemental Benefit Rate per Hour: **\$28.03**

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.

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

(Local #7)

TILE LAYER - SETTER

Tile Layer - Setter

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: \$48.35

Supplemental Benefit Rate per Hour: \$31.44

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$49.25

Supplemental Benefit Rate per Hour: \$31.82

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$42.63

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

Supplemental Benefit Rate per Hour: **\$44.54**

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$54.20**

Supplemental Benefit Rate per Hour: **\$48.20**

Tunnel Workers (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$52.31**

Supplemental Benefit Rate per Hour: **\$46.59**

Top Nipper (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

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

Wage Rate per Hour: \$51.35

Supplemental Benefit Rate per Hour: \$45.78

Outside Lock Tender, Outside Gauge Tender, Muck Lock Tender (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$50.42

Supplemental Benefit Rate per Hour: \$44.91

Bottom Bell & Top Bell Signal Person: Shaft Person (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$50.42

Supplemental Benefit Rate per Hour: \$44.92

Changehouse Attendant: Powder Watchperson (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$43.94

Supplemental Benefit Rate per Hour: \$42.55

Blasters (Free Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$51.72

Supplemental Benefit Rate per Hour: \$46.03

Tunnel Workers (Free Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$49.48

Supplemental Benefit Rate per Hour: \$44.06

All Others (Free Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$45.73

Supplemental Benefit Rate per Hour: \$40.75

Microtunneling (Free Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$39.58

Supplemental Benefit Rate per Hour: \$35.25

Overtime Description

For Repair-Maintenance Work on Existing Equipment and Facilities - Time and one half the regular rate after a 7 hour day, or for Saturday, or for Sunday. Double time the regular rate for work on a holiday.

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

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 JOURNEYPERSON 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.

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

APPRENTICESHIP SCHEDULE OF PREVAILING WAGES AND SUPPLEMENTAL BENEFITS
ADDENDUM
EFFECTIVE PERIOD JANUARY 20, 2014 THROUGH JUNE 30, 2014

List of Amended Classifications

1. ASBESTOS HANDLER
2. BRICKLAYER
3. FLOOR COVERER
4. HOUSE WRECKER
5. IRONWORKER – ORNAMENTAL
6. IRON WORKER - STRUCTURAL
7. MASON TENDER
8. PLASTERER
9. PLUMBER

TABLE OF CONTENTS

<u>CLASSIFICATION</u>	<u>PAGE</u>
ASBESTOS HANDLER.....	4
BOILERMAKER.....	4
BRICKLAYER.....	6
CARPENTER.....	7
CEMENT MASON.....	8
CEMENT AND CONCRETE WORKER.....	8
DERRICKPERSON & RIGGER (STONE).....	9
DOCKBUILDER/PILE DRIVER.....	9
ELECTRICIAN.....	10
ELEVATOR CONSTRUCTOR.....	13
ELEVATOR REPAIR & MAINTENANCE.....	14
ENGINEER.....	15
ENGINEER - OPERATING.....	15
FLOOR COVERER.....	16
GLAZIER.....	17
HEAT & FROST INSULATOR.....	17
HOUSE WRECKER.....	18
IRON WORKER - ORNAMENTAL.....	19
IRON WORKER - STRUCTURAL.....	21
LABORER (FOUNDATION, CONCRETE, EXCAVATING, STREET PIPE LAYER & COMMON).....	22
MARBLE MECHANICS.....	22
MASON TENDER.....	24
METALLIC LATHER.....	25
MILLWRIGHT.....	26
PAVER AND ROADBUILDER.....	26
PAINTER.....	27
PAINTER - STRUCTURAL STEEL.....	28
PLASTERER.....	28
PLUMBER.....	29
POINTER - WATERPROOFER, CAULKER MECHANIC (EXTERIOR BUILDING RENOVATION).....	31
ROOFER.....	31
SHEET METAL WORKER.....	32
SIGN ERECTOR.....	33
STEAMFITTER.....	35
STONE MASON - SETTER.....	35
TAPER.....	36
TILE LAYER - SETTER.....	37
TIMBERPERSON.....	37

ASBESTOS HANDLER
(Ratio of Apprentice Journeyman: 1 to 1, 1 to 3)

Asbestos Handler (First 1000 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 78% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$15.05
Effective 1/20/2014 – Supplemental Benefits Per Hour: 15.45

Asbestos Handler (Second 1000 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$15.05
Effective 1/20/2014 – Supplemental Benefits Per Hour: 15.45

Asbestos Handler (Third 1000 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 83% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$15.05
Effective 1/20/2014 – Supplemental Benefits Per Hour: 15.45

Asbestos Handler (Fourth 1000 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 89% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$15.05
Effective 1/20/2014 – Supplemental Benefits Per Hour: 15.45

(Local #78)

BOILERMAKER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Boilermaker (First Year)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$28.75

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate Per Hour: 65% of Journeyman's rate

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

Supplemental Benefit Rate Per Hour: \$29.74

Boilermaker (Second Year: 1st Six Months)

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate Per Hour: 70% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$30.33

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate Per Hour: 75% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$31.40

Boilermaker (Second Year: 2nd Six Months)

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate Per Hour: 75% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$31.91

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate Per Hour: 75% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$33.05

Boilermaker (Third Year: 1st Six Months)

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate Per Hour: 80% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$33.49

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate Per Hour: 80% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$34.69

Boilermaker (Third Year: 2nd Six Months)

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate Per Hour: 85% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$35.05

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate Per Hour: 85% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$36.34

Boilermaker (Fourth Year: 1st Six Months)

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate Per Hour: 90% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$36.63

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate Per Hour: 90% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$38.00

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

Boilermaker (Fourth Year: 2nd Six Months)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate Per Hour: 95% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$38.19

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate Per Hour: 95% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$39.65

(Local #5)

BRICKLAYER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Bricklayer (First 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$16.60
Effective 1/20/2014 – Supplemental Benefits Per Hour: 17.10

Bricklayer (Second 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$16.60
Effective 1/20/2014 – Supplemental Benefits Per Hour: 17.10

Bricklayer (Third 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$16.60
Effective 1/20/2014 – Supplemental Benefits Per Hour: 17.10

Bricklayer (Fourth 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$16.60
Effective 1/20/2014 – Supplemental Benefits Per Hour: 17.10

Bricklayer (Fifth 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014

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

Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.60
Effective 1/20/2014 – Supplemental Benefits Per Hour: 17.10

Bricklayer (Sixth 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 95% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.60
Effective 1/20/2014 – Supplemental Benefits Per Hour: 17.10

(Bricklayer District Council)

CARPENTER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Carpenter (First Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$30.29

Carpenter (Second Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$30.29

Carpenter (Third Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$30.29

Carpenter (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$30.29

(Carpenters District Council)

CEMENT MASON

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Cement Mason (First Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 50% of Journeyman's Rate

Cement Mason (Second Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 60% of Journeyman's Rate

Cement Mason (Third Year)

Effective Period: 7/1/2013 - 6/30/2014

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 (0 - 500 hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$18.04

Cement & Concrete Worker (501 - 1000 hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 65% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$18.87

Cement & Concrete Worker (1001 - 2000 hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 65% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$24.25

Cement & Concrete Worker (2001 - 4000 hours)

Effective Period: 7/1/2013 - 6/30/2014

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

Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$25.07

(Cement Concrete Workers District Council)

DERRICKPERSON & RIGGER (STONE)
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 6)

Derrickperson & Rigger (stone) - First Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: 50% of Journeyperson's rate

Derrickperson & Rigger (stone) - Second Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: 75% of Journeyperson's rate

Derrickperson & Rigger (stone) - Second Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
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: 7/1/2013 - 6/30/2014
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: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 40% of Journeyperson's rate

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

Supplemental Benefit Rate Per Hour: \$30.29

Dockbuilder/Pile Driver (Second Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$30.29

Dockbuilder/Pile Driver (Third Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$30.29

Dockbuilder/Pile Driver (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$30.29

(Carpenters District Council)

ELECTRICIAN

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Electrician (First Term: 0-6 Months)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$12.50
Supplemental Benefit Rate per Hour: \$10.86
Overtime Supplemental Rate per Hour: \$11.68

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$12.50
Supplemental Benefit Rate per Hour: \$11.10
Overtime Supplemental Rate per Hour: \$11.93

Electrician (First Term: 7-12 Months)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$13.50
Supplemental Benefit Rate per Hour: \$11.37
Overtime Supplemental Rate per Hour: \$12.26

Effective period: 5/14/2014 - 6/30/2014

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

Wage Rate per Hour: \$13.50
Supplemental Benefit Rate per Hour: \$11.62
Overtime Supplemental Rate per Hour: \$12.51

Electrician (Second Term: 0-6 Months)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$14.50
Supplemental Benefit Rate per Hour: \$11.88
Overtime Supplemental Rate per Hour: \$12.83

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$14.50
Supplemental Benefit Rate per Hour: \$12.13
Overtime Supplemental Rate per Hour: \$13.08

Electrician (Second Term: 7-12 Months)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$15.50
Supplemental Benefit Rate per Hour: \$12.39
Overtime Supplemental Rate per Hour: \$13.41

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$15.50
Supplemental Benefit Rate per Hour: \$12.64
Overtime Supplemental Rate per Hour: \$13.66

Electrician (Third Term: 0-6 Months)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$16.50
Supplemental Benefit Rate per Hour: \$12.90
Overtime Supplemental Rate per Hour: \$13.98

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$16.50
Supplemental Benefit Rate per Hour: \$13.15
Overtime Supplemental Rate per Hour: \$14.23

Electrician (Third Term: 7-12 Months)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$17.50
Supplemental Benefit Rate per Hour: \$13.40
Overtime Supplemental Rate per Hour: \$14.56

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$17.50
Supplemental Benefit Rate per Hour: \$13.65

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

Overtime Supplemental Rate per Hour: \$14.81

Electrician (Fourth Term: 0-6 Months - Hired on or after 5/10/07)

Effective period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$18.50

Supplemental Benefit Rate per Hour: \$13.91

Overtime Supplemental Rate per Hour: \$15.13

Effective period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$18.50

Supplemental Benefit Rate per Hour: \$14.16

Overtime Supplemental Rate per Hour: \$15.38

Electrician (Fourth Term: 7-12 Months - Hired on or after 5/10/07)

Effective period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$20.25

Supplemental Benefit Rate per Hour: \$14.80

Overtime Supplemental Rate per Hour: \$16.14

Effective period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$20.50

Supplemental Benefit Rate per Hour: \$15.18

Overtime Supplemental Rate per Hour: \$16.53

Electrician (Fifth Term: 0-12 Months - Hired on or after 5/10/07)

Effective period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$22.00

Supplemental Benefit Rate per Hour: \$17.30

Overtime Supplemental Rate per Hour: \$18.68

Effective period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$22.50

Supplemental Benefit Rate per Hour: \$18.06

Overtime Supplemental Rate per Hour: \$19.47

Electrician (Fifth Term: 13-18 Months - Hired on or after 5/10/07)

Effective period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$26.50

Supplemental Benefit Rate per Hour: \$19.56

Overtime Supplemental Rate per Hour: \$21.23

Effective period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$27.00

Supplemental Benefit Rate per Hour: \$20.32

Overtime Supplemental Rate per Hour: \$22.01

Electrician (Fourth Term: 0-6 Months - Hired before 5/10/07)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: **\$22.10**
Supplemental Benefit Rate per Hour: **\$15.74**
Overtime Supplemental Rate per Hour: **\$17.20**

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: **\$22.10**
Supplemental Benefit Rate per Hour: **\$15.99**
Overtime Supplemental Rate per Hour: **\$17.45**

Electrician (Fourth Term: 7-12 Months - Hired before 5/10/07)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: **\$23.95**
Supplemental Benefit Rate per Hour: **\$16.69**
Overtime Supplemental Rate per Hour: **\$18.26**

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: **\$24.20**
Supplemental Benefit Rate per Hour: **\$17.06**
Overtime Supplemental Rate per Hour: **\$18.66**

Electrician (Fifth Term: 0-18 Months - Hired before 5/10/07)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: **\$25.80**
Supplemental Benefit Rate per Hour: **\$19.21**
Overtime Supplemental Rate per Hour: **\$20.83**

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: **\$26.30**
Supplemental Benefit Rate per Hour: **\$19.96**
Overtime Supplemental Rate per Hour: **\$21.61**

Overtime Description

Overtime Wage paid at time and one half the regular rate
For "A" rated Apprentices (work in excess of 7 hours per day)
For "M" rated Apprentices (work in excess of 8 hours per day)

(Local #3)

ELEVATOR CONSTRUCTOR

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 2)

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

Elevator (Constructor) - First Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$26.87

Elevator (Constructor) - Second Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Rate Per Hour: \$27.92

Elevator (Constructor) - Third Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Rate Per Hour: \$29.38

Elevator (Constructor) - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Rate Per Hour: \$30.84

(Local #1)

**ELEVATOR REPAIR & MAINTENANCE
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 2)**

Elevator Service/Modernization Mechanic (First Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Benefit Per Hour: \$26.79

Elevator Service/Modernization Mechanic (Second Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Benefit Per Hour: \$27.12

Elevator Service/Modernization Mechanic (Third Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 65% of Journeyman's rate

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

Supplemental Benefit Per Hour: \$28.43

Elevator Service/Modernization Mechanic (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Benefit Per Hour: \$29.74

(Local #1)

ENGINEER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 5)

Engineer - First Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$22.49
Supplemental Benefit Rate per Hour: \$20.68

Engineer - Second Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$28.11
Supplemental Benefit Rate per Hour: \$20.68

Engineer - Third Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$20.92
Supplemental Benefit Rate per Hour: \$20.68

Engineer - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$33.73
Supplemental Benefit Rate per Hour: \$20.68

(Local #15)

ENGINEER - OPERATING
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 5)

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

Operating Engineer - First Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour 40% of Journeyman's Rate
Supplemental Benefit Per Hour: \$18.60

Operating Engineer - Second Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyman's Rate
Supplemental Benefit Per Hour: \$18.60

Operating Engineer - Third Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyman's Rate
Supplemental Benefit Per Hour: \$18.60

(Local #14)

FLOOR COVERER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Floor Coverer (First Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 40% of Journeyman's rate
Supplemental Rate Per Hour: \$25.75
Effective 1/20/2014 – Supplemental Benefits Per Hour: 29.55

Floor Coverer (Second Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$25.75
Effective 1/20/2014 – Supplemental Benefits Per Hour: 29.55

Floor Coverer (Third Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Rate Per Hour: \$25.75
Effective 1/20/2014 – Supplemental Benefits Per Hour: 29.55

Floor Coverer (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$25.75
Effective 1/20/2014 – Supplemental Benefits Per Hour: 29.55

(Carpenters District Council)

GLAZIER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Glazier (First Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 40% of Journeyman's rate
Supplemental Rate Per Hour: \$11.97

Glazier (Second Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$21.13

Glazier (Third Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$23.54

Glazier (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$28.34

(Local #1281)

HEAT & FROST INSULATOR
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

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

Heat & Frost Insulator (First Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 40% of Journeyperson's rate

Heat & Frost Insulator (Second Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Heat & Frost Insulator (Third Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 70% of Journeyperson's rate

Heat & Frost Insulator (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 80% of Journeyperson'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: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$20.36

Supplemental Benefit Rate per Hour: \$16.35

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$20.52

Supplemental Benefit Rate per Hour: \$16.60

House Wrecker - Second Year

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$21.46

Supplemental Benefit Rate per Hour: \$16.35

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$21.67

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

Supplemental Benefit Rate per Hour: \$16.60

House Wrecker - Third Year

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$23.01

Supplemental Benefit Rate per Hour: \$16.35

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$23.27

Supplemental Benefit Rate per Hour: \$16.60

House Wrecker - Fourth Year

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$25.36

Supplemental Benefit Rate per Hour: \$16.35

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$25.83

Supplemental Benefit Rate per Hour: \$16.60

(Local #79)

IRON WORKER - ORNAMENTAL

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Iron Worker (Ornamental) - 1st Four Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 60% of Journeyperson's rate

Supplemental Rate Per Hour: \$35.78

Iron Worker (Ornamental) 5 - 10 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Rate Per Hour: \$36.75

Iron Worker (Ornamental) 11 - 16 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 70% of Journeyperson's rate

Supplemental Rate Per Hour: \$37.72

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

Iron Worker (Ornamental) 17 - 22 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$39.66

Iron Worker (Ornamental) 23 - 28 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 85% of Journeyman's rate
Supplemental Rate Per Hour: \$40.63

Iron Worker (Ornamental) 29 - 36 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 95% of Journeyman's rate
Supplemental Rate Per Hour: \$42.57

Iron Worker (Ornamental) - 1st Ten Months - Hired After 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$33.84
Effective 1/20/2014 – Supplemental Benefits Per Hour: 34.55

Iron Worker (Ornamental) - 11 - 16 Months - Hired After 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Rate Per Hour: \$34.81
Effective 1/20/2014 – Supplemental Benefits Per Hour: 35.55

Iron Worker (Ornamental) - 17 - 22 Months - Hired After 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$35.78
Effective 1/20/2014 – Supplemental Benefits Per Hour: 36.55

Iron Worker (Ornamental) - 23 - 28 Months - Hired After 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: \$37.72
Effective 1/20/2014 – Supplemental Benefits Per Hour: 38.56

Iron Worker (Ornamental) - 29 - 36 Months - Hired After 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$39.66

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

Effective 1/20/2014 – Supplemental Benefits Per Hour: 40.56

(Local #580)

IRON WORKER - STRUCTURAL
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 6)

Iron Worker (Structural) - 1st Six Months

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: \$24.48

Supplemental Benefit Rate per Hour: \$43.87

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$24.73

Supplemental Benefit Rate per Hour: \$45.07

Iron Worker (Structural) - 7- 18 Months

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: \$25.08

Supplemental Benefit Rate per Hour: \$43.87

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$25.33

Supplemental Benefit Rate per Hour: \$45.07

Iron Worker (Structural) - 19 - 36 months

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: \$25.68

Supplemental Benefit Rate per Hour: \$43.87

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$25.93

Supplemental Benefit Rate per Hour: \$45.07

(Local #40 and #361)

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

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: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$33.25

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Second 1000 hours

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$33.25

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Third 1000 hours

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Rate Per Hour: \$33.25

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Fourth 1000 hours

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 90% of Journeyman's rate
Supplemental Rate Per Hour: \$33.25

(Local #731)

MARBLE MECHANICS

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Cutters & Setters - First 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
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: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 55% of Journeyperson's rate

Cutters & Setters - Third 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 65% of Journeyperson's rate

Cutters & Setters - Fourth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

Cutters & Setters - Fifth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 85% of Journeyperson's rate

Cutters & Setters - Sixth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 95% of Journeyperson's rate

Polishers & Finishers - First 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 50% of Journeyperson's rate

NO BENEFITS PAID DURING THE FIRST TWO MONTHS (PROBATIONARY PERIOD)

Polishers & Finishers - Second 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Polishers & Finishers - Third 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

Polishers & Finishers - Fourth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

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: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$20.63**

Supplemental Benefit Rate per Hour: **\$17.06**

Effective Period: 1/20/2014 – 6/30/2014

Wage Rate per Hour: **\$20.79**

Supplemental Benefit Rate per Hour: **\$17.58**

Mason Tender - Second Year

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$21.73**

Supplemental Benefit Rate per Hour: **\$17.06**

Effective Period: 1/20/2014 – 6/30/2014

Wage Rate per Hour: **\$21.94**

Supplemental Benefit Rate per Hour: **\$17.58**

Mason Tender - Third Year

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$23.33**

Supplemental Benefit Rate per Hour: **\$17.06**

Effective Period: 1/20/2014 – 6/30/2014

Wage Rate per Hour: **\$23.59**

Supplemental Benefit Rate per Hour: **\$17.58**

Mason Tender - Fourth Year

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$25.93**

Supplemental Benefit Rate per Hour: **\$17.06**

Effective Period: 1/20/2014 – 6/30/2014

Wage Rate per Hour: **\$26.25**

Supplemental Benefit Rate per Hour: **\$17.58**

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

(Local #79)

METALLIC LATHER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Metallic Lather (First Year -Called Prior to 6/29/11)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$28.11

Supplemental Benefit Rate per Hour: \$22.79

Metallic Lather (Second Year - Called Prior to 6/29/11)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$32.71

Supplemental Benefit Rate per Hour: \$24.44

Metallic Lather (Third Year - Called Prior to 6/29/11)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$37.77

Supplemental Benefit Rate per Hour: \$25.59

Metallic Lather (First Year -Called On Or After 6/29/11)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$17.71

Supplemental Benefit Rate per Hour: \$19.85

Metallic Lather (Second Year - Called On Or After 6/29/11)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$22.81

Supplemental Benefit Rate per Hour: \$19.85

Metallic Lather (Third Year - Called On Or After 6/29/11)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$27.91

Supplemental Benefit Rate per Hour: \$19.85

(Local #46)

MILLWRIGHT

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Millwright (First Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$26.23

Supplemental Benefit Rate per Hour: \$31.51

Millwright (Second Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$31.00

Supplemental Benefit Rate per Hour: \$34.77

Millwright (Third Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$35.77

Supplemental Benefit Rate per Hour: \$39.19

Millwright (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$45.30

Supplemental Benefit Rate per Hour: \$44.63

(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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$26.19

Supplemental Benefit Rate per Hour: \$16.20

Paver and Roadbuilder - Second Year (Minimum 1000 hours)

Effective Period: 7/1/2013 - 6/30/2014

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

Wage Rate per Hour: \$27.77

Supplemental Benefit Rate per Hour: \$16.20

(Local #1010)

PAINTER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Painter - Brush & Roller - First Year

Effective Period: 7/1/2013 - 4/30/2014

Wage Rate per Hour: \$15.00

Supplemental Benefit Rate per Hour: \$11.38

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: \$15.80

Supplemental Benefit Rate per Hour: \$11.88

Painter - Brush & Roller - Second Year

Effective Period: 7/1/2013 - 4/30/2014

Wage Rate per Hour: \$18.75

Supplemental Benefit Rate per Hour: \$15.23

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: \$19.75

Supplemental Benefit Rate per Hour: \$15.73

Painter - Brush & Roller - Third Year

Effective Period: 7/1/2013 - 4/30/2014

Wage Rate per Hour: \$22.50

Supplemental Benefit Rate per Hour: \$18.14

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: \$23.70

Supplemental Benefit Rate per Hour: \$18.64

Painter - Brush & Roller - Fourth Year

Effective Period: 7/1/2013 - 4/30/2014

Wage Rate per Hour: \$30.00

Supplemental Benefit Rate per Hour: \$23.52

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

Effective Period: 5/1/2014 - 6/30/2014
Wage Rate per Hour: \$31.60
Supplemental Benefit Rate per Hour: \$24.02

(District Council of Painters)

PAINTER - STRUCTURAL STEEL
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Painters - Structural Steel (First Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 40% of Journeyman's rate

Painters - Structural Steel (Second Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 60% of Journeyman's rate

Painters - Structural Steel (Third Year)

Effective Period: 7/1/2013 - 6/30/2014
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: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 40% of Journeyman's rate
Supplemental Rate Per Hour: \$12.76
Effective 1/20/2014 – Supplemental Benefits Per Hour: 15.76

Plasterer - First Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 45% of Journeyman's rate
Supplemental Rate Per Hour: \$13.24

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

Effective 1/20/2014 – Supplemental Benefits Per Hour: 16.24

Plasterer - Second Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Rate Per Hour: \$15.21
Effective 1/20/2014 – Supplemental Benefits Per Hour: 18.21

Plasterer - Second Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$16.29
Effective 1/20/2014 – Supplemental Benefits Per Hour: 19.29

Plasterer - Third Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: \$18.46
Effective 1/20/2014 – Supplemental Benefits Per Hour: 21.46

Plasterer - Third Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Rate Per Hour: \$19.54
Effective 1/20/2014 – Supplemental Benefits Per Hour: 22.54

(Local #530)

PLUMBER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Plumber - First Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$14.00
Supplemental Benefit Rate per Hour: \$0.71

Plumber - First Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$14.00
Supplemental Benefit Rate per Hour: \$2.96

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

Plumber - Second Year

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$18.26
Supplemental Benefit Rate per Hour: \$16.32

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$23.67
Supplemental Benefit Rate per Hour: \$11.16

Plumber - Third Year

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$20.36
Supplemental Benefit Rate per Hour: \$16.32

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$25.77
Supplemental Benefit Rate per Hour: \$11.16

Plumber - Fourth Year

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$23.21
Supplemental Benefit Rate per Hour: \$16.32

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$28.62
Supplemental Benefit Rate per Hour: \$11.16

Plumber - Fifth Year: 1st Six Months

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$24.61
Supplemental Benefit Rate per Hour: \$16.32

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$30.02
Supplemental Benefit Rate per Hour: \$11.16

Plumber - Fifth Year: 2nd Six Months

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$36.68
Supplemental Benefit Rate per Hour: \$16.32

Effective Period: 1/20/2014 - 6/30/2014

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

Wage Rate per Hour: \$42.09

Supplemental Benefit Rate per Hour: \$11.16

(Plumbers Local #1)

POINTER - WATERPROOFER, CAULKER MECHANIC (EXTERIOR BUILDING RENOVATION)

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Pointer - Waterproofer, Caulker Mechanic - First Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$25.00

Supplemental Benefit Rate per Hour: \$3.64

Pointer - Waterproofer, Caulker Mechanic - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$27.25

Supplemental Benefit Rate per Hour: \$8.59

Pointer - Waterproofer, Caulker Mechanic - Third Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$32.23

Supplemental Benefit Rate per Hour: \$11.34

Pointer - Waterproofer, Caulker Mechanic - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$38.66

Supplemental Benefit Rate per Hour: \$11.34

(Bricklayer District Council)

ROOFER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 2)

Roofer - First Year

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

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 35% of Journeyman's Rate

Roofer - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 50% of Journeyman's Rate

Roofer - Third Year

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 60% of Journeyman's Rate

Roofer - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014

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 - First Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 30% of Journeyman's rate

Supplemental Rate Per Hour: \$15.37

Sheet Metal Worker - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 35% of Journeyman's rate

Supplemental Rate Per Hour: \$18.24

Sheet Metal Worker - Third Year (1st Six Months)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 40% of Journeyman's rate

Supplemental Rate Per Hour: \$20.06

Sheet Metal Worker - Third Year (2nd Six Months)

Effective Period: 7/1/2013 - 6/30/2014

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

Wage Rate Per Hour: 45% of Journeyperson's rate
Supplemental Rate Per Hour: \$21.87

Sheet Metal Worker - Fourth Year (1st Six Months)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: \$23.69

Sheet Metal Worker - Fourth Year (2nd Six Months)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: \$25.33

Sheet Metal Worker - Fifth Year (1st Six Months)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: \$27.47

Sheet Metal Worker - Fifth Year(2nd Six Months)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: \$31.23

(Local #28)

SIGN ERECTOR

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Sign Erector - First Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 35% of Journeyperson's rate
Supplemental Rate Per Hour: \$5.96

Sign Erector - First Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: \$6.75

Sign Erector - Second Year: 1st Six Months

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

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 45% of Journeyperson's rate
Supplemental Rate Per Hour: \$7.55

Sign Erector - Second Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: \$8.34

Sign Erector - Third Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: \$9.13

Sign Erector - Third Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: \$9.92

Sign Erector - Fourth Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Rate Per Hour: \$10.72

Sign Erector - Fourth Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: \$11.51

Sign Erector - Fifth Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Rate Per Hour: \$12.30

Sign Erector - Sixth Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: \$12.30

(Local #137)

STEAMFITTER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Steamfitter - First Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate and Supplemental Per Hour: 40% of Journeyman's rate

Steamfitter - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate and Supplemental Rate Per Hour: 50% of Journeyman's rate.

Steamfitter - Third Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate and Supplemental Rate per Hour: 65% of Journeyman's rate.

Steamfitter - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate and Supplemental Rate Per Hour: 80% of Journeyman's rate.

Steamfitter - Fifth Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate and Supplemental Rate Per Hour: 85% of Journeyman's rate.

(Local #638)

STONE MASON - SETTER

(Ratio Apprentice of Journeyman: 1 to 1, 1 to 2)

Stone Mason - Setters - First 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

Stone Mason - Setters - Second 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 60% of Journeyman's rate

Supplemental Rate Per Hour: 50% of Journeyman's rate

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

Stone Mason - Setters - Third 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Fourth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Fifth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Sixth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 100% of Journeyperson's rate
Supplemental Rate Per Hour: 50% of Journeyperson's rate

(Bricklayers District Council)

TAPER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Drywall Taper - First Year

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 40% of Journeyperson's rate

Drywall Taper - Second Year

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Drywall Taper - Third Year

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 80% of Journeyperson's rate

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

(Local #1974)

TILE LAYER - SETTER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Tile Layer - Setter - First 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

Tile Layer - Setter - Second 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 55% of Journeyman's rate

Tile Layer - Setter - Third 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 65% of Journeyman's rate

Tile Layer - Setter - Fourth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 75% of Journeyman's rate

Tile Layer - Setter - Fifth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 85% of Journeyman's rate

Tile Layer - Setter - Sixth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 95% of Journeyman's rate

(Local #7)

TIMBERPERSON

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 6)

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

Timberperson - First Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: \$30.04

Timberperson - Second Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: \$30.04

Timberperson - Third Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Rate Per Hour: \$30.04

Timberperson - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: \$30.04

(Local #1536)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

NYC ADMINISTRATIVE CODE § 6-109 SCHEDULE OF "LIVING WAGES"

Contractors who provide the following services to the City of New York must post a copy of this Living Wage Schedule at their work site(s) as required by New York City Administrative Code § 6-109:

- Building Services,
- Day Care Services,
- Food Services,
- Head Start Services,
- Homecare Services,
- Services to Persons with Cerebral Palsy, and
- Temporary Services.

In accordance with NYC Administrative Code § 6-109, the Comptroller of the City of New York promulgated this schedule of living wages for the above services on contracts for non-emergency work in excess of the small purchase limit set by the Procurement Policy Board; contracting agencies must annex this schedule to such contracts.

A city service contractor or subcontractor that provides homecare services, day care services, head start services or services to persons with cerebral palsy must pay its covered employees that directly render such services in performance of the city service contract or subcontract no less than the living wage and must provide its employees health benefits (supplemental benefits) or must supplement their hourly wage rate by an amount no less than the health benefits supplement rate. This requirement applies for each hour that the employee works performing the city service contract or subcontract.

A city service contractor or subcontractor that provides building services, food services or temporary services must pay its employees that are engaged in performing the city service contract or subcontract no less than the living wage or the prevailing wage, whichever is greater. Where the living wage is greater than the prevailing wage, the city service contractor or subcontractor must either provide its employees health benefits or must supplement their hourly wage rate by an amount no less than the health benefits supplement rate. Where the prevailing wage is greater than the living wage, the city service contractor or subcontractor must provide its employees the prevailing wage and supplements. These requirements apply for each hour that the employee works performing the city service contract or subcontract.

The appropriate schedule of living wages must be posted at all work sites pursuant to NYC Administrative Code 6-109.

The schedule is applicable for work performed during the effective period, unless otherwise noted. You will be notified of any changes to this schedule by addenda published on our web site www.comptroller.nyc.gov. Schedules for future one-year periods will be published annually in the City Record on or about July 1st of each succeeding year and on our web site www.comptroller.nyc.gov.

The living wage rate and the health benefit supplement rate are known through June 30 of each year and those rates are listed in this schedule.

The living wage rates listed in this schedule may not include all hourly wage calculations for overtime, shift differential, Holiday, Saturday, Sunday or other premium time work. Similarly, this schedule does not set forth every living wage practice with which employers must comply.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Some of the rates in this schedule are based on collective bargaining agreements. These 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.

Answers to questions concerning prevailing wage practices may be obtained from the Classification Unit by calling (212) 669-7974. Please direct all other compliance issues to; Bureau of Labor Law, Attn: Wasyl Kinach, P.E., Office of the Comptroller, 1 Centre Street, Room 1122, New York, N.Y. 10007; Fax (212) 669-4002.

Contractors are solely responsible for maintaining original payroll records, which delineate, among other things, the hours each employee worked within a given classification. Contractors using rates and/or classifications not promulgated by the Comptroller do so at their own risk. Additionally, prior to bid, an agency's chief contracting officer must contact the Bureau of Labor Law to obtain a wage determination for a work classification not published in this schedule.

The information listed below is intended to assist you in meeting your living wage and prevailing wage obligation. Contractors are advised to review the Comptroller's Living Wage Schedule prior to submitting a bid for City work. Any wage rate error made by the contracting agency in the contract documents will not preclude a finding against the contractor for an underpayment of the applicable living wage or the applicable prevailing wage.

This schedule sets forth the living wage and benefit rates required to be annexed to and form part of the contract specifications for work covered by New York City Administrative Code § 6-109. Contractors performing such work are required to pay not less than the rates specified in this schedule for the applicable trade or occupation.

Benefits are paid for **EACH HOUR WORKED** unless otherwise noted.

Wasyl Kinach, P.E.
Director of Classifications
Bureau of Labor Law

TABLE OF CONTENTS

<u>CLASSIFICATION</u>	<u>PAGE</u>
BUILDING CLEANER AND MAINTAINER (OFFICE).....	4
BUILDING CLEANER AND MAINTAINER (RESIDENTIAL).....	4
CLEANER (PARKING GARAGE).....	4
DAY CARE SERVICES.....	4
FOOD SERVICE EMPLOYEES.....	4
GARDENER.....	5
HEAD START SERVICES.....	5
HOMECARE SERVICES.....	6
SECURITY GUARD (ARMED).....	6
SECURITY GUARD (UNARMED).....	6
SERVICES TO PERSONS WITH CEREBRAL PALSY.....	6
TEMPORARY OFFICE SERVICES.....	7
WINDOW CLEANER.....	8

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

BUILDING CLEANER AND MAINTAINER (OFFICE)

For the above building service classification, see the Labor Law Section 230 Schedule.

BUILDING CLEANER AND MAINTAINER (RESIDENTIAL)

For the above building service classification, see the Labor Law Section 230 Schedule.

CLEANER (PARKING GARAGE)

For the above building service classification, see the Labor Law Section 230 Schedule.

DAY CARE SERVICES

Day Care Services

'Day Care Services' means provision of day care services through the city's center-based day care program administered under contract with the city's Administration for Children's Services. No other day care programs shall be covered, including family-based day care programs administered by city-contracted day care centers.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$10.00

Supplemental Benefit Rate per Hour: \$1.50

(NYC Administrative Code §6-109)

FOOD SERVICE EMPLOYEES

Cook

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$15.62

Supplemental Benefit Rate per Hour: \$1.72

Cafeteria Attendant

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: ~~\$10.48~~

Supplemental Benefit Rate per Hour: \$1.72

Counter Attendant

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$9.95

Supplemental Benefit Rate per Hour: \$1.72

Kitchen Helper / Dishwasher

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$9.60

Supplemental Benefit Rate per Hour: \$1.72

Overtime

Time and one half the regular hourly rate after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics)

GARDENER

For the above building service classification, see the Labor Law Section 230 Schedule.

HEAD START SERVICES

Head Start Services

'Head Start Services' means provision of head start services through the city's center-based head start program administered under contract with the city's Administration for Children's Services. No other head start programs shall be covered.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$10.00

Supplemental Benefit Rate per Hour: \$1.50

(NYC Administrative Code §6-109)

HEMECARE SERVICES

Home Care Services

'Homecare Services' means the provision of homecare services under the city's Medicaid Personal Care/Home Attendant or Housekeeping Programs, including but not limited to the In-Home Services for the Elderly Programs administered by the Department for the Aging.

For homecare services provided under the Personal Care Services program, the wage and supplemental benefit rate above shall apply only as long as the state and federal government maintain their combined aggregate proportionate share of funding and approved rates for homecare services in effect as of the date of the enactment of this section.

For contractors or subcontractors providing homecare services, the supplemental benefit rate may be waived by the terms of a bona fide collective bargaining agreement with respect to employees who have never worked a minimum of eighty (80) hours per month for two consecutive months for that covered employer, but such provision may not be waived for any employee once a minimum of eighty (80) hours for two consecutive months has been achieved.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$10.00

Supplemental Benefit Rate per Hour: \$1.50

(NYC Administrative Code §6-109)

SECURITY GUARD (ARMED)

For the above building service classification, see the Labor Law Section 230 Schedule.

SECURITY GUARD (UNARMED)

For the above building service classification, see the Labor Law Section 230 Schedule.

SERVICES TO PERSONS WITH CEREBRAL PALSY

Services To Person With Cerebral Palsy

'Services to Persons with Cerebral Palsy' means provision of services which enable persons with cerebral palsy and related disabilities to lead independent and productive lives through an agency that provides health care, education, employment, housing and technology resources to such persons under contract with the city or the department of education.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$10.00

Supplemental Benefit Rate per Hour: \$1.50

(NYC Administrative Code §6-109)

TEMPORARY OFFICE SERVICES

Administrative Assistant

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$32.83

Supplemental Benefit Rate per Hour: None

Cashier

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$11.50

Supplemental Benefit Rate per Hour: None

Clerk (various)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$14.86

Supplemental Benefit Rate per Hour: None

Computer Assistant

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$21.23

Supplemental Benefit Rate per Hour: None

Data Entry Operator

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$16.21

Supplemental Benefit Rate per Hour: None

Receptionist

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$14.88

Supplemental Benefit Rate per Hour: None

Secretary (various)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$18.66
Supplemental Benefit Rate per Hour: None

Word Processor

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$20.02
Supplemental Benefit Rate per Hour: None

Overtime

Time and one half the regular hourly rate after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics or NYC Administrative Code §6-109)

WINDOW CLEANER

For the above building service classification, see the Labor Law Section 230 Schedule.



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

Leonard A. Mancusi
SENIOR ASSISTANT COMPTROLLER

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





**INFRASTRUCTURE DIVISION
BUREAU OF DESIGN**

VOLUME 2 OF 3

PROJECT ID: PS-312KR

FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES IN:

BROOKLYN

IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET AND RYDER STREET; RALPH AVENUE BETWEEN PRESTON COURT AND FOSTER AVENUE; AND, RALPH AVENUE BETWEEN AVENUE L AND AVENUE K

STATEN ISLAND

RICHMOND TERRACE BETWEEN MORNINGSTAR ROAD AND NEWARK AVENUE; RICHMOND TERRACE BETWEEN WINANT STREET AND MORNINGSTAR ROAD; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND WINANT STREET; RICHMOND TERRACE BETWEEN VAN NAME AVENUE AND SIMONSON AVENUE; RICHMOND TERRACE BETWEEN VAN PELT AVENUE AND VAN NAME AVENUE; RICHMOND TERRACE BETWEEN DE HART AVENUE AND VAN PELT AVENUE; RICHMOND TERRACE BETWEEN BUSH AVENUE AND UNION AVENUE; RICHMOND TERRACE BETWEEN HARBOR ROAD AND BUSH AVENUE; RICHMOND TERRACE AND MAPLE AVENUE; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND HOUSEMAN AVENUE; AND, CEDAR GROVE AVENUE AND EBBITS STREET;

Together With All Work Incidental Thereto

BOROUGHS OF THE BROOKLYN AND STATEN ISLAND
CITY OF NEW YORK

ENV TECH CORP.

850148009900 / 8502035E0026C ^{Contractor}

Dated MARCH 11, _____, 2015

APPROVED AS TO FORM
CERTIFIED AS TO LEGAL AUTHORITY

[Signature]

JP
Acting Corporation Counsel 3-25-14

Dated March 25 _____, 2014



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

30-30 THOMSON AVENUE
LONG ISLAND CITY, NEW YORK 11101-3045
TELEPHONE (718) 391-1000
WEBSITE www.nyc.gov/buildnyc

VOLUME 3 OF 3

LAW

**SCHEDULE A
ADDENDA NOS. 1 AND 2**

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND REQUIRED FOR:

PROJECT ID: PS-312KR

FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES
IN:

BROOKLYN

IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET
AND RYDER STREET; RALPH AVENUE BETWEEN PRESTON COURT AND
FOSTER AVENUE; AND, RALPH AVENUE BETWEEN AVENUE L AND AVENUE K

STATEN ISLAND

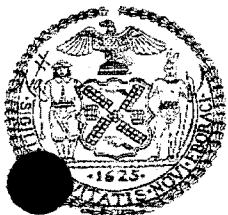
RICHMOND TERRACE BETWEEN MORNINGSTAR ROAD AND NEWARK
AVENUE; RICHMOND TERRACE BETWEEN WINANT STREET AND
MORNINGSTAR ROAD; RICHMOND TERRACE BETWEEN GRANITE AVENUE
AND WINANT STREET; RICHMOND TERRACE BETWEEN VAN NAME AVENUE
AND SIMONSON AVENUE; RICHMOND TERRACE BETWEEN VAN PELT
AVENUE AND VAN NAME AVENUE; RICHMOND TERRACE BETWEEN DE HART
AVENUE AND VAN PELT AVENUE; RICHMOND TERRACE BETWEEN BUSH
AVENUE AND UNION AVENUE; RICHMOND TERRACE BETWEEN HARBOR
ROAD AND BUSH AVENUE; RICHMOND TERRACE AND MAPLE AVENUE;
RICHMOND TERRACE BETWEEN GRANITE AVENUE AND HOUSEMAN
AVENUE; AND, CEDAR GROVE AVENUE AND EBBITS STREET;

Together With All Work Incidental Thereto

**BOROUGHS OF THE BROOKLYN AND STATEN ISLAND
CITY OF NEW YORK**

FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION
PREPARED BY
IN-HOUSE DESIGN

January 2, 2014



14-066



SPECIFICATIONS AND STANDARDS OF NEW YORK CITY

The following NYC Department of Transportation reference documents are available on-line at:

http://www.nyc.gov/html/ddc/html/pubs/pubs_infrastdts.shtml 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 Cruz, Tel. (212) 839-9434

1. New York City Standard Highway Specifications, November 1, 2010
2. New York City Standard Highway Details of Construction, July 1, 2010
3. New York City Division of Street Lighting Specifications
4. New York City Division of Street Lighting Standard Drawings
5. New York City Standard Specifications for Traffic Signals
6. New York City Standard Drawings for Traffic Signals

The following reference documents for Sewer Work are available on-line at:

http://www.nyc.gov/html/ddc/html/pubs/pubs_infrastdts.shtml 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. William Patalano, Tel. (718) 391-2054

1. New York City DEP Standard Sewer Specifications, August 1, 2009
2. New York City DEP Instructions for Concrete Specifications, Jan. 92
3. New York City DEP General Specification 11-Concrete, November 1991
4. New York City DEP Sewer Design Standards, (September 2007) Revised January 2009

The following reference documents for Water Mains Work are available on-line at: http://www.nyc.gov/html/ddc/html/pubs/pubs_infrastdts.shtml 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. New York City Department of Environmental Protection, Standard Water Main Specifications, dated August 1, 2009
2. New York City Department of Environmental Protection Water Main Standard Drawings
3. Specifications for Trunk Main Work, dated February 2010

The 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

Standard Specifications and Drawings for Fire Department Communications facilities of New York City are available at 87 Union Street, Engineering Office, Brooklyn, N.Y. 11231-1416.

Contact: Mr. Ed Durkin, Tel. (718) 624-3752

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

(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"><u>INFORMATION FOR BIDDERS SECTION 26</u> <u>BID SECURITY</u></p> <p>The Contractor shall obtain a bid security in the amount indicated to the right.</p>	See Attachment 1 (page A-1 of the Bid Booklet)
<p align="center"><u>INFORMATION FOR BIDDERS SECTION 26</u> <u>PERFORMANCE AND PAYMENT BONDS</u></p> <p>The Contractor shall obtain performance and payment bonds in the amount indicated to the right.</p>	See Attachment 1 (page A-1 of the Bid Booklet)
<p align="center"><u>CONTRACT ARTICLE 14.</u> <u>DATE FOR SUBSTANTIAL COMPLETION</u></p> <p>The Contractor shall substantially complete the Work in the number of calendar days indicated to the right.</p>	See Page SA-4
<p align="center"><u>CONTRACT ARTICLE 15.</u> <u>LIQUIDATED DAMAGES</u></p> <p>If the Contractor fails to substantially complete the Work within the time fixed for substantial completion plus authorized time extensions or if the Contractor, in the sole determination of the Commissioner, has abandoned the Work, the Contractor shall pay to the City the amount indicated to the right.</p>	For Each Consecutive Calendar Day Over Substantial Completion Time: <u>\$1,500.00</u>
<p align="center"><u>CONTRACT ARTICLE 17.</u> <u>SUB-CONTRACTOR</u></p> <p>The Contractor shall not make subcontracts totaling an amount more than the percentage of the total Contract price indicated to the right.</p>	Not to Exceed <u>35%</u> of the Contract Price
<p align="center"><u>CONTRACT ARTICLE 21.</u> <u>RETAINAGE</u></p> <p>The Commissioner shall deduct and retain until the substantial completion of the Work the percent value of the Work indicated to the right.</p>	<u>5%</u> of the Value of the Work
<p align="center"><u>CONTRACT ARTICLE 22.</u> <u>(Per Directions Indicated To The Right)</u></p>	See pages SA-5 through SA-9

<p align="center"><u>CONTRACT ARTICLE 24.</u> <u>DEPOSIT GUARANTEE</u></p> <p>As security for the faithful performance of its obligations, the Contractor, upon filing its requisition for payment on Substantial Completion, shall deposit with the Commissioner a sum equal to the percentage of the Contract price indicated to the right.</p>	<p align="center">1% of Contract Price</p>
<p align="center"><u>CONTRACT ARTICLE 24.</u> <u>PERIOD OF GUARANTEE</u></p> <p>Periods of maintenance and guarantee other than the period set forth in Article 24.1 are indicated to the right.</p>	<p align="center">Eighteen (18) Months, excluding Trees Twenty-Four (24) Months for Tree Planting</p>
<p align="center"><u>CONTRACT ARTICLE 74.</u> <u>STATEMENT OF WORK</u></p> <p>The Contractor shall furnish all labor and materials and perform all Work in strict accordance with the Contract Drawings, Specifications, and all Addenda thereto.</p>	<p align="center">See Contract Article 74</p>
<p align="center"><u>CONTRACT ARTICLE 75.</u> <u>COMPENSATION TO BE PAID TO CONTRACTOR</u></p> <p>The City shall pay and the Contractor shall accept in full consideration for the performance of the Contract, subject to additions and deductions as provided in Contract Article 75, this said sum being the amount at which the Contract was awarded to the Contractor at a public letting thereof, based upon the Contractor's bid for the Contract.</p>	<p align="center">See Contract Article 75</p>
<p align="center"><u>CONTRACT ARTICLE 78.</u> <u>PARTICIPATION BY MINORITY-OWNED AND WOMEN-OWNED BUSINESS ENTERPRISES IN CITY PROCUREMENT</u></p>	<p align="center">See M/WBE Utilization Plan in the Bid Booklet</p>

<p style="text-align: center;"><u>STANDARD HIGHWAY SPECIFICATIONS</u> <u>SECTION 6.40</u> <u>LIQUIDATED DAMAGES FOR</u> <u>ENGINEER'S FIELD OFFICE</u></p> <p>If the Contractor fails to satisfactorily provide the field office and all equipment specified in Section 6.40 - Engineer's Field Office, and/or if a cited deficiency exceed seventy two (72) hours after notice from the Engineer in writing, or is permitted to recur, liquidated damages will be assessed in the amount specified herein for each subsequent calendar day or part thereof that a cited deficiency resulting in nonpayment, as described in Section 6.40.5, is not corrected.</p>	<p>For Each Calendar Day of Deficiency: <u>\$200.00</u></p>
<p style="text-align: center;"><u>STANDARD HIGHWAY SPECIFICATIONS</u> <u>SECTION 6.70</u> <u>LIQUIDATED DAMAGES FOR</u> <u>MAINTENANCE AND PROTECTION OF TRAFFIC</u></p>	<p>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: <u>\$250.00</u></p> <p>For each and every hour of failing to open the entire width of roadway to traffic the morning following a night/weekend work operation: <u>\$500.00</u></p>
<p style="text-align: center;"><u>STANDARD HIGHWAY SPECIFICATIONS</u> <u>SECTION 7.13</u> <u>LIQUIDATED DAMAGES FOR</u> <u>MAINTENANCE OF SITE</u></p> <p>If the Contractor fails to comply, within three (3) consecutive hours after written notice from the Engineer, with the requirements of Section 7.13 - Maintenance of Site, the Contractor shall pay to the City of New York, until such notice has been complied with or rescinded, the sum specified above per calendar day, for each instance of such failure, as liquidated damages and not as a penalty, for such default.</p>	<p>For Each Calendar Day, for Each Occurrence: <u>\$250.00</u></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 365 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 the 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 the substantial completion based on the Base Contract Duration added to the date specified to commence work in the written Notice To Proceed.
- (b) Find the number of days to be added to the Base Contract Duration in the table below. Add that number of days to the Base Contract Duration to obtain the Final Contract Duration in consecutive calendar days.

Month Of Substantial Completion Based On The Base Contract Duration	Number Of Days Of Adjustment
January	150
February	120
March	90
April	60
May	30
June	0
July	0
August	0
September	0
October	0
November - December 15	0
December 16 - December 31	180

In addition, should Item No. 9.30 - STORM WATER POLLUTION PREVENTION exist in the Contract and the required Storm Water Pollution Prevention Plan (SWPPP) does not conform to NYSDEC's recommended Standards, an additional 60-ccds 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 an X in a box (☒) to left will be required under this contract

<p align="center"><u>TYPES OF INSURANCE</u> (per Article 22 in its entirety, including listed paragraph)</p>	<p align="center"><u>MINIMUM LIMITS AND SPECIAL CONDITIONS</u></p>
<p>■ Commercial General Liability Art. 22.1.1</p>	<p>The minimum limits shall be <u>\$1,000,000</u> per Occurrence and <u>\$2,000,000</u> per Project Aggregate applicable to this Contract.</p> <p>Additional Insureds:</p> <p>(1) <u>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.</u></p> <p>(2) <u>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).</u></p> <p>(3)</p> <p>(4)</p>

<p><input checked="" type="checkbox"/> Workers' Compensation</p> <p><input checked="" type="checkbox"/> Disability Benefits Insurance</p> <p><input checked="" type="checkbox"/> Employers' Liability</p> <p><input type="checkbox"/> Jones Act</p> <p><input type="checkbox"/> U.S. Longshoremen's and Harbor Workers Compensation Act</p>	<p>Art. 22.1.2</p> <p>Art. 22.1.2</p> <p>Art. 22.1.2</p> <p>Art. 22.1.3</p> <p>Art. 22.1.3</p>	<p>Workers' Compensation, Employers' Liability, and Disability Benefits Insurance: Statutory per New York State law without regard to jurisdiction.</p> <p>Note: The following forms are acceptable: (1) New York State Workers' Compensation Board Form No. C-105.2, (2) State Insurance Fund Form No. U-26.3, (3) New York State Workers' Compensation Board Form No. DB-120.1 and (4) Request for WC/DB Exemption Form No. CE-200. The City will not accept an ACORD form as proof of Workers' Compensation or Disability Insurance.</p> <p>Jones Act and U.S. Longshoremen's and Harbor Workers' Compensation Act: Statutory per U.S. Law.</p> <p><input type="checkbox"/> Additional Requirements:</p> <p>(1)</p> <p>(2)</p>
<p><input type="checkbox"/> Builders' Risk</p>	<p>Art. 22.1.4</p>	<p><u>100%</u> of Total Value of Work</p> <p>Contractor the Named Insured; the City both an Additional Insured and one of the loss payees as its interests may appear.</p> <p>If the Work does not involve construction of a new building or gut renovation work, the Contractor may provide an installation floater in lieu of Builders Risk insurance.</p> <p>Note: Builders Risk Insurance may terminate upon Substantial Completion of the Work in its entirety.</p>
<p><input checked="" type="checkbox"/> Commercial Auto Liability</p>	<p>Art. 22.1.5</p>	<p><u>\$2,000,000</u> per accident combined single limit</p> <p>If vehicles are used for transporting hazardous materials, the Contractor shall provide pollution liability broadened coverage for covered vehicles (endorsement CA 99 48) as well as proof of MCS 90.</p> <p>Additional Insureds:</p> <p>(1) <u>City of New York, including its officials and employees.</u></p> <p>(2)</p> <p>(3)</p>

<input type="checkbox"/> Contractors Pollution Liability Art. 22.1.6	\$ _____ per occurrence \$ _____ aggregate Additional Insureds: (1) <u>City of New York, including its officials and employees.</u> (2) (3)
<input type="checkbox"/> Marine Protection and Indemnity Art. 22.1.7(a)	\$ _____ each occurrence \$ _____ aggregate Additional Insureds: (1) <u>City of New York, including its officials and employees.</u> (2) (3)
<input type="checkbox"/> Hull and Machinery Insurance Art. 22.1.7(b)	\$ _____ per occurrence \$ _____ aggregate Additional Insureds: (1) <u>City of New York, including its officials and employees.</u> (2) (3)
<input type="checkbox"/> Marine Pollution Liability Art. 22.1.7(c)	\$ _____ per occurrence \$ _____ aggregate Additional Insureds: (1) <u>City of New York, including its officials and employees.</u> (2) (3)

<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"> • Policy Endorsement CG 28 31 - Pollution Exclusion Amendment is required to be endorsed onto the policy when environmental-related work and/or exposures exist. • Indicate the Name and address of the Contractor to perform the work, the Contract Number and the name of the railroad property where the work is being performed and the Agency Permit. • Evidence of Railroad Protective Liability Insurance, must be provided in the form of the <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 thirty (30) days of the Binder Approval.</u> 	<p><u>\$2,000,000</u> per occurrence</p> <p><u>\$6,000,000</u> annual aggregate</p> <p>Named Insureds:</p> <p>(1)</p> <p>(2)</p>
<p>[OTHER] Art. 22.1.8</p> <p><input type="checkbox"/> Professional Liability</p> <p>A. The Contractor's Professional Engineer shall maintain and submit evidence of Professional Liability Insurance in the minimum amount of <u>\$1,000,000</u> 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] Art. 22.1.8</p> <p><input checked="" type="checkbox"/> Engineer's Field Office</p> <p>Section 6.40, Standard Highway Specifications</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] Art. 22.1.8</p> <p><input type="checkbox"/> The Following Additional Insurance Must Be Provided:</p> <p><u>Umbrella/Excess Liability Insurance - The Contractor shall provide Umbrella/Excess Liability Insurance in the minimum amount of \$10,000,000 per Occurrence and \$10,000,000 in Aggregate. The policy terms and condition should be at least as broad as the underlying policies. The underlying policies should comply with the insurance provision as outlined by the contract. Defense cost should be in addition to the limit of liability. The City of New York, including its officials and employees, should be included as additional insured as respects to the noted project.</u></p>	

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

ATTACH TO CONTRACT DOCUMENTS

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

PROJECT ID: PS-312KR

FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES IN:

BROOKLYN

IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET AND RYDER STREET; RALPH AVENUE BETWEEN PRESTON COURT AND FOSTER AVENUE; AND, RALPH AVENUE BETWEEN AVENUE L AND AVENUE K

STATEN ISLAND

RICHMOND TERRACE BETWEEN MORNINGSTAR ROAD AND NEWARK AVENUE; RICHMOND TERRACE BETWEEN WINANT STREET AND MORNINGSTAR ROAD; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND WINANT STREET; RICHMOND TERRACE BETWEEN VAN NAME AVENUE AND SIMONSON AVENUE; RICHMOND TERRACE BETWEEN VAN PELT AVENUE AND VAN NAME AVENUE; RICHMOND TERRACE BETWEEN DE HART AVENUE AND VAN PELT AVENUE; RICHMOND TERRACE BETWEEN BUSH AVENUE AND UNION AVENUE; RICHMOND TERRACE BETWEEN HARBOR ROAD AND BUSH AVENUE; RICHMOND TERRACE AND MAPLE AVENUE; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND HOUSEMAN AVENUE; AND, CEDAR GROVE AVENUE AND EBBITS STREET;

Together With All Work Incidental Thereto

BOROUGHS OF THE BROOKLYN AND STATEN ISLAND
CITY OF NEW YORK

ADDENDUM NO. 1

DATED: February 24, 2014

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

The New York City Department of Transportation Standard Highway Specifications, dated November 1, 2010, (which include, but are not limited to, "General Conditions", "Basic Materials of Construction", "Combined Materials of Construction", "Construction Methods", "Inspection and Testing of Materials, Adjustments for Deficiencies, and Maintenance", and "Supplemental Construction Methods"), as modified by addenda issued prior to the opening of bids, shall apply to and become a part of the contract.

All references contained herein are to the New York City Department of Transportation, Standard Highway Specifications, dated November 1, 2010. The said Specifications are hereby revised. Included hereunder are the following REVISIONS:

1. Amendments to Standard Highway Specifications, Volume I
2. Amendments to Standard Highway Specifications, Volume II, including Section 7.88 (Revised) and new Sections 6.44 PO and 6.52 CG.

1. AMENDMENTS TO STANDARD HIGHWAY SPECIFICATIONS, VOLUME I

The following amendments to the Contract Requirements shall become a part of and apply to the contract:

[Added 12-09-2010]

1. Refer to Page 15, **Subsection 1.06.23.(C) CONFORMANCE WITH FEDERAL, STATE AND CITY AGENCIES;**

Add the following new paragraphs:

"The Contractor is notified that all vehicles that are owned, leased or operated by the Contractor or its subcontractors and used in connection with the Project shall comply with the following requirement:

Every truck, tractor, and tractor-trailer or semitrailer combination, having a gross vehicle weight rating of twenty-six thousand pounds or more, and a conventional cab configuration in which more than half of the engine length is forward of the foremost point of the windshield base, and the steering wheel hub is in the forward quarter of the vehicle length shall be equipped with a convex mirror on the front of such vehicle or combination of vehicles. Such convex mirror shall be adjusted so as to enable the operator of such vehicle or combination of vehicles to see all points on an imaginary horizontal line which is three feet above the road, is one foot directly forward from the midpoint of the front of such vehicle or combination of vehicles, and extends the full width of the front of such vehicle or combination of vehicles.

Any vehicle that does not comply with this provision may be prohibited from entering the Project site and/or supplying equipment or materials to the Project. The Contractor shall not be entitled to any damages as a result of such prohibition."

[Added 01-09-2011]

2. Refer to Page 240, **Subsection 4.16.5.(B) STUMP REMOVAL;**
Delete **Subsection 4.16.5.(B) STUMP REMOVAL**, in its entirety:
Substitute the following revised **Subsection 4.16.5.(B)** :

"(B) STUMP REMOVAL

1. Tree stumps designated to be removed and their roots shall be completely excavated to a minimum depth of three (3) feet below the existing grade. A portable stump cutter may be required in some locations. It may be necessary to remove concrete, asphalt, pavers, and/or other types of material surrounding the base of the stump. All excess debris, including chips from tree stumps, shall be removed and disposed of by the Contractor, away from the site prior to backfilling and the area shall be restored by completion of the workday, to the satisfaction of the Engineer. The disposal of tree stumps by burning in open fires will not be permitted.

2. All voids and excavations left after the removal of the stump and roots shall be backfilled to grade with clean earth fill. Fill shall be placed and compacted to a minimum of 95 percent of Standard Proctor Maximum Density by acceptable methods to the satisfaction of the Engineer. Where paving blocks exist, they are to be reset to the existing grade as directed.

3. Maximum safety and care must be used by Contractor during stump removal. The Contractor shall carefully protect against damage all existing trees, plants, curbs, sidewalks and utilities and other features to remain. The Contractor is responsible for locating and protecting underground utilities from damage during stump removal procedures. During stump grinding operations, plywood must be used to protect adjacent vehicles, real property, and pedestrians. If, when removing stumps, existing sidewalks or curbs are disturbed, the Contractor shall restore and/or reset these sidewalks and curbs, at no additional cost to the City. Restoration work shall be done to match the existing, to the satisfaction of the Engineer. All damaged trees, curbs, sidewalks, real property, vehicles and utilities must be addressed within three (3) days."

[Added 04-18-2011]

3. Refer to Pages 218 and 219, **Subsection 4.13.4.(H) PIGMENT**;
Delete the first three (3) paragraphs on page 219:
Substitute the following revised three (3) paragraphs:

"Where the color of the concrete is required to simulate the color of dark gray bluestone, the concrete shall be integrally pigmented to produce a gray color equivalent to: Davis Colors No. 884-3%; Lansco Color No. 437 "Strong Black" 5 lbs. per 94 lbs. Light Grey Portland Cement and 3 parts sand; L.M. Scofield "Cool Black No. 4"; Bayferrox Limestone 330, 2 lbs. per 94 lbs. Light Gray Portland Cement; or an approved equivalent, unless otherwise specified.

Where the color of the concrete is required to simulate the color of light to medium gray granite, the concrete shall be integrally pigmented to produce a gray color equal to: Davis Colors No. 884-1%; Lansco Color No. 437 "Strong Black" 2.5 lbs. per 94 lbs. Light Grey Portland Cement and 3 parts sand; L.M. Scofield "Cool Black No. 1"; Bayferrox Silver 330, 1 lb. per 94 lbs. Light Gray Portland Cement; or an approved equivalent, unless otherwise specified.

Where the sidewalk is designated to have a saw cut joint finish the color of the concrete shall be integrally pigmented to produce a gray color equivalent to L.M. Scofield "Landmarks Grey" K-157-4; L.M. Scofield "Cool Black No. 4"; Davis Colors No. 884-3%; Lansco Color No. 437 "Strong Black" 5 lbs. per 94 lbs. Light Grey Portland Cement and 3 parts sand; Bayferrox NYC Landmark Commission Gray, 3.5 lbs. per 94 lbs. Light Gray Portland Cement; or an approved equivalent, unless otherwise specified."

[Added 07-01-2011]

4. Refer to Page 14, **Subsection 1.06.23.(A) PERMITS**;
Delete line (b) under the first paragraph;
Substitute the following text:

"(b) Any planned work requiring a DOT Construction Permit that may potentially be within 100 feet of a bridge structure will be placed on a Bridge Hold. If any proposed work is within 100 feet of a bridge structure, permittees must submit a scaled drawing showing the work and exact location, along with the following:

- Plan layout of the project area.
- The scope of work.
- The contractor's means and methods.
- Indicate if work will be done of the bridge itself or its abutments, and the type of work.

If the work is more than 100 feet away from the bridge structure, permittees may send a certification by e-mail stating so. Either response must be sent to the Division of Bridges at bridgeshold@dot.nyc.gov for review and release prior to commencing work. Emergency work will not be placed on hold and shall proceed in accordance with the New York City Highway Rules, section 2-11 (g);

(c) Permits from the Department of Sanitation for use of City landfills;"

[Added 07-27-2011]

5. Refer to Page 37, **Subsection 1.06.46.(A) 6. Sign Graphics;**
Delete article "a." beginning with the words "All visual components of the sign are in an Adobe *.pdf file, . . ." and ending with the words ". . . DDC to the Contractor (on a CD or via E-mail) for printing.", in its entirety;
Substitute the following revised article "a":

"a. All visual components of the sign are in an Adobe *.pdf file, which is provided by the Commissioner's representative. The file is not to be altered for composition, type font or image from the version provided by DDC. The Commissioner's representative shall provide a complete file with data and image. The digital file shall be provided by DDC to the Contractor (on a CD or via E-mail) for printing."

[Added 09-27-2012]

6. Refer to Page 36, **Subsection 1.06.46. Project Sign;**
Delete the words "Unless otherwise specified in the Special Provisions of the contract, the following shall apply:";
Substitute the following revised text:

"The Contractor is notified that he shall be required to furnish, install, maintain, and remove, when directed, Construction Project Information Signs (CPIS) as per Sec. 2-02(c)(4) and (5) of the NYC DOT Highway Rule and the cost shall be deemed included under all scheduled items of the contract. In addition, unless otherwise specified in the Special Provisions of the contract, the following Project Sign shall also apply:"

[Added 04-08-2013]

7. Refer to Page 200, **Subsection 4.11.2.(B), first paragraph, sixth line;**
Delete the word "porcelain,".
8. Refer to Page 201, **Subsection 4.11.3.(B) FILL AND BACKFILL, second and third paragraphs;**
Delete the second and third paragraphs under Subsection 4.11.3.(B), in their entirety;
Substitute the following revised two paragraphs:

"Glass or Recycled Porcelain Aggregate (RPA) from recycling facilities that meets the requirements of **Subsection 4.11.3.(E)** for Glass and **Subsection 4.11.3.(F)** for RPA shall be considered suitable material for mixing with fill provided the Contractor maintains the gradations specified herein. However, glass shall not be placed in contact with synthetic liners, geogrids, geotextiles or other geosynthetics.

Glass and/or RPA incorporated into fill shall be thoroughly mixed with other suitable material so that glass, RPA or combination of both constitutes no more than 30 percent by volume anywhere in the fill as visually determined by the Engineer."

9. Refer to Page 202, **Subsection 4.11.3.(E) GLASS;**
Add the following new **Subsection 4.11.3.(F) RECYCLED PORCELAIN
AGGREGATE (RPA) :**

“(F) RECYCLED PORCELAIN AGGREGATE (RPA)

All porcelain to be used as RPA shall be crushed by a New York City Department of Environmental Protection (NYCDEP) approved recycling facility to a maximum particle size of 3/8 inch and graded to meet the gradation specified above for use in either fill, backfill or select fill, as may be required. RPA from any other source will not be permitted. The NYCDEP approved recycling facility will also certify that the RPA being furnished is free from organic material and other unsuitable material.

Should the Contractor desire to use RPA in his fill or backfill material, he shall contact Mr. Vasyl Kravchuk at NYCDEP (Tel. No. 718-595-7512) to determine the availability of RPA and from which recycling facility it can be obtained.

The Contractor shall be required to make arrangement with the recycling plant, at least two (2) weeks in advance of when he would need the material, to schedule the time, date and quantity available for pickup. The Contractor shall be required to furnish the recycling facility with a complete list of his trucks involved in transporting the material, which shall include the name of the registered owner (Contractor), Consumer Affairs or DOS Permit numbers, body license plate number, and truck volume. This information must be supplied to the facility prior to the start of picking up the RPA.

Weight ticket receipt slips given by the recycling facility to each truck driver picking up RPA shall be collected by the Contractor and given to the Engineer upon delivering fill or backfill material to the site that contains RPA, and the Contractor agrees and warrants that in obtaining the RPA that such material has originated only from a NYCDEP approved recycling plant and it has not been mixed with porcelain material from any other source.

The Contractor shall be required to transport said material from the approved recycling facility to his yard for storage and mixing with his fill material; however, there is not guarantee that the material will actually be available.

The Contractor is advised that there is no guarantee that RPA will in fact be available for his use from a NYCDEP approved recycling plant and he shall make no claim against the City for loss of anticipated profits should the material not be available upon request by the Contractor.

All excess RPA not used in the fill or backfill shall remain the property of the DDC Contractor.

The Contractor must comply with all rules and regulations of the Department of Transportation and the Department of Environmental Protections governing the use of RPA in its fill and backfill material.”

10. Refer to Pages 218 and 219, **Subsection 4.13.4.(H) PIGMENTING,**
first four paragraphs;

Delete the first four paragraphs under Subsection 4.13.4.(H), in
their entirety;

Substitute the following revised four paragraphs:

“Where pigmenting is specified, the concrete sidewalks shall be pigmented with an admixture complying with the requirements of **Section 2.19** and the following requirements:

‘Commercial Gray’: In commercial districts C4–4 through C4–7, C5 and C6, as defined in the Zoning Resolution of the City of New York, and in areas under the jurisdiction of the Lower Manhattan Development Corporation the color of the concrete shall be integrally pigmented to produce a gray color equivalent to L.M. Scofield ‘Landmarks Grey’ K-157-4; L.M. Scofield ‘Cool Black No. 4’; Davis Colors No. 884-3%; Lansco Color No. 437 ‘Strong Black’ 5 lbs. per 94 lbs. Light Grey Portland Cement and 3 parts sand; Bayferrox NYC Landmark Commission Gray, 3.5 lbs. per 94 lbs. Light Grey Portland Cement; or an approved equivalent, unless otherwise specified.

'Bluestone': Where the color of the concrete is required to simulate the color of dark gray bluestone, the concrete shall be integrally pigmented to produce a gray color equivalent to: Davis Colors No. 884-3%; Lansco Color No. 437 'Strong Black' 5 lbs. per 94 lbs. Light Grey Portland Cement and 3 parts sand; L.M. Scofield 'Cool Black No. 4'; Bayferrox Limestone 330, 2 lbs. per 94 lbs. Light Gray Portland Cement; or an approved equivalent, unless otherwise specified.

'Granite': Where the color of the concrete is required to simulate the color of light to medium gray granite, the concrete shall be integrally pigmented to produce a gray color equal to: Davis Colors No. 884-1%; Lansco Color No. 437 'Strong Black' 2.5 lbs. per 94 lbs. Light Grey Portland Cement and 3 parts sand; L.M. Scofield 'Cool Black No. 1'; Bayferrox Silver 330, 1 lb. per 94 lbs. Light Gray Portland Cement; or an approved equivalent, unless otherwise specified."

[Added 05-24-2013]

11. Refer to Page 14, **Subsection 1.06.23.(A) PERMITS**, first paragraph as modified by Article 4 on page A1-1b;
Add the following new text:

"(d) All necessary permits from the Department of Environmental Protection which may include, but are not limited to, permits for use of City water."

12. Refer to Page 14, **Subsection 1.06.23.(A) PERMITS**, second paragraph;
Add the following as the third paragraph:

"No fee permits for use of City water necessary to complete roadway pavement reconstruction project in conjunction with installation of sewers and/or water mains, will be issued by the Department of Environmental Protection. However, for all other type projects (such as installation of sidewalks, installation of pedestrian ramps, pavement milling, resurfacing, rehabilitation of retaining walls, and bridge reconstruction type projects) the Contractor will be required to obtain the water use permit at its own cost."

[Added 08-05-2013]

13. Refer to page 116, second paragraph up from the bottom of the page, first line;
Change the words "Concrete of Type IA and IIA shall have..." to read "Concrete of Type IA, IIA and IIIA shall have..."

[Added 09-04-2013]

14. Refer to page 100, **Subsection 3.01.3.(C)1.(c)**;
Delete the last two lines of text beginning with the words "The proportion of reclaimed asphalt pavement permitted within each mix...";
Substitute the following sentence: "The proportion of reclaimed asphalt pavement permitted within each mix shall be not less than 30 percent for the top and bottom courses as per Local Law #71 of 2011."

15. Refer to page 110, **Subsection 3.05.2.(A)**, **Table 3.05-I**;
Insert the following text at the bottom of **Table 3.05-I**:

"Note: The above proportions shown for non-High-Early mixes shall be modified by pozzolan substitutes as per **Subsection 3.05.4.**"

16. Refer to page 112, **Subsection 3.05.3.(C)**, second paragraph;
Delete the second paragraph in its entirety;
Substitute the following paragraph:

"Water shall be potable and drawn from municipal water mains."

17. Refer to page 113, first line of text, beginning with the words
"condition making up one (1) cubic yard of concrete.";
Insert the following sentence between the words "condition making up one
(1) cubic yard of concrete." and "The range of water-cement ratio within which the ...":

"The calculated yield of the mix shall be within \pm 2% of the Theoretical (1) cubic yard."

18. Refer to Page 113, second paragraph beginning with the words "The
Contractor may substitute Portland cement";
Delete the second paragraph under **Subsection 3.05.4.**, in its
entirety;
Substitute the following revised paragraph:

"With the exception of high-early strength concrete, the Contractor shall be required to substitute Portland cement with pozzolans (Fly Ash or GGBFS) such that the maximum amount of Portland cement per cubic yard of concrete does not exceed 400 pounds, and with the use of an approved non-corrosive, non-chloride admixture as required to obtain a minimum compressive strength of 3,000 psi in seven (7) days. For high-early strength concrete the Contractor may substitute Portland cement with pozzolans (Fly Ash or GGBFS), pound for pound, up to 20% (or up to 25% for tidal/sea water spray areas) of the weight of cement specified for any concrete mixture provided the Contractor can obtain a minimum compressive strength of 3,000 p.s.i. in three (3) days. The Contractor, immediately following but not later than eight weeks after the date of the Contractor's Notice to Proceed, shall file with the Engineer, Age-Strength data of the job mix he proposes to use for the various ambient temperatures anticipated during the period of concrete placement. This data shall be presented in both tabular and graphical form for those various ambient temperatures with a maximum setting period of seven (7) days for Class B-32 concrete or seventy-two (72) hours for High-Early Strength Concrete."

19. Refer to Page 115, **TABLE 3.05-III - INGREDIENT MATERIALS**;
Change in the third row, second column, the type of Portland
Cement from "Type III*" to read "Type II or Type III*"
20. Refer to page 132, **Subsection 3.06.3.(D)**;
Change the words "Water shall be drawn from mains owned by The City of New York." to
read "Water shall be potable and drawn from municipal water mains."
21. Refer to page 133, **Subsection 3.07.3.(D)**;
Change the words "Water shall be drawn from mains owned by or supplying water to The
City of New York." to read "Water shall be potable and drawn from municipal water
mains."
22. Refer to page 134, **Subsection 3.08.4.(D)**;
Change the words "Water shall be drawn from mains owned by or supplying water to The
City of New York." to read "Water shall be potable and drawn from municipal water
mains."

23. Refer to Page 166, **Subsection 4.05.2.(A)** ;
Delete Subsection 4.05.2.(A), in their entirety;
Substitute the following revised **Subsection 4.05.2.(A)** :

“(A) Concrete Pavement shall be of the following types:

- Type 1--Non-reinforced
- Type 2--Reinforced (Unpigmented or pigmented if specified)
- Type 3--High Early Strength Reinforced (Unpigmented or pigmented if specified)

Type 2 and Type 3 pavements shall consist of a concrete surface course, which shall be unpigmented or pigmented if specified, laid on a concrete base course, which may or may not be pigmented at the Contractor's option, while the base course is still plastic, of the thickness shown on the Contract Drawings, with reinforcement placed between the surface and base courses.”

24. Refer to Page 166, **Subsection 4.05.3.(A)** ;
Insert the following new **Subsection 4.05.3.(A1)** :

“(A1) PIGMENTING

Where pigmenting is specified, the surface course of the concrete bus pad shall be pigmented with an admixture complying with Section 2.19 and the following requirements:

Where the color of the concrete is required to simulate the red color of the Red Bus Lane Pavement Overlay (Item 6.44 POR in Section 6.44 PO), the surface course concrete shall be integrally pigmented to produce a red color equivalent to Scofield's quarry red.

Except for the use of an air-entraining agent complying with ASTM Designation C 260 and water reducing admixtures complying with ASTM Designation C 494 used in combination with the Pigment Admixture as per the pigment manufacturer's instruction, no other admixtures (including, but not limited to, calcium chloride) shall be used unless stated in writing by the manufacturer of the Pigment Admixture to be of no consequence to the colorfastness of the concrete mixture and is approved by the Engineer.

All pigmented concrete at different locations shall be identical, unless otherwise directed. Variations in color/tint/hue will not be acceptable. Therefore, the same brand and type of cement and the same source and type of aggregate shall be used throughout the project.

Prior to the mix design being made, the cement intended for use shall be checked to determine that its lightness/darkness is similar to the cement used in the original approved sample. The Pigmented Admixture shall be added in the standard proportion specified by the manufacturer.”

25. Refer to Page 170, **Subsection 4.05.5.(A) GENERAL** ;
Insert the following two new paragraphs:

“For pigmented concrete, the Contractor shall within eight weeks of the notice to proceed, submit the name of its proposed roadway installer upon which his bid is based, along with their respective work history experience in placing pigmented concrete. The installer shall have documented experience in working with pigmented concrete.

Prior to making any field samples and the placing of any pigmented concrete, the Contractor, its concrete supplier, installer, cement producer, laboratory, the pigmented admixture's representative, and the Engineer shall meet and agree on the specifications and methods of handling the pigmented concrete.”

26. Refer to Page 183, **Subsection 4.05.9. PRICES TO COVER**, 4th line;
Insert in the fourth line, the words "pigment when specified" between the
words "specifications, including, but not limited to," and "furnishing and installing...":

27. Refer to Page 183, **Subsection 4.05.9. PRICES TO COVER**;
Insert the following two new Items to the list of Item Nos. at the
bottom of **Subsection 4.05.9**:

"4.05 ACP	REINFORCED CONCETE PAVEMENT (BUS STOPS)(PIGMENTED)	C.Y.
4.05 AXP	HIGH-EARLY STRENGTH REINFORCED CONCRETE PAVEMENT (BUS STOPS)(PIGMENTED)	C.Y."

2. AMENDMENTS TO STANDARD HIGHWAY SPECIFICATIONS, VOLUME II

[Added 01-25-2012]

1. Refer to Pages 365 and 366, **Subsection 6.40.2. (C) (c) (1) Personal Computer(s) - Workstation Configuration;**

Delete the text under **Subsections (a), (b), (c), (d), (h), (i), and (m),** in their entirety;

Substitute the following revised text:

- "(a) Make and Model: Dell; HP; Gateway; Acer; or, an approved equivalent. (Note: an approved equivalent requires written approval of the Assistant Commissioner of ITS.)
- (b) Processor: i5-2400 (6MB Cache, 3.1GHz) or faster computer - Single Processor.
- (c) System Ram: Minimum of 4GB (Gigabytes) Dual Channel DDR3 SDRAM at 1333MHz – 2 DIMMSs
- (d) Hard Disk Drive(s): 500 GB (Gigabytes) Serial ATA (7200RPM) w/DataBurst Cache, or larger."
- "(h) Video Display Card: HD Graphics (VGA, HDMI) with a minimum of 64 MB of RAM.
- (i) Monitor: 22" W, 23.0 Inch VIS, Widescreen, VGA/DVI LCD Monitor."
- "(m) Software Requirements: Microsoft Windows 7 Professional SP1, 64 bit; Microsoft Office Professional 2010; Microsoft Project 2010; Adobe Acrobat reader; Anti-Virus software package with 2 year updates subscription; and, either Auto Cad 2012 LT or Microsoft Visio 2010 Standard Edition, as directed by the Engineer."

~~2. Refer to Page 366, **Subsection 6.40.2. (C) (c) (2) (b) ;**
Delete the text under **Subsection (b)**, which begins with the words
"(b) One (1) 600 DPI HP Laser Jet . . .", in its entirety;
Substitute the following revised text:~~

- ~~"(b) One (1) 600 DPI HP Color Laser Jet all-in-one Printer/Scanner/Copier/Fax (twelve (12) pages per minute or faster) with one (1) Extra Paper Tray (Legal Size) networked to all office computers."~~

3. Refer to Page 367, Subsection 6.40.3. SPECIFIC REQUIREMENTS FOR ENGINEERS FIELD OFFICE (TYPE A, B, C, CU, D OR DU), first paragraph;

Delete the text in the first paragraph of Subsection 6.40.3., in its entirety;

Substitute the following revised text:

6.40.3. SPECIFIC REQUIREMENTS FOR ENGINEER'S FIELD OFFICE (TYPE A, B, C, CU, D, OR DU). In addition to the general requirements, each type of Field Office shall have the minimum floor area indicated in Table 6.40-I calculated based on usable area only, excluding any loss factors. Loss factors are defined as those areas such as lobby, sidewalk window ledge, elevator shafts and stairways. The Contractor shall provide and maintain furnishings for each type of Field Office in the quantity specified in Table 6.40-I. The furnishings shall be new or used equipment satisfactory to the Engineer:

4. Refer to Page 368, TABLE 6.40-I, ADDITIONAL REQUIREMENTS SPECIFIC REQUIREMENTS;

Delete the requirements for a Photocopy Machine shown in the 15th row of TABLE 6.40-I, in its entirety;

Substitute the following revised requirements:

Photocopying Machine – Stand-alone, heavy duty, electric, dry-process color photocopying type with a minimum production rate of 70 pages per minute and an adequate supply of copy paper, toner, etc. The machine shall be capable of duplex copying paper sizes of 8-1/2 x 11 inches, 8-1/2 x 14 inches and 11 x 17 inches, and have separate trays for each paper size. It shall have a document feeder, collator, stapler, and the capability to reduce/enlarge copies between each paper size. The supply of each size copy paper, toner, etc. shall be replenished and the machines shall be maintained for the duration of the contract by the Contractor as required by the Engineer. Make and model can be Minolta, Canon, IBM, Epson, or an approved equivalent, and shall be networked to the office computers.	1	1	1	1	1	1
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5. Refer to Page 368, TABLE 6.40-I, ADDITIONAL REQUIREMENTS SPECIFIC REQUIREMENTS;

Insert the following two additional requirements:

Heavy duty commercial grade diamond cut shredder with automatic start. The shredder shall be able to receive 8-1/2 inch wide paper and shred a minimum of 15 sheets simultaneously along with CDs and staples.	1	1	1	1	1	1
Projector – 1080p LCD with a min. of 2200 ANSI Lumens, 1920 x 1080, 16:9, 40,000:1 contrast ratio, HDMI, VGA, USB, and a 10 feet diagonal, 16:9 Projection Screen.	-	-	1	1	1	1

6. Refer to Page 496, Subsection 7.20.4. **METHODS**, last paragraph beginning with the words "When directed by the Engineer, due to the original conditions . . .";
Add the following sentence to the end of the last paragraph under **Subsection 7.20.4:**

"However, if the owner at his own expense supplies the replacement frame and doors or hatch covers the Contractor shall install the replacement frame and doors or hatch covers under this Item 7.20, as a basement access reset, in lieu of the steel safety closure plate."

[Added 07-16-2012]

7. Refer to Page 365, Subsection 6.40.2. (C) (c) (1) "**Personal Computer(s) - Workstation Configuration**";
Delete the text under **Subsections (g) and (k)**, in their entirety;
Substitute the following revised text:

- "(g) I/O Ports: Must have at least one (1) Serial Port, one (1) Parallel Port, and three (3) USB Ports.
- (k) Network Interface: Integrated 10/100/1000 Ethernet card."

8. Refer to Page 366, Subsection 6.40.2. (C) (c) (2) "**All field offices requiring computers shall be provided with the following:**";
Delete the text under **Subsection (a)**, in its entirety;
Substitute the following revised text:

- "(a) One (1) broad-band internet service account. Wideband Internet connectivity at a minimum throughput of 15 Mbps download and 5 Mbps upload is required at each field office location with 1-5 staffers. For larger field offices see table below for minimum required upload speeds. Telephone service should be bundled together with Internet connectivity. Because of throughput requirements Verizon FIOS is the preferred connectivity provider where available.

Office Personnel #	Upload Speeds (Minimum)
1 - 5	5 Mbps
6 - 10	10 Mbps
11 - 15	15 Mbps
16 - 20 ...	20 Mbps

This account will be active for the life of the project. The e-mail name for the account shall be the DDC Field Office/project Id (e.g. FLD K HWK666 McGuinness@earthlink.com)."

[Added 08-09-2012]

9. Refer to Page 366, **Subsection 6.40.2.(C)(c)(2)(b)**, as amended by Article 2 on page A1-2 of this Addendum;
Delete the text under **Subsection (b)**, in its entirety;
Substitute the following words: "**(b) (No Text)**."

10. Refer to Page 368, TABLE 6.40-I, ADDITIONAL REQUIREMENTS SPECIFIC REQUIREMENTS;
Delete the requirements for a Photocopy Machine shown in the 15th row of TABLE 6.40-I, as modified by Article 4 on page A1-2a of this Addendum, in its entirety;
Substitute the following revised requirements:

Photocopying Machine – Stand-alone, heavy duty, electric, dry-process color photocopying type with color scan and send capability via e-mail, a minimum production rate of 70 pages per minute and an adequate supply of copy paper, toner, etc. The machine shall be capable of duplex copying paper sizes of 8-1/2 x 11 inches, 8-1/2 x 14 inches and 11 x 17 inches, and have separate trays for each paper size. It shall have a document feeder, collator, stapler, and the capability to reduce/enlarge copies between each paper size. The supply of each size copy paper, toner, etc. shall be replenished and the machines shall be maintained for the duration of the contract by the Contractor as required by the Engineer. Make and model can be Minolta, Canon, IBM, Epson, or an approved equivalent, and shall be networked to the office computers.	1	1	1	1	1	1
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[Added 11-26-2012]

11. Refer to Pages 504 through 508, **SECTION 7.88 - Rodent and Waterbug Pest Control**;
Delete **Section 7.88**, in its entirety;
Substitute SECTION 7.88 (Revised), as contained on the following pages A1-2d through A1-2i.

[Added 02-08-2013]

12. (NO TEXT)

SECTION 7.88 (Revised)
Rodent and Waterbug Pest Control

7.88.1. DESCRIPTION. The Contractor shall provide all labor, materials, plant and equipment, and incidentals required to survey and monitor rodent activity and control any infestation or outbreak of rodents and waterbugs (American cockroaches) within the project limit.

7.88.2. MATERIALS. All materials shall be approved by the New York State Department of Environmental Conservation and comply with the New York City Health Code for the intended usage.

Rodenticide weatherproof bait blocks shall be multiple dose anticoagulants such as Chlorophacinone or Diphacinone, or single feed rodenticides such as ContraMeal, ContractBait block, Quintox pellets or TalonG pellets, or an approved equivalent.

Tamper proof bait station boxes shall be designed to exclude other mammals and shall be used with poisoned bait to attract rats. Information on "tamper proof bait station boxes" is available from the NYC Bureau of Regulatory & Environmental Health Services, Pest Control Office (718-956-7103/4).

Live traps shall be of proper dimensions for trapping rats and shall not be used with poisoned bait.

Insecticide bait shall be a residual type such as phenol methyl carbamate (2%) bait or an approved equivalent.

(A) SUBMITTALS

Prior to commencement of construction activities the Contractor shall submit to the Engineer manufacturer's installation instructions for all materials required for rodent and waterbug pest control work and product data which shall include illustrations, catalog data, product characteristics, typical use, performance, and limitation criteria of all rodent and waterbug pest control materials required.

7.88.3. PERSONNEL. The Contractor shall employ two independent licensed exterminators: one to engage in survey and monitoring work to establish the level of infestation of rodents and insects and provide recommendations for specific Integrated Pest Management (IPM) actions, and one to execute the rodent and waterbug pest control work to deal with such infestations. All pest control personnel employed by each exterminator company must be supervised by an exterminator licensed in categories 7A & 8. The Contractor shall submit the names and license credentials of the two exterminator companies to the Engineer for approval prior to the commencement of any work under this section.

7.88.4. METHODS. Application and dosage of all materials shall be done in strict compliance with the manufacturer's recommendations. All surveying, monitoring, baiting, and/or live trapping work shall be performed in the presence of the Engineer, without which no payment will be made under this Section.

(A) GENERAL

The Contractor's construction activity is expected to disturb any established rodent and/or waterbug population that may exist within the project limits, possibly causing their dispersion. The Contractor shall take all appropriate action to eliminate and/or control these populations within the construction corridor: the construction corridor shall be defined as being the full width of streets under the contract and intersecting streets up to the limits of construction, from property line to property line, excluding buildings and under sidewalk building vaults.

Under the Maintenance of Site requirements for the contract, any unsanitary conditions, such as uncollected garbage or debris, resulting from the Contractor's activities which will provide food and shelter to the resident rodent population shall be corrected by the Contractor immediately after notification of such condition by the Engineer. Non-compliance shall be subject to the application of the "Nonconformance" provisions of the Item for Maintenance of Site, and no payment will be made for any additional application of rodenticide or insecticide needed to control resultant infestations.

(B) SURVEY AND MONITORING WORK

(1) Prior to Construction - The Contractor's designated survey and monitoring exterminator shall execute a survey of the project area and estimate the level of rodent (Norway rat, House mouse) infestation and the waterbug population within the construction corridor. An appropriate sample of utility manholes (sewer, electrical, telephone, etc.) and catch basins should be opened and surveyed to the satisfaction of the Engineer. Contractor shall maintain all survey records in the manner described in 7.88.6., Records and Reports.

(2) During Construction - The Contractor shall monitor the rodent activity through trapping (snap, glue traps or live traps), fecal count methods, and inspection of the conditions of all installed baits every week during construction activity or as otherwise directed by the Engineer. Contractor shall maintain all monitoring records in the manner described in 7.88.6., Records and Reports.

(C) RODENT CONTROL WORK

(1) Wetlands, Woodlands and Areas Within Seventy-five (75') feet of a Stream. In wetlands, woodlands and areas adjacent to a stream, special precautions must be taken to protect water quality and to ensure the safety of other wildlife. To prevent poisoned bait from entering streams, no poisoned bait shall be used in areas within seventy-five (75') feet of either streambank. Live traps must be used in these seventy-five (75') feet buffer zone areas and within wetland and woodland areas.

(2) Outside Wetland Areas, Woodland Areas and Beyond Seventy-five (75') feet of a Stream. In areas outside the seventy-five foot zone of protection adjacent to streams, and areas outside wetlands and woodlands, tamper proof bait stations with poisoned bait shall be established during the period of construction and any consumed or decomposed bait shall be replenished as directed.

Rodent control shall be achieved in two stages as follows:

Stage I. At least one month prior to initiation of the construction work, and periodically thereafter, live traps and/or rodenticide bait, as directed above, shall be placed at locations [e.g., burrows, utility manholes (sewer, electrical, phone, etc.), and catch basins] that are inaccessible to pets, human beings, children and other non-target species, particularly wildlife (e.g., birds) in the construction corridor. Locations of initial bait placement and quantities of bait shall be determined by the survey and monitoring exterminator's written report of his survey and monitoring results, or as otherwise directed by the Engineer.

Stage II. During Construction - Infested sites as determined by the survey and monitoring exterminator's monitoring report shall be baited and/or rebaited, and live traps shall be collected and replaced, the rates and quantities of which shall be determined by the written monitoring reports submitted weekly or as otherwise directed by the Engineer in consultation with the City's Office of Pest Control.

The baiting exterminator shall be responsible for collecting and disposing of all trapped and poisoned rodents found in live traps and tamper proof bait stations. The baiting exterminator shall also be responsible for posting and maintaining signs announcing the baiting of each particular location.

The Contractor, under his maintenance of site operations, shall be responsible for the immediate collection and disposal of any visible rodent remains found on streets or sidewalk within the project limits. Any visible remains shall be placed into double plastic bags. No more than five (5) carcasses shall be placed into each bag. Each bag shall be a minimum of 3 mils thick, black plastic. No additional payment will be made for this work.

It is anticipated that public complaints will be addressed to the Engineer's Field Office. The Contractor, where directed by the Engineer, shall take appropriate Integrated Pest Management (IPM) actions, such as baiting, trapping, proofing, etc., to remedy the source of a complaint within the next six (6) hours of normal working time, which is defined herein, for the purposes of this section, as 7 A.M. to 6 P.M. on Mondays through Saturdays.

(D) WATERBUG (AMERICAN COCKROACH) CONTROL

Infested sites (e.g., sewers) shall be baited at least 2 times per month with insecticides, or as directed by the Engineer in consultation with the exterminator monitoring the work and the City's Office of Pest Control.

7.88.5. EDUCATION & TRAINING. The Contractor shall post notices in all Construction Bulletin Boards advising workers, employees, and residents to call the Engineer's Field Office to report rodent and waterbug infestations. The Contractor shall provide and distribute literature pertaining to IPM techniques of rodent control to affected businesses and superintendents of nearby residential buildings to ensure their participation in maintaining their establishments free of unsanitary conditions, harborage removal and rodent proofing.

Prior to application of any chemicals, the Contractor shall furnish copies or sample labels for each pesticide, antidote information, and Material Data Safety Sheets (MSDS) for each chemical used.

7.88.6. RECORDS AND REPORTS.

(A) GENERAL

The Contractor shall be responsible for assigning within the construction corridor an identifying number to each manhole, catch basin, and other location where bait and/or live trap placement and/or waterbug control work is proposed by the survey and monitoring exterminator. The Contractor shall then provide that list of locations and corresponding reference numbers along with a drawing showing the locations, as a reference for the exterminator(s) performing the work, to indicate locations of bait placement and waterbug control work and rodent and waterbug activity (droppings, bait consumed, dead rodents, etc.).

(B) SURVEY AND MONITORING WORK

(1) Prior to Construction – Contractor shall submit to the Engineer, for approval, a written survey report including proposed IPM procedures, including specific materials, quantities, locations, methods, and time schedule for the implementation of the exterminating work. The written report shall also include a survey with a drawing (provided by the Contractor) marked with locations indicating all signs of rodent (Norway rat, House mouse) infestation and waterbug activity discovered during the execution of the survey indicating that rodent and waterbug pest control work is necessary.

(2) During Construction - Based on monitoring results, Contractor shall submit to the Engineer a weekly written monitoring report identifying all locations and conditions of installed bait and/or other rodent control work. The monitoring report shall also include any other recommended IPM techniques, such as baiting, trapping, proofing, etc., proposed for rodent and waterbug pest control.

The survey and monitoring exterminator shall keep a record of all rodent and waterbug infestation surveys s/he has conducted. The Contractor shall be required to submit a copy of all survey and monitoring reports to the Engineer each week, prior to payment.

(C) RODENT AND WATERBUG CONTROL WORK

The baiting exterminator shall maintain records of all locations baited along with the type and quantity of rodenticide and insecticide bait used. These records will be kept by the City Inspector. A weekly report shall be prepared, signed and certified by the approved licensed exterminator, and such reports shall be submitted to the Engineer each week, prior to payment.

7.88.7. NONCONFORMANCE. If the Contractor fails to perform as directed to control the rodent and/or waterbug population at any location within the project limits for a period of more than one week, the Engineer will correct the adverse conditions by any means he deems appropriate, including but not limited to, the use of "outside services" and shall deduct the cost of the corrective work from any monies due to the Contractor. The deducted cost of this work shall be in addition to the non-payment for rodent and waterbug pest control.

7.88.8. MEASUREMENT.

(A) RODENT INFESTATION SURVEY AND MONITORING

The quantity to be measured for payment under Item No. 7.88 AA, RODENT INFESTATION SURVEY AND MONITORING, shall be a Lump Sum measurement.

(B) RODENT BAIT STATIONS

The quantity to be measured for payment under Item No. 7.88 AB, RODENT BAIT STATIONS, shall be the number of tamper-proof rodent bait station boxes and/or live traps satisfactorily installed or reinstalled after inspection within the construction corridor, as approved by the Engineer. However, the initial baiting, and subsequent rebaiting as may be required, of any bait station will be paid for under Item 7.88 AC.

(C) BAITING OF RODENT BAIT STATIONS

The quantity to be measured for payment under Item No. 7.88 AC, BAITING OF RODENT BAIT STATIONS, shall be the number of tamper-proof rodent bait station boxes, utility manholes, catch basins, or other locations approved by the Engineer, satisfactorily baited or rebaited to replenish consumed or decomposed bait within the construction corridor, as approved by the Engineer.

(D) WATERBUG BAIT APPLICATION

The quantity to be measured for payment under Item No. 7.88 AD, WATERBUG BAIT APPLICATIONS, shall be the number of blocks satisfactorily treated with insecticide bait within the construction corridor, as approved by the Engineer. A block shall be defined as the area of street, measured between property lines, from intersection to intersection. Each rebaiting of any block shall be considered as a new block for measurement purposes.

7.88.9. PRICES TO COVER.

(A) RODENT INFESTATION SURVEY AND MONITORING

Payment will be made at the lump sum price bid for RODENT INFESTATION SURVEY AND MONITORING which shall include the cost of furnishing all the labor, materials, plant, equipment (traps, etc.), insurance, and other incidentals required, including but not limited to providing all required maintenance of traffic equipment, to perform a rodent infestation survey of the project area and then monitor the site each week for rodent activity, all in accordance with the specifications and the directions of the Engineer.

Ten (10%) percent of the lump sum price bid will be paid when the initial survey of the project area has been completed and the written survey report has been submitted to the satisfaction of the Engineer. The remainder will be paid in proportion to the percentage of contract completion.

(B) RODENT BAIT STATIONS

The Contract price bid for RODENT BAIT STATIONS shall be a unit price per each tamper proof bait station box and/ or live trap installed or reinstalled after inspection and shall cover the cost of furnishing all labor, materials, plant, equipment (bait stations, etc.), insurance, and other incidentals, including but not limited to providing all required maintenance of traffic equipment, required to control the rodent population found within the project limits in accordance with the specifications and the directions of the Engineer.

In addition to the payment for Rodent Bait Stations installed or reinstalled under this Item 7.88 AB, the Contractor will also be paid for each baiting or rebaiting, when required, of each bait station, under Item No. 7.88 AC.

(C) BAITING OF RODENT BAIT STATIONS

The Contract price bid for BAITING OF RODENT BAIT STATIONS shall be a unit price per each bait station, utility manhole, catch basin or other location approved by the Engineer satisfactorily baited or rebaited, when required, and shall cover the cost of furnishing all labor, materials, plant, equipment (bait), insurance, and other incidentals, in accordance with the specifications and directions of the Engineer. Installation or resetting of the bait station will be paid for under Item 7.88 AB.

(D) WATERBUG BAIT APPLICATION

The Contract price bid for WATERBUG BAIT APPLICATION shall be a unit price per block treated by the exterminator and shall include the cost of furnishing all the labor, materials, plant, equipment (bait, etc.), insurance, and other incidentals, including but not limited to providing all required maintenance of traffic equipment, necessary to control the waterbug population found within the project limits for the duration of the contract in accordance with the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
7.88 AA	RODENT INFESTATION SURVEY AND MONITORING	L.S.
7.88 AB	RODENT BAIT STATIONS	EACH
7.88 AC	BAITING OF RODENT BAIT STATIONS	EACH
7.88 AD	WATERBUG BAIT APPLICATION	BLOCK

[Added 05-24-2013]

13. Refer to Page 366, **Subsection 6.40.2.(C)(c)(1)(m) Software Requirements**, as modified by Article 1 on page A1-2;
Delete the text under **Subsection (m)**, in its entirety;
Substitute the following revised text:

"(m) **Software Requirements:** Microsoft Windows 7 Professional SP1, 32 bit; Microsoft Office Professional 2010; Microsoft Project 2010; Adobe Acrobat reader; Anti-Virus software package with 2 year updates subscription; and, either Auto Cad LT or Microsoft Visio Standard Edition, as directed by the Engineer."

[Added 09-04-2013]

14. Refer to Page 384, the end of **Section 6.44 - White and Yellow Thermoplastic Reflectorized Pavement Markings**;
Insert new **SECTION 6.44 PO**, after **Section 6.44**, as contained on the following pages A1-2k through A1-2m.

[Added 02-10-2014]

15. Refer to Pages 393 and 394, **SECTION 6.52 - Uniformed Full-Time Flagperson**;
Delete **Section 6.52** on pages 393 and 394, but do not delete examples on pages 395 and 396;
Substitute **SECTION 6.52 CG**, as contained on the following pages A1-2n and A1-2o.

**SECTION 6.44 PO
Lane Pavement Overlay**

6.44PO.1. DESCRIPTION. This section describes the furnishing and application of an approved Green Asphalt Pavement Color Scheme along designated bicycle lanes and Brick-Red Asphalt Pavement Color Scheme matching Quest's StreetBondCL Terracotta color along designated Select Bus Service (SBS) lanes, as indicated in the Contract Drawings or as directed by the Engineer.

6.44PO.2. REFERENCES.

- A. ASTM D-4541 Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Tester.
- B. ASTM D-4060 Test Method for Abrasion Resistance of Organic Coatings by the Taber Abrasion.
- C. ASTM D-522-93A Standard Test Method for Mandrel Bend Test of Attached Organic Coatings.
- D. ASTM G-155 QUV Accelerated Weathering Environment. Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials.
- E. ASTM D-2486 MEK rub test for chemical resistance.
- F. ASTM D-570 Standard Test Method for water absorption of plastics.
- G. ASTM E-303 British Pendulum test for friction.
- H. EPA 24 ASTM D3960-05 Volatile Organic Compounds.

6.44PO.3. SUBMITTALS.

- A. A copy of the current year accreditation certificate available from the Contractor or subcontractor who will be performing this work, or written verification from the coating supplier that the Contractor or subcontractor is qualified to perform this Work.
- B. Written and published specification for the application of the selected asphalt pavement coating.
- C. Confirmation of coating color.
- D. Proof of coating performance through a Certificate of Analysis or equivalent document as provided by the Contractor or the coating supplier.

6.44PO.4. MATERIALS.

The following table outlines minimum performance properties of a typical asphalt pavement coating.

Characteristic	Test Specification	Measured result
Durability: Taber Abrasion resistance	ASTM D-4060 7 day cure, H-10 wheel (wet test)	< 5.0 g/1000
Water sensitivity	ASTM D-570 Water absorption after 9 days: Remaining absorption after 1 hour of recovery:	< 10% < 1.0%
Color stability	ASTM G-155 QUV 2,000 hours (CIE units)	New York City Bike Lane Green $\Delta E < 1.5$
Color stability	ASTM G-155 QUV 2,000 hours (CIE units)	Brick color $\Delta E < 1.5$

Flexibility: Mandrel Bend	ASTM D-522-93A Flexibility as measured by Mandrel bend 0.5mm thick sample passes 10 mm at 21°C 0.5mm thick sample passes 125mm at -18°C	
Chemical resistance	ASTM D-2486 Modified MEK scrubs 16 dry mils, number of scrubs until 50% substrate exposed	>5000
Adhesion to Asphalt	ASTM D-4541	Substrate Failure
Friction Wet	ASTM E-303 British Pendulum Tester	>55
Environmental Sensitivity	EPA 24 ASTM D-3960-05 Volatile Organic Compounds	VOC < 150

These properties shall be evidenced by Certificates of Analysis produced by an independent qualified testing facility.

Green Bicycle and Red Bus Lane Pavement Overlays furnished by the following manufacturers, or approved equivalent, are acceptable for use in this contract:

Ennis Paint, Inc.
1509 S. Kaufman Street
Ennis, TX 75119

Integrated Pavement Concepts, Inc.
102-17957 55th Avenue
Surrey, BC Canada V3S 6C4

Crafco, Inc.
420 N. Roosevelt Avenue
Chandler, AZ 85226

6.44PO.5. METHODS. The asphalt pavement coating system shall be applied to the pavement in accordance with the manufacturer's specification. In its hardened state the color shall be as specified, and as approved by the Engineer. The material shall present a marking whose color and chemical resistance will not degrade under normal exposure to calcium chloride, sodium chloride or automotive oils and fuels. Color pigments used shall remain stable under exposure to ultra violet light. A minimum of four (4) layers of coating material shall be applied to the pavement surface.

The Contractor shall be required to use the proper equipment in the application of the asphalt pavement coating, as per the recommendation of the coating supplier, and as approved by the Engineer.

Asphalt pavement must be stable, well compacted and generally in excellent condition for the application of the asphalt pavement coating to be successful. The Engineer shall make the final determination as to the suitability of the existing asphalt pavement.

The asphalt pavement surface shall be dry and free from all foreign matter, including but not limited to dirt, dust, de-icing materials, and chemical residue.

The asphalt pavement coating shall only be applied in the correct environmental conditions as instructed by the coating supplier, and as approved by the Engineer.

Refer to the instructions provided by the coating supplier regarding when the painted lane may be opened to traffic. Wait time is typically a function of the dry rate of the coating, and climate conditions.

The Engineer may, at his discretion, require the Contractor to remove all extraneous marks on the pavement made by the agents or employees of the Contractor, or made by others due to improper control or protection of the work area by the Contractor, his agents or employees. Any installation which, in the opinion of the Engineer, is not acceptable, whether by reason of poor workmanship, poor appearance, poor performance, poor materials, improper width or improper alignment, shall be reworked by the Contractor at no cost to the City. The Contractor shall replace rejected installation as directed by the Engineer, within fifteen (15) days after receiving written notification of the rejection of such completed work.

6.44PO.6. MEASUREMENT. The quantities to be measured for payment shall be the number of square yards of Lane Pavement Overlay, of each color, placed as specified to the satisfaction of the Engineer.

6.44PO.7. PRICES TO COVER. The unit prices bid per square yard of Green Bicycle Lane Pavement Overlay and Red Bus Lane Pavement Overlay shall cover the cost of all labor, materials, plant, equipment, insurance, and necessary incidentals required including, but not limited to, testing, cleaning, preparation of surfaces, and application of the lane pavement overlay materials, all in accordance with the contract plans and specifications, and as directed by the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
6.44 POG	GREEN BICYCLE LANE PAVEMENT OVERLAY	S.Y.
6.44 POR	RED BUS LANE PAVEMENT OVERLAY	S.Y.

SECTION 6.52 CG Crossing Guard

6.52CG.1. INTENT. This section describes the employment of full-time uniformed crossing guards to direct and detour traffic.

6.52CG.2. DESCRIPTION. The Contractor shall furnish an adequate number of competent crossing guards to control vehicular and pedestrian traffic when it is necessary to maintain alternating one-way traffic in one lane of a two-way roadway, and at all other locations where construction operations, construction vehicles and equipment, and temporary traffic patterns related to the construction operations require positive temporary traffic control for safe, efficient traffic operations.

6.52CG.3. METHODS. All crossing guards, whether paid for under this item or not, shall be proficient in speaking, writing and reading English and adequately trained, as approved by the Engineer, in controlling vehicular and pedestrian traffic at construction sites.

All crossing guards, whether paid for under this item or not, their apparel, hand-signaling devices, and active two-way radios shall be appropriate for use at roadway construction sites as approved by the Engineer.

Prior to the start of crossing guard operations, the Contractor shall provide to the Engineer a list of crossing guards to be used in the contract, identifying the source of crossing guard training for each individual. When requested by the Engineer, crossing guards shall demonstrate their competency in crossing guard procedures. Crossing guards not competent in controlling vehicular and pedestrian traffic procedures to the satisfaction of the Engineer shall be retrained or replaced at once. Each crossing guard paid under this item must be a full-time crossing guard. If any worker performing services under this item is also assigned the task of directing construction equipment (as per attached Example #2, worker acting as a flagperson 'A') or any laborer tasks, then such worker shall be deemed to be subject to the provisions of Labor Law §220 Prevailing Wage Schedule and will not be paid for under this Item.

6.52CG.4. MEASUREMENT. The quantity to be measured for payment shall be the number of person-hours of uniformed crossing guard service actually performed, as authorized by the Engineer. Laborers who are not full-time crossing guard will not be measured for payment as crossing guards under this or any other item. Each uniformed crossing guard shall be required to work a minimum of eight (8) hours a day and the Contractor will be given a minimum of twelve (12) hours advanced notice by the Engineer as to when to furnish a crossing guard.

6.52CG.5. PRICE TO COVER. The contract price per person-hour shall cover the cost of all labor, materials, equipment, and insurance necessary to employ a uniformed full-time crossing guard, and equip him/her with safety vests, hard hats, and signaling devices, including all other incidental costs necessary to control and detour traffic, as shown on the Contract Drawings, the Examples #1 and #2 on pages 395 and 396 (excluding worker acting as a flagperson "A" in Example #2), or as directed by the Engineer.

Payment for flagperson "A" in Example #2, shall be deemed to be included under other items of work, as appropriate.

Where there is no scheduled item for Crossing Guard, the cost of furnishing Crossing Guards as required shall be deemed included in the unit price bid for the Maintenance and Protection of Traffic item.

Payment will be made under:

Item No.	Item	Pay Unit
6.52 CG	CROSSING GUARD	PERSON-HOUR (P/HR)

[Added 02-24-2014]

16. Refer to Pages 480 and 481, Subsection 7.13.2.(B) MAINTENANCE OF STREETS, 4th paragraph, beginning with the words "The Contractor shall maintain the traveled way . . . ; Delete the 4th paragraph, in its entirety; Substitute the following text:

"The Contractor shall maintain the traveled way in such a condition and conduct operations in such a manner that snow and ice may be readily removed by others as and when necessary, and in such a manner that proper drainage is provided for the melting of snow in the banks resulting from normal plowing. However, the Contractor will not be responsible for snow or ice removal on the pavement or traveled way opened for public usage, except within the limits of the work zone(s) which may include, but is not be limited to, stairways, promenades, esplanade areas, and sidewalk, including those fronting his office and the Engineer's field office all of which will be the responsibility of the Contractor."

ATTACH TO CONTRACT DOCUMENTS

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

PROJECT ID: PS-312KR

FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES IN:

BROOKLYN

**IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET AND RYDER STREET;
RALPH AVENUE BETWEEN PRESTON COURT AND FOSTER AVENUE; AND, RALPH AVENUE
BETWEEN AVENUE L AND AVENUE K**

STATEN ISLAND

**RICHMOND TERRACE BETWEEN MORNINGSTAR ROAD AND NEWARK AVENUE; RICHMOND
TERRACE BETWEEN WINANT STREET AND MORNINGSTAR ROAD; RICHMOND TERRACE
BETWEEN GRANITE AVENUE AND WINANT STREET; RICHMOND TERRACE BETWEEN VAN
NAME AVENUE AND SIMONSON AVENUE; RICHMOND TERRACE BETWEEN VAN PELT AVENUE
AND VAN NAME AVENUE; RICHMOND TERRACE BETWEEN DE HART AVENUE AND VAN PELT
AVENUE; RICHMOND TERRACE BETWEEN BUSH AVENUE AND UNION AVENUE; RICHMOND
TERRACE BETWEEN HARBOR ROAD AND BUSH AVENUE; RICHMOND TERRACE AND MAPLE
AVENUE; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND HOUSEMAN AVENUE; AND,
CEDAR GROVE AVENUE AND EBBITS STREET;**

Together With All Work Incidental Thereto

BOROUGHS OF THE BROOKLYN AND STATEN ISLAND

ADDENDUM NO. 2

DATED: November 20, 2013

This Addendum is issued for the purpose of amending the requirements of the contract documents and is hereby made part of said contract documents to the same extent as if it was originally included therein.

The Standard Sewer Specifications of the Department of Environmental Protection (dated August 1, 2009), Sewer Design Standards of the Department of Environmental Protection (dated (September 2007) Revised January 2009), Standard Water Main Specifications of the Department of Environmental Protection (dated August 1, 2009), Water Main Standard Drawings of the Department of Environmental Protection (latest revisions), and the Standard Highway Specifications (Volumes I and II) of the Department of Transportation (dated November 1, 2010) of The City of New York, 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. AMENDMENTS TO THE STANDARD HIGHWAY SPECIFICATIONS**
- C. AMENDMENTS TO THE STANDARD SEWER SPECIFICATIONS**
- D. AMENDMENTS TO THE STANDARD WATER MAIN SPECIFICATIONS**
- E. SPECIAL PROVISIONS**

A. NOTICE TO BIDDERS

- (1) (A) The Contractor is advised that copies of the Standard Sewer Specifications (dated August 1, 2009), Sewer Design Standards (dated (September 2007) Revised January 2009), Standard Water Main Specifications (dated August 1, 2009), Specifications For Trunk Main Work (dated March 2012) and Water Main Standard Drawings (latest revisions) are available to all prospective bidders at no cost upon presentation of receipt of purchase of Bid Package at the following location:

Department of Design and Construction
Division of Infrastructure
Design Services, Specifications, 3rd Floor
30-30 Thomson Avenue
Long Island City, NY 11101

- (B) The Contractor is advised that copies of the Standard Highway Specifications (Volume I and II) (dated November 1, 2010), Standard Highway Details of Construction (latest revisions), Division of Street Lighting Specifications (latest revisions), Division of Street Lighting Standard Drawings (latest revisions), Standard Specifications for Traffic Signals (latest revisions), and Standard Drawings for Traffic Signals (latest revisions) are available to all prospective bidders for a fee at the following location:

Department of Transportation
55 Water Street, Ground Floor
New York City, NY 10041

- (2) The Contractor is notified that it is the intent of this Agency to commence work promptly after registration of the contract and to order the Contractor to commence work within two (2) months after registration.
- (3) 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.
- (4) 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.
- (5) 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.
- (6) The Contractor is advised that any City owned light poles, traffic signals, 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.
- (7) 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 Water Main Specifications of the Department of Environmental Protection (dated August 1, 2009), the Water Main Standard Drawings of the Department of Environmental Protection (latest revisions), the Specifications For Trunk Main Work (dated March 2012), and the contract drawings, shall be replaced with Bolted Split-Sleeve Restrained Coupling.

- (8) The Contractor is responsible for any damage to the existing street and traffic signal equipment, including underground conduits and the safety of both pedestrian and vehicular traffic for the duration of the contract.

Should any conduits, cables or foundations need repair due to the Contractor's negligent operations during construction, all work shall be performed according to NYCDOT Bureau of Traffic's Standard Drawings and Specifications at the sole expense of the Contractor.

It is the Contractor's responsibility to secure an approved electrical contractor to perform all traffic signal work (if any). For list of approved electrical contractors, contact Mr. Michael R. LeFosse of New York City Department of Transportation at (718) 786-2236.

- (9) Maintenance of Traffic shall be done in accordance with the New York City Department of Design and Construction "MAINTENANCE AND PROTECTION OF TRAFFIC" sketches provided (see MPT General Notes) at the end of the contract drawings. Payment for maintenance and protection of traffic work shall be made under the price bid for Item No. 6.70 - MAINTENANCE AND PROTECTION OF TRAFFIC. No separate or additional payment will be made for this maintenance and protection of traffic work.
- (10) The Contractor shall, due to the complexity of the work and the extensive and continuous bypass operations required, obtain traffic stipulation permits from OCMC for maintenance and protection of traffic prior to commencement of work at any location. The cost for acquiring these permits at all locations shall be deemed included in the price bid for Item No. 6.70 - MAINTENANCE AND PROTECTION OF TRAFFIC.

The Contractor is informed that if due to the traffic stipulation permit(s), the Contractor is required to bury bypass piping. Payment for all costs required to bury the bypass piping shall be made in accordance with **Articles 25 and 26** of the Contract. These costs shall include, full-depth saw cutting, excavation, removal and disposal of pavements; earth excavation of all materials of whatever nature encountered and their disposal in order to bury bypass piping below grade; plating and securing plates over the trench; removing of plates; backfilling and compaction of trench; and, restoring the roadway to match the existing pavement, all in accordance with the standards and specification and as directed by the Engineer.

- (11) The Contractor is notified that it will be the Contractor's responsibility to locate and verify the existing manholes shown on the contract drawings and the as built drawing. The City cannot guarantee the accuracy of the exact locations of the existing manholes. Any buried manholes shall be excavated and brought up to the existing street grade. Where existing manhole frames and covers are buried, damaged or not standard they shall be replaced with new manhole frames and covers and raised to existing street grade. Payment for this work shall be made under the price bid for Item No. 51.23RF - REPLACEMENT OF EXISTING MANHOLE FRAME AND COVER.

Where buried manholes are excavated and have no manhole frames and covers but are covered by a slab, the Contractor shall remove the slab and restore the manhole shafts and frames and covers as directed by the Engineer. Payment for the cost of any labor, materials, equipment, etc. required to perform this work for which there are no bid items shall be made in accordance with **Articles 25 and 26** of the Contract.

- (12) The Contractor is informed that for the purpose of computing the thickness of the liner, the Contractor shall assume the elevation of water table to be five (5) feet below the street surface.
- (13) The Project Sign as per **New York City Department of Transportation (NYCDOT) Standard Highway Specifications Subsection 1.06.46 - Project Sign** will not be required on this contract. However, the Contractor shall be required to provide Temporary Notification Signs in accordance with **New York City Department of Transportation (NYCDOT) Standard Highway Specifications Subsection 1.06.46A - Temporary Notification Signs**.

(14) The Contractor is notified that Bid Schedule Item No. DSS014C - ALLOWANCE FOR EXTRA WORK ON ARTERIAL HIGHWAYS is for extra work that may be performed on arterial highways, as defined below in this Article 14, as required by the New York State Department of Transportation (NYSDOT) and the Engineer.

(A) ALLOWANCE FOR EXTRA WORK ON ARTERIAL HIGHWAYS (Bid Schedule Item No. DSS014C): The Contractor may be required by the New York State Department of Transportation (NYSDOT) and the Engineer to perform the following extra work on arterial highways:

- (1) apply for separate permits for working within arterial highways;
- (2) (a) prepare detailed Maintenance and Protection of Traffic (MPT) drawings for working within arterial highways. (Showing placement of Barrels, Barrels with flashing lights tapered to a distance of one (1) mile in some cases, Variable Message Sign Boards, Arrow Boards, Shock Absorber Trucks, Jersey Barriers protected with sand-filled Barrels, etc.. (Note: Barrels under this item are for the exclusive use in arterial highways and not for use on City streets.);
- (b) cost of Maintenance and Protection of Traffic for working within arterial highways. (Note: Cost of maintenance and protection of traffic under this item is for maintenance and protection of traffic on arterial highways and not for cost of maintenance and protection of traffic within City streets);
- (3) extra cost for night work or on Saturday, Sunday or holidays as ordered by the NYSDOT for working within arterial highways;
- (4) providing flood lights when working within arterial highways; and,
- (5) cleaning of existing catch basins within arterial highways and disposal of material. (Note: Cleaning of existing catch basins under this item is for cleaning of catch basins exclusively on arterial highways and not for existing catch basins within City streets.)

(B) Payment for Bid Schedule Item No. DSS014C - ALLOWANCE FOR EXTRA WORK ON ARTERIAL HIGHWAYS, will be made for the cost of performing extra work on arterial highways, as defined above in this Article 14, required by the New York State Department of Transportation (NYSDOT) and the Engineer. Such extra work shall be paid for under this item and evaluated in accordance with the requirements of **Article 26** of the Standard Construction Contract. The total estimated cost of this item is the "Fixed Sum" amount shown for this item in the Bid Schedule and it shall not be varied in the bid. No guarantee is given that this allowance item will in fact be required under 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 on arterial highways by the Contractor, as ordered by the NYSDOT and the Engineer.

(15) The Contractor will be required to prepare and submit "**As Built**" sewer record drawings to the Engineer for approval, at the completion of each rehabilitation. Drawings submitted at the completion of the entire contract after all rehabilitations shall not be accepted. Approved "**As Built**" drawings shall be delivered to the Department of Environmental Protection, Chief of Emergency Construction, 59-17 Junction Boulevard, 6th Floor - High Rise, Corona, New York, 11368, Tel. No. (718) 227-1868. The following guideline is provided for the preparation of "**As Built**" sewer record drawings:

(A) Drawings shall be prepared for each individual unrelated location. The drawings shall be submitted in CADD format on CD's along with a plotted Mylar for each location drawing. The drawings on CD's and the plotted Mylar's shall be legal size (8-1/2" x 14"). The Mylar shall be 3-mil in thickness.

(B) The "**As Built**" drawings shall conform to Department of Environmental Protection (DEP) Emergency Construction Drawings (ECD). A sample copy of the ECD may be obtained at the above office together with DEP guidelines. These DEP guidelines are summarized below:

- (1) Drawings shall consist of the same legend and layout of title boxes shown on the sample ECD drawing.
- (2) Drawings shall consist of a location plan view on one sheet. The location plan view shall be drawn Not-To-Scale.

- (3) Drawings shall contain a note making reference to the datum used. (Datum used shall be that of the Borough where the sewer is located.)
- (4) Each plotted Mylar drawing shall contain the signature and stamp of the Contractor's NYS Professional Engineer/Registered Architect.
- (5) The location plan view shall include:
 - (a) street name and two (2) crossing streets or distance from;
 - (b) north arrow;
 - (c) property lines and widths;
 - (d) curb lines and widths;
 - (e) sewers, manholes, catch basins, connections (No horizontal bends allowed on sewer lines);
 - (f) sewer sizes, materials (ESVP, RCP, DIP, etc.), and types (New, Existing, Sanitary, Storm, Combined, etc.);
 - (g) sewer length (between centerlines of manholes);
 - (h) sewer flow direction;
 - (i) offsets of sewer lines or extensions from property lines (not curb lines);
 - (j) foundations (concrete cradle, stone ballast, piles, etc.);
 - (k) manholes types (Precast, Concrete, Brick, A-1, A-2, etc.);
 - (l) manhole elevations (both rim and invert);
 - (m) manhole stationing along installed sewers;
 - (n) catch basins types (Type 1, Type 2, etc.);
 - (o) catch basin connections;
 - (p) show actual number of manholes and catch basins;
 - (q) house connection spurs (stations and locations);
 - (r) address of house connections (new connections and reconnections);
 - (s) house connection information at curb (station, length, depth and offset from the curb);
 - (t) details of non-standard structures or appurtenances constructed;
 - (u) location of all existing and installed offset distances from property lines;
 - (v) for shotcreted sewers (thickness and reinforcement of shotcreting); and
 - (w) all appropriate notes.
- (6) Examples of notes that can be used are as follows:
 - (a) Unless otherwise noted, all house connections are 6" ESVP;
 - (b) Unless otherwise noted, all catch basins are Standard Type 1;
 - (c) Unless otherwise noted, all new curb connections are at a depth of approximately 8-feet at the curb and are 2-feet inside the curb line;
 - (d) Unless otherwise noted, all built manholes are brick;
 - (e) Unless otherwise noted, all catch basin connections are 12" DIP on crushed stone;
 - (f) unless otherwise noted, all ESVP sewers are installed on 6" concrete cradle;
 - (g) Pipe lengths are measured from inside face of manhole to inside face of manhole.

(C) The cost of preparing and submitting "As Built" approved drawings shall be deemed included in the prices bid for all scheduled bid items in the contract. No separate or additional payment will be made for this work.

- (16) The Contractor is notified that the fuel cost per gallon used in the formula under **Sub-Article 26.2.8** of the Standard Construction Contract for **Extra Work** will be derived from the fuel price index for the United States East Coast published weekly by the United States Energy Information Administration ("USEIA"), and available on its website at <http://www.eia.gov/petroleum/gasdiesel/>. The USEIA published cost per gallon for the applicable fuel on the East Coast for the week in which the first day of each calendar quarter during the contract term occurs (i.e., January 1st, April 1st, July 1st and September 1st) will be used in the reimbursement formula for all **Extra Work** invoiced that was performed during that calendar quarter. Should the USEIA stop publishing this fuel price index, the fuel cost per gallon will be determined by reference to a substitute index to be agreed upon by the Contractor and the City.

B. AMENDMENTS TO THE STANDARD HIGHWAY SPECIFICATIONS

(NO TEXT)

C. AMENDMENTS TO THE STANDARD SEWER SPECIFICATIONS

- (1) **Refer** to **Subsection 1.06.3 - Hours Of Work**, Page I-4:
Add the following to **Subsection 1.06.3**:

- (A) **HOLIDAY CONSTRUCTION EMBARGO** - A special Holiday Construction Embargo shall be in effect on the Friday of the week preceding Thanksgiving Day week from 6:00 AM to 11:59 PM and again from the Monday of Thanksgiving Day week from 6:00 AM through January 2, at 11:59 PM. Roadway and sidewalk construction activities will be restricted during the embargo period on the streets listed below*.

Any permits issued prior to the date of this notice, for work during this embargo period on the streets listed below which do not already have the permit stipulation "410" are hereby suspended for the period noted above. All permittees must comply with this embargo unless a special waiver is granted by OCMC. Waiver requests must be filed at least thirteen (13) days before Thanksgiving Day, in the Permit Office by filing a "Request for Roadway/Sidewalk Permits During Embargo Periods" and submitting supporting documentation. Waiver requests should only be submitted for critical reasons for a specific project. If a waiver is granted, the applicant will be notified so they can apply for the approved permits. Waivers **are not** required for ongoing Building Construction Activity Permits which already include the "410" permit stipulation. Waiver request forms may be obtained at any Permit Office or on the Department of Transportation's website at:

<http://www.nyc.gov/html/dot/downloads/pdf/holidayembapp.pdf>

Prior to this embargo period all necessary measures must be taken so that all roadways and sidewalks are in proper condition to allow for the expeditious and safe movement of vehicular, bicycle and pedestrian traffic. Tool carts, cable reels, containers, and material stored on roadways must be removed during the embargo period.

The opening of utility access covers is prohibited on any of the streets noted below between the hours of 6:00 AM and midnight unless the utility or contractor files for an Emergency Authorization Number as required by section 2-07 of the Department of Transportation's Highway Rules. The planned opening of utility access covers may occur during the hours of 12:01 AM and 5:59 AM where no authorization number is required.

Temporary restoration of the streets and sidewalks and removal thereof, if required for the Holiday Embargo period, will be paid for under the appropriate scheduled items.

No extension of time due to the shutdown period will be granted to the Contractor for completion of the work.

* **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>**

- (2) **Refer** to **Subsection 1.06.20 - Contractor To Notify City Departments**, Page I-12:
Add the following to **Subsection 1.06.20**:

- (1) N.Y.C. D.E.P., BUREAU OF WATER AND SEWERS OPERATIONS

The Contractor shall notify Mr. James Garin, P.E., Assistant Commissioner, Engineering 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 rehabilitation work at each location.

- (2) NEW YORK CITY FIRE DEPARTMENT

The Contractor shall notify the Bureau of Fire Communications at least thirty (30) days prior to the start of reconstruction work at each location by contacting Mr. Paul Soehren, 48-34 35th Street, L.I.C., New York, 11101, at (718) 784-6561 (Brooklyn).

(3) N.Y.C. DEPARTMENT OF TRANSPORTATION

The Contractor shall notify Mr. Steve Galgano, P.E. Chief of Signal/Street Lighting Operations, 34-02 Queens Blvd., Long Island City, N.Y. 11101 at (718) 786-3550, at least seventy-two (72) hours prior to the start of rehabilitation work at each location.

(4) N.Y.C. TRANSIT AUTHORITY

- (a) The Contractor is advised that bus routes as well as bus stops, within the scope of this project may be affected during construction operations. The Contractor shall notify the Transit Authority at least two (2) weeks prior to the start of construction at each location, in order to make the necessary arrangements.

Arrangements shall be made through:

Ms. Sarah Wyss
Director Of Short Range, Bus Service Planning (SRB)
New York City Transit
2 Broadway, 17th Floor
New York, N.Y. 10004
Telephone No. (646) 252-5517
sarah.wyss@nyc.com

(3) **Refer to Subsection 1.06.27 - Salvageable Materials**, Page I-14:

Delete the paragraph starting with the words, "No salvageable material...", and ending with the words, "...from the site.", in its entirety:

Substitute the following:

Except as specified below, no salvageable material shall be returned to the New York City Department of Environmental Protection regardless of condition. It shall become the property of the Contractor for removal and disposal, by the Contractor, away from the site.

The Contractor shall salvage and deliver to a designated NYCDEP yard all Metropolitan Valves (6" thru 20") removed during construction of the contract.

(4) **Refer to Subsection 1.06.29 - Contractor To Provide For Traffic**, Page I-15:

Add the following to **Subsection 1.06.29**:

(1) Traffic Stipulations:

The Contractor shall obtain all permits and traffic requirements from the Office of Construction Mitigation and Coordination (OCMC) prior to beginning work at any location. The Contractors shall contact Mr. Joseph Noto, NYC Department of Transportation, Division of Engineering Control, 55 Water Street, 7th Floor, New York, NY 10041, at (212) 839-9621.

(5) **Refer to Section 1.08 - Miscellaneous Provisions**, Page I-19:

Delete Subsection 1.08.2 - Vendors in its entirety:

Substitute the following new **Subsection 1.08.2**:

1.08.2 VENDORS

Prior to starting work, the Contractor shall submit in writing to the Engineer the names of all vendors and manufacturers the Contractor intends to use. Unless otherwise specified in the contract documents or a written exception is granted by NYCDDC, the Contractor shall submit only one (1) vendor or manufacturer for each product that is to be incorporated in the contract. The use of multiple vendors or manufacturers to supply the same product will be prohibited, unless otherwise specified in the contract documents or a written exception is granted by NYCDDC. If the vendor or manufacturer is not approved, the Contractor will be notified to either submit another vendor or manufacturer, or have their proposed vendor or manufacturer submit a request for approval from NYCDDC. The Contractor will be prohibited from using the vendor or manufacturer until approval of the vendor or manufacturer has been acquired from NYCDDC.

- (6) **Refer** to **Section 1.08 - Miscellaneous Provisions**, Page I-20:
Add the following new **Subsection 1.08.7**:

1.08.7 SUBMITTAL OF SCHEDULE LOG

The Contractor's attention is directed to **Article 9 - Progress Schedule** of the Contract. The Contractor shall submit along with the proposed progress schedule the following: A schedule log in Excel Format (tied to the proposed progress schedule) indicating a description of and the schedule submission dates for all required submittals, shop drawings, approval requests, design mixes, reports, samples, etc., as required by the specifications and the terms of the contract.

- (7) **Refer** to **Section 2.05 - Precast Reinforced Concrete Pipe**, **Subsection 2.05.4 - Materials, Workmanship And Finish**, Page II-10:

Delete from **Subsection 2.05.4**, paragraph (A) CONCRETE in its entirety:
Substitute the following:

(A) CONCRETE - The Concrete shall comply with the requirements of **General Specification 11 - Concrete, as modified in Section 2.15**, and be a homogeneous mixture of such proportions and quality that the pipe will conform to the design and test requirements of these specifications.

- (8) **Refer** to **Section 2.15 - Concrete, Subsection 2.15.3 - Modifications**, Page II-23:

Delete from **Subsection 2.15.3, Reference Number D 3.2.1** together with its paragraphs in their entirety:

Substitute the following:

D 3.2.1 **DELETE** 3.2.1 to 3.2.9 of GS11 and **SUBSTITUTE** the following:

All concrete mix designs shall be subject to approval by DDC's Quality Assurance and Construction Safety (QACS) Bureau and in accordance with their "MIX DESIGN, LABORATORY AND PLANT APPROVAL PROTOCOL". Copies of this protocol may be obtained at the preconstruction meeting or from the Engineer. Before the Contractor begins to manufacture concrete, the Contractor shall secure DDC's QACS approval of the mix design the Contractor proposes to use.

The Contractor shall submit for this purpose a statement, in writing, of the sources of all ingredient materials, the type and brand of the cement and the number of pounds of each of the materials in a saturated surface-dry condition making up one (1) cubic yard of concrete. The range of water-cement ratios within which the concrete will be manufactured and the method of mixing to be employed shall also be stated. The mix design submittal shall include gradation of aggregates, specific gravities of ingredients, unit weight, mix proportion for each batch (a minimum of four (4) batches except in case of precast plants where one specific mix may be proposed), compressive strength test results for each mix at 7-days, 28-days (high-early strength mixes may require 6-hours,

24-hours, 3-days and shrinkage test as per the requirements), and graphical representation of strength vs. W/C projected in hours/days.

The Contractor may submit for approval concrete mixes that (within one (1) year of the contract) have been previously approved and used on other jobs with any Bureau of the Department of Environmental Protection or the Department of Design and Construction. Such submittals shall contain evidence that the concrete mix was approved within one (1) year of this contract and shall show that the concrete will be produced at the same mix plant, that the cement and admixtures are the same type (though not necessarily the same brand), that the water/cement ratio is the same and that adjustments have been made in the mix for air content, specific gravity and gradation of the aggregates.

If the Contractor elects to submit a concrete mix that was not previously approved, the Contractor shall submit the new concrete mix in accordance with Chapters 2 and 3 of General Specification 11 as modified herein.

- (9) **Refer** to **Section 2.15 - Concrete, Subsection 2.15.3 - Modifications**, Page II-26:
Add to **Subsection 2.15.3**, before **Reference Number D 8.2** the following:

D 7.3.3 **ADD** the following to Subsection 7.3.3 of GS11:

Each Portland cement concrete batching plant shall be subject to approval by DDC's Quality Assurance and Construction Safety (QACS) Bureau and in accordance with their "MIX DESIGN, LABORATORY AND PLANT APPROVAL PROTOCOL". Copies of this protocol may be obtained at the preconstruction meeting or from the Engineer. The minimum requirement for approval is that the proposed Portland cement concrete batching plant must be on the New York State Department of Transportation (NYSDOT) approved list for the current construction season.

The minimum requirement for approval of a precast concrete plant is that the proposed plant must be on the NYSDOT approved list. A waiver for this requirement may be granted by the DDC's Quality Assurance and Construction Safety (QACS) Director for special products that no NYSDOT approved plant is capable of producing.

Each Portland cement concrete batching plant shall also be subject to auditing and approval of the DDC's Director of Quality Assurance and Construction Safety (QACS). The Director of QACS may at any time discontinue the use of any previously approved equipment if nonconformance with the specifications results during the progress of the work. When the Director of QACS discontinues the use of the plant, production will not be acceptable for Department work until corrective measures satisfactory to the Director are carried out.

- (10) **Refer** to **Section 2.15 - Concrete, Subsection 2.15.3 - Modifications**, Page II-26:
Delete from **Subsection 2.15.3, Reference Number D 16.3** together with its paragraphs in their entirety:
Substitute the following:

D 16.3 Testing Service - **ADD** the following:

The Contractor shall retain the services of an independent testing laboratory to provide for the services outlined in 16.3.1.4 to 16.3.1.11 of GS11, with the exception of those tests specified herein to be performed by the Engineer and the City Retained Laboratory.

All laboratories shall be subject to approval by DDC's Quality Assurance and Construction Safety (QACS) Bureau and in accordance with their "MIX DESIGN, LABORATORY AND PLANT APPROVAL PROTOCOL". Copies of this protocol may be obtained at the pre-

construction meeting or from the Engineer. The minimum requirement for approval is that the laboratory must have the current AMRL/AASHTO R-18 accreditation in the category of service proposed and must be currently licensed by the NYC Department of Buildings (DOB).

(11) **Refer to Section 2.15 - Concrete, Subsection 2.15.3 - Modifications, Page II-26:**

Delete from **Subsection 2.15.3, Reference Number D 16.8** together with its paragraphs in their entirety:

Substitute the following:

D 16.8 Responsibilities and Duties of Contractor - **ADD** the following:

The Contractor may, if the Contractor so desires, take cylinders corresponding to those taken by the Engineer for the City Retained Laboratory. However, determination of payment will be based solely on the cylinders taken by the Engineer for the City Retained Laboratory.

CONCRETE TEST CYLINDERS

The Contractor will be responsible for safe delivery of concrete cylinders to the Department of Design and Construction Laboratory, within two (2) days after molding, where they will be properly stored and cured until the date of test, and tested by others, upon removal from the curing room. The Department of Design and Construction testing laboratory will provide the services for the curing and breaking of the test cylinders.

The Contractor shall provide empty cylinder molds and facilities for the proper care of these cylinders while on the site, and shall safeguard them against injury and protect them from the elements.

The Engineer will be responsible for the preparation, documentation and labeling of the cylinders and for notifying the Contractor, at least twenty-four (24) hours in advance, when a shipment of cylinders is ready for delivery, so that cylinders can be tested for the standard twenty-eight (28) day and seven (7) day tests. Cylinders are to be delivered by the Contractor to a designated area near 30-30 Thomson Avenue, Long Island City, New York, or where otherwise directed within the City of New York.

The Contractor shall make arrangements to protect all cylinders from damage during loading, transport to, and unloading at a Department of Design and Construction designated testing laboratory, and shall obtain a receipt for delivered cylinders, which shall be submitted to the Engineer.

(12) **Refer to Section 4.06 - Backfilling, Subsection 4.06.3 - Method Of Depositing All Backfill, Page IV-18:**

(A) **Add** the following paragraph to beginning of **Subsection 4.06.3:**

At the preconstruction meeting, the Contractor shall submit for approval a full description of the Contractor's proposed methods to be used for all backfilling operations including, but not limited to, equipment, backfill material, depth of compaction layers, and trench locations where each is to be employed. In the field, the Contractor shall be required to demonstrate that the Contractor's methods of backfilling and compaction shall obtain a minimum of ninety-five (95) percent of Standard Proctor Maximum Dry Density.

(B) **Delete** from **Subsection 4.06.3**, the fourth paragraph in its entirety:

Substitute the following:

Unless otherwise approved in writing by the Engineer, backfilling of the remainder of the trenches and excavations from a point not less than two (2) feet above the top of the sewer conduit (i.e. sewer pipes on cradles or encasements, reinforced concrete sewers, basin and house connections, culverts, etc.) to the underside of the pavement shall be progressively deposited in uniform and successive horizontal layers not exceeding twelve (12) inches in depth for the entire width of the trench or excavation and each successive layer shall be solidly compacted by mechanical tamping or other approved means so as to achieve the required density. In deep trenches defined as those requiring sheeting, the Contractor may submit to the Engineer, for approval, an alternate backfill method (i.e. jetting, deeper deposited layers not exceeding twenty-four (24) inches, etc.) for depositing and compacting the backfill from two (2) feet above the top of the sewer conduit to a plane five (5) feet below final surface elevation. However, approval of any alternate backfill method shall not relieve the Contractor from obtaining a minimum of ninety-five (95) percent of Standard Proctor Maximum Dry Density. Should the Engineer determine that the specified density is not being obtained, the area must be re-excavated and backfilled at the Contractor's own cost until the required compaction density is achieved.

(C) Delete from **Subsection 4.06.3**, the seventh paragraph in its entirety:
Substitute the following:

Backfill shall proceed simultaneously with the withdrawal of sheeting but at no time shall the withdrawal of sheeting exceed a height of six (6) inches above the deposited backfill. Withdrawal of sheeting below levels previously backfilled and compacted is prohibited.

(13) Refer to **Section 5.01 - Reinforced Concrete Sewers, Subsection 5.01.4 - Precast Reinforced Concrete Sewer**, Paragraph (C) - Details, second paragraph, first line, Page V-4:
Change the words "C789 or C850 (as required)", to "C1433":

(14) Refer to **Section 5.05C - Reconstruction Of Existing Sewers Using D.E.P. Approved Cured-In-Place-Pipe (CIPP) Lining Method, Subsection 5.05C.6 - Separate Payment**, third paragraph, second line, Page V-49
Change the word, "nine", to "eleven":

(15) Refer to Page V-65:
Add the following new **Section 5.05I**:

**SECTION 5.05I
RECONSTRUCTION OF EXISTING SEWERS USING D.E.P. APPROVED
CENTRIFUGALLY-CAST-CONCRETE-PIPE (CCCP) LINING METHOD**

5.05I.1 INTENT

It is the intent of this section to provide for the reconstruction of existing sewers by the use of a uniform high-strength factory blended cementitious layer of special mortar that cures in place to form an interior hardened, abrasion resistant and corrosion resistant liner. This cementitious layer shall be applied using a D.E.P approved centrifugally-cast-concrete-pipe (CCCP) lining method. The centrifugally-cast-concrete-pipe shall extend over the specified length in a continuous structural concrete pipe within a pipe.

5.05I.2 DESCRIPTION OF WORK

Unless otherwise specified in the contract, the Contractor shall use a Department of Environmental Protection (DEP) approved centrifugally-cast-concrete-pipe (CCCP) lining method on all existing sewers shown, specified, or ordered to be reconstructed under this contract by use of an approved centrifugally-cast-concrete-pipe (CCCP) lining method. All such work shall comply with the terms of

this specification and with the manufacturer's instructions, recommendations, specifications and standards set forth for the lining method.

During the warranty period any defects that might affect the integrity or strength of the centrifugally-cast-concrete-pipe (CCCP) liner shall be immediately repaired or replaced by the Contractor, at the Contractor's expense, pursuant to the manufacturer's instructions, recommendations, specifications and standards, and to the satisfaction of the Engineer.

The reconstruction of existing sewers using centrifugally-cast-concrete-pipe (CCCP) lining method shall be performed in strict accordance with **Subsections 5.05I.3 through 5.05I.10**, inclusively.

5.05I.3 SAFETY AND TEMPORARY LIGHTING

- (1) **SAFE ENVIRONMENT** - The Contractor shall carry out the Contractor's operations in strict accordance with all OSHA and manufacturer's safety requirements. Emphasis shall be placed upon safety requirements for entering confined spaces.

The Contractor shall erect such signs and other devices as are necessary for the safety of the work site and shall secure the site and conform all work to the safety requirements of all pertinent regulatory agencies.

The Contractor is advised that all lining work shall be carried out in full compliance with all City, State, and Federal laws, rules, and regulations regarding Air Quality and Safety.

- (2) **TEMPORARY LIGHTING** - Prior to the start of reconstruction, the Contractor shall submit the Contractor's method of providing temporary lighting within the sewer section to be lined to the Engineer for approval. The Contractor shall furnish all labor, materials, and equipment and do all work necessary to install, maintain, and eventually remove all temporary lighting.

(a) Bulb wattage shall be sufficient to adequately light the section of sewer being worked on. Bulbs shall be replaced in kind as needed. Lighting shall be intrinsically safe (explosion proof).

(b) The Contractor shall maintain the temporary lighting until such time as the Engineer inspects and approves the newly lined sewer section. Temporary lighting may be removed as soon as the Engineer approves and accepts the newly lined sewer section.

5.05I.4 FLOW BYPASSING AND SERVICE CONNECTIONS

- (1) **FLOW BYPASSING** - Prior to the start of work the Contractor will be required to submit a fluming/bypass-pumping detail in accordance with **Subsection 1.06.12 - (3) Existing Flow**. The Contractor shall provide for the diversion of flow of existing sewers at existing upstream manholes (if available) and pump the flow into an existing downstream manhole. The pumps and bypass lines shall be of adequate capacity and size to handle the flow. The proposed bypassing system shall be submitted to the Engineer for approval and no work shall commence until such approval is granted. Bypass for man entry shall require dual plugs, back up pumps and an escape plan if failure of bypass occurs.

- (2) **SERVICE CONNECTIONS** - The Contractor shall be required to determine which service connections are active and shall be responsible for controlling (or maintaining) the flow for each active service connection along the line of the sewer to be rehabilitated. Where necessary, the flow from an active service connection shall be bypassed to a manhole downstream of the proposed work by means of pumping from the trap located in the basement of the affected building. However, should such bypassing be judged unfeasible by the Engineer, the Contractor shall excavate to the service connection outside the building area (sidewalk or roadway as determined by the Engineer) and bypass the connection from this point. The pump and bypass line for each service connection shall be of adequate capacity and size to handle the flow.

Prior to the commencement of any work, the Contractor shall make all necessary investigations and prepare a plan for the controlling (or maintaining) of the flow and, where necessary, for the bypassing of active service connections. This plan shall be submitted to the Engineer for approval and no work shall commence until such approval is granted.

- (3) The Contractor shall continue to divert the flow of the existing sewer and control (or maintain) the flow for active service connections during the installation of and curing of the centrifugally-cast-concrete-pipe (CCCP) liner and during the final television inspection and digital audio-visual recording.

5.051.5 INSPECTION PRIOR TO LINING

The Contractor along with the Engineer shall perform a walk-through inspection of the existing sewer prior to reconstruction. This interior inspection shall be performed, in order to determine and locate conditions which would prevent the proper installation of the lining and to identify the location of active service connections. Where existing sewers are of a size that does not permit a walk-through inspection, the Contractor shall perform a television inspection and digital audio-visual recording of the existing sewer utilizing a radial eye camera.

5.051.6 SUBMITTALS

Prior to the start of work on each size existing sewer, the Contractor will be required to submit design calculations together with shop drawing for liner thickness to the Engineer. These design calculations shall be done in accordance with the manufacturer's design instructions, recommendations, specifications and standard.

Under no circumstances shall the finished thickness of liner be less than as follows:

- (i) For Sewer Pipe Less Than 60" In Diameter - one and one-quarter (1-1/4) inch in thickness.
- (ii) For Sewer Pipe Greater Than Or Equal To 60" In Diameter - one and one-half (1-1/2) inch in thickness.

Note: Diameter means diameter of circular pipe, and equivalent circular diameter for other shape sewers.

The liner thickness shall be designed to adequately resist all external pressures and conditions required by the Engineer.

5.051.7 SEWER CLEANING, REMOVAL OF OBSTRUCTIONS AND CORROSION PROTECTION APPLICATION

Prior to performing the work of repairing and reconstructing the existing sewers the Contractor shall perform the following:

- (1) Thoroughly clean the existing sewers and remove obstructions in accordance with **Section 5.18C - Cleaning Of Existing Sewers**.
- (2) Apply a Con^{mic}Shield[®] corrosion protection rinse to all surfaces of the existing sewer to ensure the complete kill of acid producing bacterial. The corrosion resistant rinse shall be applied in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

5.051.8 SEWER REPAIR

Upon completion of the cleaning of the existing sewers to be reconstructed the Contractor shall inform the Engineer of such and shall perform no further work until such time that the Engineer inspects and notifies the Contractor, in writing within twenty-four (24) hours, that the sewers have been cleaned to the satisfaction of the Engineer. At the time of this inspection the Engineer shall inform the Contractor of all areas (including those shown on the plans) that require sewer repair. If it is determined by the Engineer that the sewer has been damaged and/or that injection grouting is required to fill surrounding voids and/or stop infiltration/exfiltration of the existing sewer to be reconstructed, the Contractor shall

perform the sewer repair work in accordance with **Section 5.20A - Portland Cement (Type V) - Injection Grouting** and **Section 5.20C - Mortar For Sewer/Manhole Repair Work (For CCCP Lining Method)**.

5.05I.9 MATERIALS

(A) CCCP LINING MORTAR: Pipe lining mortar shall be PERMACAST® PL-8000 as manufactured by AP/M PERMAFORM available from the following installers: (i) Arold Construction Company Incorporated, 51 Powder Mill Bridge Road, Kingston, NY 12401-7210, Contact: Ryan Arold, Tel. No. 845-336-8753, rarold@aroldcompanies.com ; (ii) Centrifugal Lining Incorporated, 1201 Edgely Road, Levittown, PA 19057-4801, Contact: Scott Benner, Tel. No. 215-269-6180, sbenner@centlining.com ; (iii) Truax Corporation, PO Box 2186, Plainville, MA 02762, Contact: Lloyd Truax, Tel. No. 508-316-0979, truaxcorporation@comcast.net ; or approved equal.

PERMACAST® PL-8000 comes in dry mix packages of 50-lbs each. PERMACAST® PL-8000 is a high-strength, high build, abrasion resistant, and; with the additive Con^{mic}Shield®; corrosion resistant mortar. The hardened liner is dense and highly impermeable. The composition also possesses excellent thin-section toughness, high modulus of elasticity and self-bonding. Graded quartz sands are used to enhance particle packing and further improve the fluidity and hardened density. Fibers are added as an aid to casting, for increased cohesion and to enhance flexural strength.

Physical Properties:

Set Time At 70°F ASTM C403:

Initial Set -----approx. 150-minutes

Final Set -----approx. 240-minutes

Flexural Strength ASTM C293:

24-hours ----- min. 600-psi

28-days ----- min. 1,080-psi

Compressive Strength ASTM C109:

24-hours ----- 3,000-psi

28-days ----- 8,000-psi

Tensile Strength ASTM C496 ----- 682-psi

Slant Shear Bond ASTM C882 ----- 2,100-psi

Modulus Of Elasticity ASTM C469:

28-days ----- min. 3.56 x 10⁶-psi

Freeze Thaw ASTM C666 ----- 300 Cycle Pass

Rapid Chloride Permeability ASTM C1202 ----- <550 Coulombs

(B) REPAIR MATERIAL: Repair material shall be as specified in **Section 5.20C - Mortar For Sewer/Manhole Repair Work (For CCCP Lining Method)**.

(C) Water shall be fresh, clean and free from oils, acids, alkali or organic matter.

(D) CORROSION PROTECTION: Corrosion protection shall be Con^{mic}Shield® as manufactured by AP/M PERMAFORM available from the distributors/installers specified above. Con^{mic}Shield® is a liquid that can be used both as a rinse applied to existing concrete sewer surfaces, and as an additive to PERMACAST® PL-8000. It is used as a rinse over concrete and as additive to mortar for the prevention of Microbiologically Induced Corrosion (MIC) common to concrete pipe and structures in sewer environments. As an additive, it permeates the mortar during the mixing phase and molecularly bonds to the cement particles to create an environment incompatible to the growth of harmful bacteria. Con^{mic}Shield® becomes an integrated component of the hardened binder. It cannot wash off, delaminate or lose its effectiveness from wear. As bacterial growth is neutralized, hydrogen sulfide gases from raw sewerage cannot be metabolized and converted into sulfuric acid in concentrations sufficient to damage the impregnated concrete and mortar.

(E) CURING COMPOUND: Curing Compound shall be Cor+Gard Cure 'N Seal as manufactured by AP/M PERMAFORM available from the distributors/installers specified above.

5.051.10 RECONSTRUCTION OF EXISTING SEWERS (CENTRIFUGALLY-CAST-CONCRETE-PIPE (CCCP) LINING METHOD)

(A) DESCRIPTION - The Contractor will be responsible for the reconstruction of existing sewers via the use of centrifugally-cast-concrete-pipe (CCCP) lining method.

(B) MIXING

- (1) CCCP LINING MORTAR: PERMACAST® PL-8000 pipe lining mortar shall be mixed by combining 50-lbs packaged dry mix with potable water in an amount as specified by the manufacturer (7 to 8-pints @ 50°-70°F). The mortar shall be mixed with a high-speed shear mixer until proper consistency is obtained. Continue to agitate the mortar to prevent thickening beyond desired fluidity. The working time of the mix is approximately thirty (30) minutes depending on conditions.

The water content shall be as specified by the manufacturer and approved by the Engineer. Mortar can achieve consistencies ranging from plastic to modeling clay.

- (2) Con^{mic}Shield® additive shall be added to the PERMACAST® PL-8000 pipe lining mortar mix above in the amounts prescribed by the manufacturer for Microbiologically Induced Corrosion (MIC) protection. No other additives shall be used unless approved by the manufacturer and the Engineer.

(C) EQUIPMENT

- (1) Mortar mixers, compressors, pumps, hoses, tools, etc. shall be standard commercial models as specified by the manufacturer. Mixing equipment shall be capable of thoroughly mixing the materials in sufficient quantity to maintain placing continuity. Compressor shall be of sufficient capacity to maintain, without interruption, the pressures and volume necessary for delivery.
- (2) The high-speed, rotating applicator device shall be as specified by the manufacturer in order to provide a densely compacted liner of uniform thickness and thorough coverage.
- (3) The Contractor shall prepare and inspect all necessary tools and any spare parts that are required for equipment that suffer frequent breakdowns, and shall ensure that said tools and spare parts are available at the site. Supporting equipment, such as pumps and generators, shall be provided at the site in the event there is a fluid surge and pumping is required on an emergency basis. The Contractor shall also prepare and make operable all necessary communication equipment for the Contractor's field crew.

(D) CCCP LINING MORTAR CONTRACTOR - The Contractor is required to use one of the following installers to perform the centrifugally-cast-concrete-pipe (CCCP) lining work: (i) Arold Construction Company Incorporated, 51 Powder Mill Bridge Road, Kingston, NY 12401-7210, Contact: Ryan Arold, Tel. No. 845-336-8753, rarold@aroldcompanies.com ; (ii) Centrifugal Lining Incorporated, 1201 Edgely Road, Levittown, PA 19057-4801, Contact: Scott Benner, Tel. No. 215-269-6180, sbenner@centlining.com ; (iii) Truax Corporation, PO Box 2186, Plainville MA 02762, Contact: Lloyd Truax, Tel. No. 508-316-0979, truaxcorporation@comcast.net ; or approved equal.

(E) CONNECTIONS TO HYDRANTS - The Contractor shall strictly comply with the New York State Department of Health's Public Water Supply Guide on "CROSS-CONNECTION CONTROL". In order to insure strict compliance with the State Guide, all connections to Hydrants shall be provided with an approved and certified "REDUCED PRESSURE ZONE BACKFLOW PREVENTER" in accordance with the Department's Standards and as directed by the Engineer. The cost for all labor, materials and equipment required to complete this work shall be deemed included in the prices bid for all items of this contract.

(F) MEANS AND METHODS - Upon completion of the cleaning, obstruction removal, corrosion protection application and repair of the existing sewers to be reconstructed using centrifugally-cast-

concrete-pipe (CCCP) lining method, the Contractor shall inform the Engineer of such and shall perform no further work until such time that the Engineer inspects and notifies the Contractor, in writing, that the sewers have been cleaned, corrosion protected, repaired and that the quality of the substrate is to the satisfaction of the Engineer and that the Contractor may proceed with the centrifugally-cast-concrete-pipe (CCCP) lining installation. After such notification, the Contractor shall proceed with the centrifugally-cast-concrete-pipe (CCCP) lining installation in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

Four (4) small plastic depth gauges shall be attached as a ring around the inner surface of the sewer, one (1) at the crown, one (1) at the invert, and one (1) at each spring line. The depth gauges shall show the thickness as designed or specified. The gauge rings shall be placed five (5) linear feet apart parallel to the center line of the sewer. The preset depth gauge guides shall be positioned just below the designed or specified finished cementitious layer. The gauges will be left in place within the cementitious layer. The Contractor shall be required to hit the approved designed or specified liner thickness. Additional material thicknesses applied by the Contractor will be at the Contractor's own expense. No separate or additional payment will be made for any extra material thicknesses applied above the approved designed or specified liner thickness.

The Contractor shall furnish all labor, materials, and equipment and shall do all work necessary to place the cementitious layer over the entire surface area of the interior of the existing sewer, including the invert, walls and crown, in accordance with the plans and specifications, the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

(G) APPLICATION CONDITIONS - The cementitious layer can be applied over a damp substrate. However, pools of water should be removed before start of application of cementitious layer.

The mortar shall not be applied when ambient and substrate temperatures are 100°F and above. Shade the material and prepared surfaces to keep them cool. To extend work time, mix the material with cool water or ice-cooled water. The substrate shall be in a saturated surface-dry (SSD) condition before application begins.

The mortar shall not be applied when ambient and surface temperatures are expected to fall below 45°F within 72-hours of placement. Both ambient and surface temperatures must be at least 45°F at time of placement. For applying mortar at temperatures below 45°F, the material, water and substrate shall be warmed to above a temperature of 45°F. The area when heating shall be properly ventilated. The newly installed liner shall be protected from freezing.

(H) APPLICATION - The rotating casting applicator shall be positioned within the center of the sewer and pumping of the mixed mortar shall then commence. As the mortar begins to centrifugally cast evenly around the interior, the applicator head shall be retrieved at the best speed for applying the thickness that has been selected. If flows are interrupted, simply arrest the retrieval of the applicator head until flows are restored. Retrieval speed can easily be varied to create the required thicknesses.

Built-in bonding agents allow for additional layers to be applied at any time.

The pressure application from the centrifugal casting of the mortar produces a finely textured surface that requires no additional troweling or finishing.

(I) SERVICE CONNECTIONS - After the liner has been installed, the Contractor shall clean all existing active service connections and those inactive connections ordered by the Engineer of lining material that may hinder or block flow from the service connection.

(J) CURING - After the new lining is installed and initial set is complete as determined by the Engineer, the Contractor shall apply Cor+Gard Cure 'N Seal curing compound to the interior surface of the newly installed lining. The curing compound shall be applied in accordance with the manufacturer's instructions, recommendations, specifications and standards. All fluming and/or bypass pumping shall be maintained during the curing process.

(K) TESTING - TEST CUBES

Determination of the strength of the mortar will be based on the average strength of test cubes made in the manner hereinafter described. The test cubes shall be 4" x 4" x 4". A minimum of one (1) set of two (2) test cubes will be required at the start of the project for the first three hundred (300) linear feet of sewer lined with a minimum of one (1) additional set made for every additional three hundred (300) linear feet of sewer lined. During the progress of the reconstruction, the Engineer will have test cubes made to determine whether the mortar being produced complies with the contract requirements. Test cubes will be made and stored in accordance with ASTM C31 and tested in accordance with ASTM C39, except as otherwise modified by the Engineer. Each test will consist of two (2) cubes at twenty-eight (28) days.

Test cubes shall be made at the point of mortar deposit and shall be representative of the batch from which they are taken. The Contractor under the Engineer's supervision shall provide the necessary labor and facilities required to make, store and care for the test cubes. They shall be safeguarded against injury and protected from the elements.

The Engineer will be responsible for the preparation, documentation and labeling of the test cubes and for notifying the Contractor, at least twenty-four (24) hours in advance, when a shipment of test cubes is ready for delivery, so that cubes can be tested for the standard twenty-eight (28) day tests. Test cubes shall be transported to the testing laboratory when directed by the Engineer.

The Contractor shall make arrangements to protect all cubes from damage during loading, transport to, and unloading at a Department of Design and Construction designated testing laboratory, and shall obtain a receipt for delivered test cubes, which shall be submitted to the Engineer.

The Total Minimum Number of Test Cube Sets to be taken by the Engineer shall be determined as follows:

- (a) A minimum of One (1) Test cube set shall be taken at the start of the project for the first Three Hundred (300) Linear Feet of Sewer Section Lined;
- (b) Then a minimum of One (1) Test cube set shall be taken for every additional Three Hundred (300) Linear Feet of Sewer Section Lined.

All tests will be made by the Department of Design and Construction designated testing laboratory. The Contractor may, if the Contractor so desires, take test cubes corresponding to those taken for the Department of Design and Construction designated testing laboratory. However, determination of payment will be based solely on the test cubes taken for the Department of Design and Construction designated testing laboratory. The sampling shall be based on the quantities indicated hereinafter.

Mortar shall have a minimum compressive strength of eight thousand (8,000) pounds per square inch at the end of twenty-eight (28) days. The Contractor shall be considered to have met the requirements of the specifications for mortar placed in the section of sewer, when the average strength of all twenty-eight (28) day test cubes taken for that section of sewer is equal to or better than the eight thousand (8,000) pound per square inch requirement.

The strength of mortar placed in each section of sewer will be recorded as the average strength of all twenty-eight (28) day test cubes taken for that section of sewer, determined in accordance with the following conditions: Test cubes exhibiting strengths in excess of one hundred fifteen (115) percent of the specified minimum strength will be considered to have only a strength of one hundred fifteen (115) percent of the specified minimum strength in determining the average strength of the mortar. The cubes exhibiting strengths below the specified minimum strength will be considered as having the exhibited strength in determining the average strength of the mortar.

(L) FINAL TELEVISION INSPECTION AND RECORDING - Upon completion of the work the Contractor shall perform a final television inspection and digital audio-visual recording of the newly

lined sewer in accordance with **Section 5.17** of the specifications, with the exception that all sewers regardless of size (including those larger than fifty-four (54) inches in their least inside dimension) shall receive this final television inspection and digital audio-visual recording. Payment for final television inspection and digital audio-visual recording shall be made under Item No. 53.11DR - TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS.

Should the results of this final inspection reveal any defects, as determined by the Engineer, the Contractor will be required to repair or replace these defects as ordered by the Engineer and in accordance with the manufacturer's instructions, recommendations, specifications and standards. Such repair work shall be done at the sole expense of the Contractor.

5.05I.11 MEASUREMENT

The quantity to be measured for payment shall be the number of linear feet of existing sewer reconstructed to the satisfaction of the Engineer, as shown, specified or required, measured horizontally along the centerline of the existing sewer from inside face of manhole to inside face of manhole.

The quantity to be measured for payment per linear foot for reconstruction of multiple barrel sewers shall be measured once for all barrels within that linear section. Measurement for payment will not be made for each multiple barrel reconstructed.

5.05I.12 PRICE TO COVER

The contract price for "RECONSTRUCTION OF EXISTING SEWERS USING D.E.P. APPROVED CENTRIFUGALLY-CAST-CONCRETE-PIPE (CCCP) LINING METHOD" shall be the unit price bid per linear foot for each size, shape, kind and type of existing sewer and shall cover the cost of all labor, materials, plant, equipment, samples and tests required or necessary to reconstruct the existing sewer as specified herein, including the taking, storing and protecting of test cubes; all submittals; fluming and/or diversion of the flow in the existing sewer; applying Con^{mic}Shield[®] corrosion protection rinse; walk-through inspection or television inspection prior to lining; cleaning of lining material from active and inactive service connection; applying Cor+Gard Cure 'N Seal curing compound; and furnishing and installing all other items necessary to complete this work and do all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

The contract price hereunder shall also include the cost of all labor and materials required and necessary to provide for the safe environment and temporary lighting as specified herein.

The contract price per linear foot for reconstruction of multiple barrel sewers shall be made once for all barrels within that linear foot section. Payment will not be made for each multiple barrel reconstructed.

5.05I.13 SEPARATE PAYMENT

Payment for this final television inspection will be made under Item No. 53.11DR - TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS.

5.05I.14 DETERMINATION OF PAYMENT

When the average strength of the test cubes equals or exceeds eight thousand (8,000) pounds per square inch, the appropriate mortar incorporated in the existing sewer will be paid for at the contract price bid.

When the average strength of the test cubes is less than eight thousand (8,000) pounds per square inch, the appropriate mortar incorporated in the existing sewer will be paid for at a price which will have the same proportion to a price of five hundred (\$500.00) dollars per cubic yard for such mortar that the deficient strength bears to eight thousand (8,000) pounds per square inch. Such difference in cost shall be deducted from the contract price bid. When the average strength of the test cubes is six

thousand four hundred (6,400) pounds per square inch or less, the Contractor may be required, at the order of the Engineer, to remove the defective mortar or portions thereof and replace it with mortar in full compliance with the specifications at no extra cost to the City.

In the event the Contractor should take exception to the results as determined by test cubes taken for the Department of Design and Construction designated testing laboratory, the Contractor may, at the Contractor's own cost, elect to take core borings of the completed mortar work at places to be designated by the Engineer. Such core borings will be tested by the Department of Design and Construction designated testing laboratory. The Contractor, at the Contractor's own expense, may elect to take corresponding core borings adjacent to the Department's core borings and employ a recognized testing laboratory to make comprehensive tests. All such tests shall be done in the presence of a representative of the Department of Design and Construction designated testing laboratory. The core borings must be delivered to the laboratories by the Contractor immediately so that compressive tests can be performed as close to the twenty-eight (28) day compressive test requirement as is possible. The result of the test of each Contractor's corresponding core boring will be averaged with that of the adjacent Department's core boring, and the resulting averages will be used to determine the average strength of the mortar in lieu of the comparable test cube results. Determination of payment based on the average strength of core borings will be made according to the method specified herein.

Core borings having strengths exceeding one hundred twenty-five (125) percent of the specified minimum strength will be considered to have a strength of only one hundred twenty-five (125) percent of the specified minimum strength in determining the average strength of the mortar. Core borings exhibiting strengths below the specified minimum strength will be considered as having the exhibited strength in determining the average strength of the mortar.

Where cores have been removed within the limits of this contract, the Contractor shall refill core openings in accordance with the manufacturer's instructions, recommendations, specifications and standards at no cost to the City.

Payment for Reconstruction Of Existing Sewers Using D.E.P Approved Centrifugally-Cast-Concrete-Pipe (CCCP) Lining Method will be made under the Item Number as calculated below:

The Item Numbers for Reconstruction Of Existing Sewers Using D.E.P. Approved Centrifugally-Cast-Concrete-Pipe (CCCP) Lining Method have fourteen characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Reconstruction Of Existing Sewers Using D.E.P. Approved Centrifugally-Cast-Concrete-Pipe (CCCP) Lining Method:
50.76

(2) The sixth character shall define the Type of Sewer Effluent:
S - Sanitary Sewer
M - Storm Sewer
C - Combined Sewer
I - Interceptor Sewer

(3) The seventh, eighth and ninth characters shall define either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Sewers of Other Shapes (e.g. Rectangular, Arched, Elliptical, and Egg). (The seventh, eighth and ninth characters representing the unit of inches for either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Sewers of Other Shapes.) See examples below:

- 060 - 60"
- 096 - 96"
- 108 - 108"
- 120 - 120"

(4) The tenth character shall define the Shape of the Existing Sewer:

- D - Circular (Diameter)
- R - Rectangular (Single Barrel)
- B - Double Barrel Rectangular
- T - Triple Barrel Rectangular
- A - Arch-Shaped
- H - Horizontal Elliptical
- V - Vertical Elliptical
- E - Egg-Shaped

(5) The eleventh character shall define the Kind of Existing Sewer:

- B - Brick
- C - Concrete

(6) The twelfth, thirteenth and fourteenth characters shall define either Circular and Arch-Shaped or the Height of the Sewer for Existing Sewers of Other Shapes (e.g. Rectangular, Elliptical, and Egg). (The twelfth, thirteenth and fourteenth characters representing the unit of inches for the Height of the Sewer for Existing Sewers of Other Shapes.) See examples below:

- 000 - Circular and Arch-Shaped
- 087 - 87"
- 096 - 96"
- 108 - 108"
- 120 - 120"

(7) Examples of Item Numbers together with Description and Pay Unit as provided in the Bid Schedule are provided below:

Item No.	Description	Pay Unit
50.76S054DB000	RECONSTRUCTION OF EXISTING 54" DIAMETER CIRCULAR BRICK SANITARY SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76S054DC000	RECONSTRUCTION OF EXISTING 54" DIAMETER CIRCULAR CONCRETE SANITARY SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76S051RC048	RECONSTRUCTION OF EXISTING 51"W X 48"H RECTANGULAR CONCRETE SANITARY SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76S084AB000	RECONSTRUCTION OF EXISTING 84"W ARCH-SHAPED BRICK SANITARY SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76S048VB076	RECONSTRUCTION OF EXISTING 48"W X 76"H VERTICAL ELLIPTICAL BRICK SANITARY SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76S043VC068	RECONSTRUCTION OF EXISTING 43"W X 68"H VERTICAL ELLIPTICAL CONCRETE SANITARY SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76S040EB060	RECONSTRUCTION OF EXISTING 40"W X 60"H EGG-SHAPED BRICK SANITARY SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76S045EC060	RECONSTRUCTION OF EXISTING 45"W X 60"H EGG-SHAPED CONCRETE SANITARY SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76M060DB000	RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR BRICK STORM SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76M060DC000	RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR	L.F.

	CONCRETE STORM SEWER USING D.E.P. APPROVED CCCP LINING METHOD	
50.76M060RC051	RECONSTRUCTION OF EXISTING 60"W X 51"H RECTANGULAR CONCRETE STORM SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76M108AB000	RECONSTRUCTION OF EXISTING 108"W ARCH-SHAPED BRICK STORM SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76M053VB083	RECONSTRUCTION OF EXISTING 53"W X 83"H VERTICAL ELLIPTICAL BRICK STORM SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76M058VC091	RECONSTRUCTION OF EXISTING 58"W X 91"H VERTICAL ELLIPTICAL CONCRETE STORM SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76M047EB070	RECONSTRUCTION OF EXISTING 47"W X 70"H EGG-SHAPED BRICK STORM SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76M052EC065	RECONSTRUCTION OF EXISTING 52"W X 65"H EGG-SHAPED CONCRETE STORM SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76M072BC072	RECONSTRUCTION OF EXISTING 72"W X 72"H DOUBLE BARREL RECTANGULAR CONCRETE STORM SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76M087TC060	RECONSTRUCTION OF EXISTING 87"W X 60"H TRIPLE BARREL RECTANGULAR CONCRETE STORM SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76C072DB000	RECONSTRUCTION OF EXISTING 72" DIAMETER CIRCULAR BRICK COMBINED SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76C072DC000	RECONSTRUCTION OF EXISTING 72" DIAMETER CIRCULAR CONCRETE COMBINED SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76C126RC075	RECONSTRUCTION OF EXISTING 126"W X 75"H RECTANGULAR CONCRETE COMBINED SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76C132AB000	RECONSTRUCTION OF EXISTING 132"W ARCH-SHAPED BRICK COMBINED SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76C063VB098	RECONSTRUCTION OF EXISTING 63"W X 98"H VERTICAL ELLIPTICAL BRICK COMBINED SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76C077VC121	RECONSTRUCTION OF EXISTING 77"W X 121"H VERTICAL ELLIPTICAL CONCRETE COMBINED SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76C050EB074	RECONSTRUCTION OF EXISTING 50"W X 74"H EGG-SHAPED BRICK COMBINED SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76C058EC077	RECONSTRUCTION OF EXISTING 58"W X 77"H EGG-SHAPED CONCRETE COMBINED SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76I060DC000	RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76I064RC048	RECONSTRUCTION OF EXISTING 64"W X 48"H RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.
50.76I060BC060	RECONSTRUCTION OF EXISTING 60"W X 60"H DOUBLE BARREL RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED CCCP LINING METHOD	L.F.

50.761078TC060 RECONSTRUCTION OF EXISTING 78"W X 60"H TRIPLE BARREL L.F.
RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P.
APPROVED CCCP LINING METHOD

(16) Refer to Page V-65:

Add the following new Section 5.05J:

**SECTION 5.05J
RECONSTRUCTION OF EXISTING SEWERS USING D.E.P. APPROVED
POLYMER LINING METHOD**

5.05J.1 INTENT

It is the intent of this section to provide for the reconstruction of existing sewers by the use of D.E.P. approved uniform high-strength polymer material that cures in place to form an interior hardened, impermeable, abrasion resistant and corrosion resistant liner. Polymer shall be applied using a method approved by the manufacturer and the Engineer for the specific polymer material being used for the specific pipe to be lined. The polymer lining method shall extend over the specified length in a continuous application within the pipe.

5.05J.2 DESCRIPTION OF WORK

Unless otherwise specified in the contract, the Contractor shall use a Department of Environmental Protection (DEP) approved polymer lining method on all existing sewers shown, specified, or ordered to be reconstructed under this contract by use of an approved polymer lining method. All such work shall comply with the terms of this specification and with the manufacturer's instructions, recommendations, specifications and standards set forth for the lining method.

During the warranty period any defects that might affect the integrity or strength of the polymer liner shall be immediately repaired or replaced by the Contractor, at the Contractor's expense, pursuant to the manufacturer's instructions, recommendations, specifications and standards, and to the satisfaction of the Engineer.

The reconstruction of existing sewers using polymer lining method shall be performed in strict accordance with **Subsections 5.05J.3 through 5.05J.10**, inclusively.

5.05J.3 SAFETY AND TEMPORARY LIGHTING

- (1) **SAFE ENVIRONMENT** - The Contractor shall carry out the Contractor's operations in strict accordance with all OSHA and manufacturer's safety requirements. Emphasis shall be placed upon safety requirements for entering confined spaces.

The Contractor shall erect such signs and other devices as are necessary for the safety of the work site and shall secure the site and conform all work to the safety requirements of all pertinent regulatory agencies.

The Contractor is advised that all lining work shall be carried out in full compliance with all City, State, and Federal laws, rules, and regulations regarding Air Quality and Safety.

- (2) **TEMPORARY LIGHTING** - Prior to the start of reconstruction, the Contractor shall submit the Contractor's method of providing temporary lighting within the sewer section to be lined to the Engineer for approval. The Contractor shall furnish all labor, materials, and equipment and do all work necessary to install, maintain, and eventually remove all temporary lighting.

- (a) Bulb wattage shall be sufficient to adequately light the section of sewer being worked on. Bulbs shall be replaced in kind as needed. Lighting shall be intrinsically safe (explosion proof).

- (b) The Contractor shall maintain the temporary lighting until such time as the Engineer inspects and approves the newly lined sewer section. Temporary lighting may be removed as soon as the Engineer approves and accepts the newly lined sewer section.

5.05J.4 FLOW BYPASSING AND SERVICE CONNECTIONS

- (1) FLOW BYPASSING - Prior to the start of work the Contractor will be required to submit a fluming/bypass-pumping detail in accordance with **Subsection 1.06.12 - (3) Existing Flow**. The Contractor shall provide for the diversion of flow of existing sewers at existing upstream manholes (if available) and pump the flow into an existing downstream manhole. The pumps and bypass lines shall be of adequate capacity and size to handle the flow. The proposed bypassing system shall be submitted to the Engineer for approval and no work shall commence until such approval is granted. Bypass for man entry shall require dual plugs, back up pumps and an escape plan if failure of bypass occurs.
- (2) SERVICE CONNECTIONS - The Contractor shall be required to determine which service connections are active and shall be responsible for controlling (or maintaining) the flow for each active service connection along the line of the sewer to be rehabilitated. Where necessary, the flow from an active service connection shall be bypassed to a manhole downstream of the proposed work by means of pumping from the trap located in the basement of the affected building. However, should such bypassing be judged unfeasible by the Engineer, the Contractor shall excavate to the service connection outside the building area (sidewalk or roadway as determined by the Engineer) and bypass the connection from this point. The pump and bypass line for each service connection shall be of adequate capacity and size to handle the flow.

Prior to the commencement of any work, the Contractor shall make all necessary investigations and prepare a plan for the controlling (or maintaining) of the flow and, where necessary, for the bypassing of active service connections. This plan shall be submitted to the Engineer for approval and no work shall commence until such approval is granted.

- (3) The Contractor shall continue to divert the flow of the existing sewer and control (or maintain) the flow for active service connections during the installation of and curing of the polymer liner and during the final television inspection and digital audio-visual recording.

5.05J.5 INSPECTION PRIOR TO LINING

The Contractor along with the Engineer shall perform a walk through inspection of the existing sewer prior to reconstruction. This interior inspection shall be performed, in order to determine and locate conditions which would prevent the proper installation of the lining and to identify the location of active service connections. Where existing sewers are of a size that does not permit a walk through inspection, the Contractor shall perform a television inspection and digital audio-visual recording of the existing sewer utilizing a radial eye camera.

5.05J.6 SUBMITTALS

Prior to the start of work on each size existing sewer, the Contractor will be required to submit design calculations together with shop drawing for liner thickness to the Engineer. These design calculations shall be done in accordance with the manufacturer's design instructions, recommendations, specifications and standard.

Under no circumstances shall the finished thickness of liner be less than as follows:

- (A) AT LOCATION AREAS SHOWN, SPECIFIED OR ORDERED REQUIRING REPAIR WORK (Limit Of Repair Work Lining Length = Length Of Repair Work Plus Ten (10) Feet On Both Sides Of The Repair Work, (However, In No Case Shall The Limit Of Repair Work Lining Length Be Less Than Twenty Five (25) Feet)):

- (i) For Application Of Restorative And Protective Lining For Sewer Pipe Less Than 60" In Diameter: SEWERGARD™ HIGH-STRENGTH/HIGH-BUILD NO. 210X - one hundred twenty-five (125) mils in thickness, for the inner perimeter (surfaces) of the entire sewer.
- (ii) For Application Of Restorative And Protective Lining For Sewer Pipe Greater Than Or Equal To 60" In Diameter: SEWERGARD™ HIGH-STRENGTH/HIGH-BUILD NO. 210X - one hundred twenty-five (125) mils in thickness, for the inner perimeter (surfaces) of the sewer that is above a level that is 25-percent of the diameter (height) above the invert.

Note: Diameter means diameter of circular pipe, and equivalent circular diameter for other shape sewers.

(B) AT ALL OTHER LOCATION AREAS SHOWN, SPECIFIED OR ORDERED REQUIRING LINING WORK ONLY (Outside of Limit of Repair Work Lining Length):

- (i) For Application Of Restorative And Protective Lining For Sewer Pipe Less Than 60" In Diameter: SEWERGARD™ HIGH-STRENGTH/HIGH-BUILD NO. 210X - sixty (60) mils in thickness, for the inner perimeter (surfaces) of the entire sewer.
- (ii) For Application Of Restorative And Protective Lining For Sewer Pipe Greater Than Or Equal To 60" In Diameter: SEWERGARD™ HIGH-STRENGTH/HIGH-BUILD NO. 210X - sixty (60) mils in thickness, for the inner perimeter (surfaces) of the sewer that is above a level that is 25-percent of the diameter (height) above the invert.

Note: Diameter means diameter of circular pipe, and equivalent circular diameter for other shape sewers.

The liner thickness shall be designed to adequately resist all external pressures and conditions required by the Engineer.

5.05J.7 SEWER CLEANING AND REMOVAL OF OBSTRUCTIONS

Prior to performing the work of repairing and reconstructing the existing sewers the Contractor shall thoroughly clean the existing sewers and remove obstructions in accordance with **Section 5.18C - Cleaning Of Existing Sewers**.

5.05J.8 SEWER REPAIR

Upon completion of the cleaning of the existing sewers to be reconstructed the Contractor shall inform the Engineer of such and shall perform no further work until such time that the Engineer inspects and notifies the Contractor, in writing within twenty-four (24) hours, that the sewers have been cleaned to the satisfaction of the Engineer. At the time of this inspection the Engineer shall inform the Contractor of all areas (including those shown on the plans) that require sewer repair. If it is determined by the Engineer that the sewer has been damaged and/or that injection grouting is required to fill surrounding voids and/or stop infiltration/exfiltration of the existing sewer to be reconstructed, the Contractor shall perform the sewer repair work in accordance with **Section 5.20E - Hydroactive Polyurethane - Injection Grouting (For Polymer Lining Method)** and **Section 5.20D - Material For Sewer/Manhole Repair Work (For Polymer Lining Method)**.

5.05J.9 MATERIALS

(A) POLYMER LINING MATERIAL: Restorative and protective polymer lining material shall be SEWERGARD™ HIGH-STRENGTH/HIGH-BUILD NO. 210X as manufactured by SAUERISEN available from the following installers: (i) Alpine Painting And Sandblasting, 17 Florida Avenue, Paterson, NJ 07503, Contact: Sam Scaturro, Tel. No. 973-279-3200 Ext. 14, Fax No. 973-279-3991, sam@alpinepainting.com ; (ii) Entech Corporation, 304 Harrington Avenue, Closter, NJ 07624, Contact: Robert Benz, Tel. No. 201-784-1034, Fax No. 201-784-0855, rbenz@en-techcorp.com ; (iii) Pullman Services, 127 Salem Avenue, Thorofare, NJ 08086, Contact: John Guinta, Tel. No. 877-701-5236, jguinta@pullman-services.com ; (iv) SWERP Incorporated, 1237 Hayes Boulevard, Bristol, PA 19007, Contact: Fred DeVincent, Tel. No. 215-785-2242, Fax No. 610-834-9522, swerpinc@aol.com ; (v) Waterware Corporation, 2502 Edgemont Street, P.O. Box 3609, Philadelphia, PA 19125, Contact: Steve Byrnes, Tel. No. 215-426-5225, Fax No. 215-739-1729, steveb@waterwarecorp.com ; or approved equal.

SEWERGARD™ HIGH-STRENGTH/HIGH-BUILD NO. 210X comes in components of two parts, and is a spray-applied, impermeable, high-strength, durable, corrosion resistant and abrasion resistant polymer material.

Physical Properties:

Working Time At 70°F-----	30-minutes
Re-Coat Time At 70°F-----	12-24-hours
Maximum Re-Coat Time At 70°F-----	24-hours
Chemical And Water Exposure At 70°F-----	17-hours
Abrasion Resistance ASTM-D4060 (Tabor Abrader C-17 Wheel):	
1,000-gram load, 1,000-cycles-----	44.9-mg average weight loss
Bond Strength To Concrete ASTM D7234-----	Concrete Failure
Bond Strength By Slant Shear ASTM-C882-Modified-----	700 psi
Compressive Strength ASTM D695:	
28-day-----	15,500-psi
Elongation ASTM D638-----	12.9%
Flexural Strength ASTM D790:	
28-day-----	8,000-psi
Maximum Service Temperature-----	150°F
Modulus Of Elasticity ASTM D790-----	5.1 x 10 ⁴ -psi
Permeability ASTM E96-----	1.32 x 10 ⁻¹⁰ g/m·s·Pa
Shore D ASTM D2240-----	95
Tensile Strength ASTM D638-----	4,300-psi

(B) REPAIR MATERIAL: Repair material shall be as specified in **Section 5.20D - Material For Sewer/Manhole Repair Work (For Polymer Lining Method)**.

5.05J.10 RECONSTRUCTION OF EXISTING SEWERS (POLYMER LINING METHOD)

(A) DESCRIPTION - The Contractor will be responsible for the reconstruction of existing sewers via the use of polymer lining method.

(B) MIXING

(1) POLYMER LINING MATERIAL:

SEWERGARD™ HIGH-STRENGTH/HIGH-BUILD NO. 210X lining material shall be mixed in the proportions specified by the manufacturer and as follows:

- (1) For Application By Airless Spray:
 - (i) Remix contents of Part B Liquid Resin component for a minimum of 2-minutes with a slow speed paddle or "Jiffy" mixer;
 - (ii) Remix contents of Part A Hardener by shaking;
 - (iii) Then add Part A Hardener to Part B Liquid Resin and mix for a minimum of 3-minutes with a slow speed paddle or "Jiffy" mixer until thoroughly blended;
 - (iv) Mix only complete batches;
 - (v) The working time of the mix is approximately thirty (30) minutes depending on conditions.
 - (vi) Material which has begun to set must be discarded. Do not try to retemper the material.
 - (vii) Do not add solvent, additive or adulterant to any component or mixed material.
- (2) For Application By Plural Component Spray:
 - (i) Premix contents of Part A Hardener, and premix contents of Part B Liquid Resin component for a minimum of 2-minutes with a slow speed paddle or "Jiffy" mixer separately;
 - (ii) Do not add solvent, additive or adulterant to any component material.

(C) EQUIPMENT

- (1) Mixers, spray guns, gun tips, compressors, pumps, hoses, tools, etc. shall be standard commercial models as specified by the manufacturer. Mixing equipment shall be capable of thoroughly mixing the materials in sufficient quantity to maintain placing continuity. Compressor shall be of sufficient capacity to maintain, without interruption, the pressures and volume necessary for delivery.
- (2) The Contractor shall prepare and inspect all necessary tools and any spare parts that are required for equipment that suffer frequent breakdowns, and shall ensure that said tools and spare parts are available at the site. Supporting equipment, such as pumps and generators, shall be provided at the site in the event there is a fluid surge and pumping is required on an emergency basis. The Contractor shall also prepare and make operable all necessary communication equipment for the Contractor's field crew.

(D) POLYMER LINING MATERIAL CONTRACTOR - The Contractor is required to use one of the following installers to perform the polymer lining work: (i) Alpine Painting And Sandblasting, 17 Florida Avenue, Paterson, NJ 07503, Contact: Sam Scaturro, Tel. No. 973-279-3200 Ext. 14, Fax No. 973-279-3991, sam@alpinepainting.com ; (ii) Entech Corporation, 304 Harrington Avenue, Closter, NJ 07624, Contact: Robert Benz, Tel. No. 201-784-1034, Fax No. 201-784-0855, rbenz@entechcorp.com ; (iii) Pullman Services, 127 Salem Avenue, Thorofare, NJ 08086, Contact: John Guinta, Tel. No. 877-701-5236, jguinta@pullman-services.com ; (iv) SWERP Incorporated, 1237 Hayes Boulevard, Bristol, PA 19007, Contact: Fred DeVincent, Tel. No. 215-785-2242, Fax No. 610-834-9522, swerpinc@aol.com ; (v) Waterware Corporation, 2502 Edgemont Street, P.O. Box 3609, Philadelphia, PA 19125, Contact: Steve Byrnes, Tel. No. 215-426-5225, Fax No. 215-739-1729, steveb@waterwarecorp.com ; or approved equal.

(E) CONNECTIONS TO HYDRANTS - The Contractor shall strictly comply with the New York State Department of Health's Public Water Supply Guide on "CROSS-CONNECTION CONTROL". In order to insure strict compliance with the State Guide, all connections to Hydrants shall be provided with an approved and certified "REDUCED PRESSURE ZONE BACKFLOW PREVENTER" in accordance with the Department's Standards and as directed by the Engineer. The cost for all labor, materials and equipment required to complete this work shall be deemed included in the prices bid for all items of this contract.

(F) MEANS AND METHODS - Upon completion of the cleaning, obstruction removal and repair of the existing sewers to be reconstructed using polymer lining method, the Contractor shall inform the Engineer of such and shall perform no further work until such time that the Engineer inspects and notifies the Contractor, in writing, that the sewers have been cleaned, repaired and that the quality of the substrate is to the satisfaction of the Engineer and that the Contractor may proceed with the polymer lining installation. After such notification, the Contractor shall proceed with the polymer lining installation in accordance with the plans and specifications, the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

The Contractor shall furnish all labor, materials, and equipment and shall do all work necessary to place the polymer layer(s) over the specified surface area of the interior of the existing sewer, including the invert, walls and crown, to the thicknesses, and in accordance with the plans and specifications, the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

A Wet Film Thickness Gauge shall be used as the lining process progresses to measure the depth of application to ensure that the designed or specified thickness is achieved. Four (4) depth tests shall be done for every one hundred (100) square feet of liner application. The locations of depth tests shall be random as directed by the Engineer. The Contractor shall be required to hit the approved designed liner thickness. Additional material thicknesses applied by the Contractor will be at the Contractor's own expense. No separate or additional payment will be made for any extra material thicknesses applied above the approved designed liner thickness.

(G) APPLICATION CONDITIONS - The polymer layer can be applied over a slightly damp substrate. However, pools of water should be removed before start of application of polymer layer. If the substrate is wet to the touch the substrate shall be dried at a minimum to the slightly damp condition.

The component materials and substrate shall be kept at 55°-80°F for at least 48-hours prior to application.

The polymer liner shall not be applied when ambient and surface temperatures are expected to fall below 50°F within 72-hours of placement. Both ambient and surface temperatures must be at least 50°F at time of placement. For applying polymer liner at temperatures below 50°F, the material and substrate shall be warmed to above a temperature of 50°F. The area when heating shall be properly ventilated. The newly installed liner shall be protected from freezing.

(H) APPLICATION - The polymer liner shall be applied in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

(I) SERVICE CONNECTIONS - After the liner has been installed, the Contractor shall clean all existing active service connections and those inactive connections ordered by the Engineer of lining material that may hinder or block flow from the service connection.

(J) CURING - After the new lining is installed cure time shall be in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer. All fluming and/or bypass pumping shall be maintained during the curing process.

(K) TESTING

(1) Sample Test Panel: Prior to start of polymer lining process at each new location set up, the Contractor shall construct two (2) 1/2" x 24" x 24" sample test panels for the purpose of establishing an accepted standard for quality of placement of polymer liner material (One test panel for application of the design thickness or minimum 60-mil thickness and one test panel for application of the design thickness or minimum 125-mil thickness). The 1/2" x 24" x 24" panels shall be Cement Board. The polymer lining shall be applied to the test panels with the same manner of application that will be used in lining the existing sewer. The Engineer shall measure the depth of application using a Wet Film Thickness Gauge supplied by the Contractor at four locations on each test panel. The Engineer shall also make a determination as to the quality of the application. Test panels that fail the Engineer's inspections shall be discarded, remade and replaced with an acceptable test panel.

All sample test panels shall be made in the presence of the Engineer. Test panels shall become the property of the Engineer.

(2) Testing Of Installed Liner: After the polymer liner has achieved a hardened surface, a holiday detector shall be utilized to test the entire liner so as to ensure a continuous pinhole-free lining. Pinholes shall be repaired in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

Installed protective epoxy lining shall be tested for pinholes after a minimum 24-hour cure at a temperature of 70°F. Pinhole testing shall be accomplished in accordance with ASTM D4787, using a Tinker Razor Holiday Detector, San Gabriel, CA, Model AP/W, or an approved equal device. Test voltage of 100-volts/mil of coating thickness shall be applied. All pinholes shall be marked and repaired using manufacturer's approved method (ASTM G62).

All holiday testing shall be done in the presence of the Engineer.

(L) FINAL TELEVISION INSPECTION AND RECORDING - Upon completion of the work the Contractor shall perform a final television inspection and digital audio-visual recording of the newly lined sewer in accordance with **Section 5.17** of the specifications, with the exception that all sewers regardless of size (including those larger than fifty-four (54) inches in their least inside dimension) shall receive this final television inspection and digital audio-visual recording. Payment for final

television inspection and digital audio-visual recording shall be made under Item No. 53.11DR - TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS.

Should the results of this final inspection reveal any defects, as determined by the Engineer, the Contractor will be required to repair or replace these defects as ordered by the Engineer and in accordance with the manufacturer's instructions, recommendations, specifications and standards. Such repair work shall be done at the sole expense of the Contractor.

5.05J.11 MEASUREMENT

The quantity to be measured for payment shall be the number of linear feet of existing sewer reconstructed to the satisfaction of the Engineer, as shown, specified or required, measured horizontally along the centerline of the existing sewer from inside face of manhole to inside face of manhole.

The quantity to be measured for payment per linear foot for reconstruction of multiple barrel sewers shall be measured once for all barrels within that linear section. Measurement for payment will not be made for each multiple barrel reconstructed.

5.05J.12 PRICE TO COVER

The contract price for "RECONSTRUCTION OF EXISTING SEWERS USING D.E.P. APPROVED POLYMER LINING METHOD" shall be the unit price bid per linear foot for each size, shape, kind and type of existing sewer and shall cover the cost of all labor, materials, plant, equipment, samples and tests required or necessary to reconstruct the existing sewer as specified herein, including the making of sample test panels, holiday testing; pinhole repair, all submittals; fluming and/or diversion of the flow in the existing sewer; walk-through inspection or television inspection prior to lining; cleaning of lining material from active and inactive service connection; furnishing and installing all other items necessary to complete this work and do all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

The contract price hereunder shall also include the cost of all labor and materials required and necessary to provide for the safe environment and temporary lighting as specified herein.

The contract price per linear foot for reconstruction of multiple barrel sewers shall be made once for all barrels within that linear foot section. Payment will not be made for each multiple barrel reconstructed.

5.05J.13 SEPARATE PAYMENT

Payment for this final television inspection will be made under Item No. 53.11DR - TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS.

Payment for Reconstruction Of Existing Sewers Using D.E.P Approved Polymer Lining Method will be made under the Item Number as calculated below:

The Item Numbers for Reconstruction Of Existing Sewers Using D.E.P. Approved Polymer Lining Method have fourteen characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Reconstruction Of Existing Sewers Using D.E.P. Approved Polymer Lining Method:

50.77

(2) The sixth character shall define the Type of Sewer Effluent:

S - Sanitary Sewer

M - Storm Sewer

C - Combined Sewer

I - Interceptor Sewer

(3) The seventh, eighth and ninth characters shall define either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Sewers of Other Shapes (e.g. Rectangular, Arched, Elliptical, and Egg). (The seventh, eighth and ninth characters representing the unit of inches for either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Sewers of Other Shapes.) See examples below:

- 060 - 60"
- 096 - 96"
- 108 - 108"
- 120 - 120"

(4) The tenth character shall define the Shape of the Existing Sewer:

- D - Circular (Diameter)
- R - Rectangular (Single Barrel)
- B - Double Barrel Rectangular
- T - Triple Barrel Rectangular
- A - Arch-Shaped
- H - Horizontal Elliptical
- V - Vertical Elliptical
- E - Egg-Shaped

(5) The eleventh character shall define the Kind of Existing Sewer:

- B - Brick
- C - Concrete

(6) The twelfth, thirteenth and fourteenth characters shall define either Circular and Arch-Shaped or the Height of the Sewer for Existing Sewers of Other Shapes (e.g. Rectangular, Elliptical, and Egg). (The twelfth, thirteenth and fourteenth characters representing the unit of inches for the Height of the Sewer for Existing Sewers of Other Shapes.) See examples below:

- 000 - Circular and Arch-Shaped
- 087 - 87"
- 096 - 96"
- 108 - 108"
- 120 - 120"

(7) Examples of Item Numbers together with Description and Pay Unit as provided in the Bid Schedule are provided below:

Item No.	Description	Pay Unit
50.77S054DB000	RECONSTRUCTION OF EXISTING 54" DIAMETER CIRCULAR BRICK SANITARY SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77S054DC000	RECONSTRUCTION OF EXISTING 54" DIAMETER CIRCULAR CONCRETE SANITARY SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77S051RC048	RECONSTRUCTION OF EXISTING 51"W X 48"H RECTANGULAR CONCRETE SANITARY SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77S084AB000	RECONSTRUCTION OF EXISTING 84"W ARCH-SHAPED BRICK SANITARY SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77S048VB076	RECONSTRUCTION OF EXISTING 48"W X 76"H VERTICAL ELLIPTICAL BRICK SANITARY SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.

50.77S043VC068	RECONSTRUCTION OF EXISTING 43"W X 68"H VERTICAL ELLIPTICAL CONCRETE SANITARY SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77S040EB060	RECONSTRUCTION OF EXISTING 40"W X 60"H EGG-SHAPED BRICK SANITARY SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77S045EC060	RECONSTRUCTION OF EXISTING 45"W X 60"H EGG-SHAPED CONCRETE SANITARY SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77M060DB000	RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR BRICK STORM SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77M060DC000	RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR CONCRETE STORM SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77M060RC051	RECONSTRUCTION OF EXISTING 60"W X 51"H RECTANGULAR CONCRETE STORM SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77M108AB000	RECONSTRUCTION OF EXISTING 108"W ARCH-SHAPED BRICK STORM SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77M053VB083	RECONSTRUCTION OF EXISTING 53"W X 83"H VERTICAL ELLIPTICAL BRICK STORM SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77M058VC091	RECONSTRUCTION OF EXISTING 58"W X 91"H VERTICAL ELLIPTICAL CONCRETE STORM SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77M047EB070	RECONSTRUCTION OF EXISTING 47"W X 70"H EGG-SHAPED BRICK STORM SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77M052EC065	RECONSTRUCTION OF EXISTING 52"W X 65"H EGG-SHAPED CONCRETE STORM SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77M072BC072	RECONSTRUCTION OF EXISTING 72"W X 72"H DOUBLE BARREL RECTANGULAR CONCRETE STORM SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77M087TC060	RECONSTRUCTION OF EXISTING 87"W X 60"H TRIPLE BARREL RECTANGULAR CONCRETE STORM SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77C072DB000	RECONSTRUCTION OF EXISTING 72" DIAMETER CIRCULAR BRICK COMBINED SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77C072DC000	RECONSTRUCTION OF EXISTING 72" DIAMETER CIRCULAR CONCRETE COMBINED SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77C126RC075	RECONSTRUCTION OF EXISTING 126"W X 75"H RECTANGULAR CONCRETE COMBINED SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77C132AB000	RECONSTRUCTION OF EXISTING 132"W ARCH-SHAPED BRICK COMBINED SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77C063VB098	RECONSTRUCTION OF EXISTING 63"W X 98"H VERTICAL ELLIPTICAL BRICK COMBINED SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77C077VC121	RECONSTRUCTION OF EXISTING 77"W X 121"H VERTICAL ELLIPTICAL CONCRETE COMBINED SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77C050EB074	RECONSTRUCTION OF EXISTING 50"W X 74"H EGG-SHAPED	L.F.

	BRICK COMBINED SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	
50.77C058EC077	RECONSTRUCTION OF EXISTING 58"W X 77"H EGG-SHAPED CONCRETE COMBINED SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77I060DC000	RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77I064RC048	RECONSTRUCTION OF EXISTING 64"W X 48"H RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77I060BC060	RECONSTRUCTION OF EXISTING 60"W X 60"H DOUBLE BARREL RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.
50.77I078TC060	RECONSTRUCTION OF EXISTING 78"W X 60"H TRIPLE BARREL RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	L.F.

(17)Refer to Page V-78:

Add the following new **Section 5.07D**:

**SECTION 5.07D
RECONSTRUCTION OF EXISTING MANHOLES ON EXISTING SEWERS USING D.E.P.
APPROVED LINING METHODS**

5.07D.1 INTENT

This section describes the reconstruction of existing manholes on existing sewers that are to be reconstructed by the following lining methods:

- (a) D.E.P. approved centrifugally-cast-concrete-pipe (CCCP) lining method;
- (b) D.E.P. approved polymer lining method; and,
- (c) D.E.P. approved polyurethane lining method.

5.07D.2 WORK INCLUDED

Where existing sewer manholes are shown on the plans, specified in the contract documents, or ordered by the Engineer to be reconstructed, the Contractor shall furnish all labor, materials, equipment, etc., necessary and required to reconstruct such manholes as specified herein and as ordered.

Prior to the start of work the Contractor will be required to submit a fluming/bypass-pumping detail in accordance with **Subsection 1.06.12 - (3) Existing Flow**. The Contractor shall provide for the diversion of flow of existing sewers through the manholes at existing upstream manholes (if available) and pump the flow into an existing downstream manhole. The pumps and bypass lines shall be of adequate capacity and size to handle the flow. The proposed bypassing system shall be submitted to the Engineer for approval and no work shall commence until such approval is granted. Bypass for man entry shall require dual plugs, back up pumps and an escape plan if failure of bypass occurs.

The Contractor shall continue to divert the flow of the existing sewer through the manhole and control (or maintain) the flow for active service connections during the installation of the liner and during the final television inspection and digital audio-visual recording.

5.07D.3 MANHOLE CLEANING

(1) The Contractor is notified that the cleaning of the sewer portions through the manholes (i.e. sewer troughs through the manholes; sewer walls, invert floors and roof portions through the manholes) shall be performed and payment made in accordance with **Section 5.18C - Cleaning Of Existing Sewers**.

The cleaning of all other surfaces within the manhole (i.e. benches; walls and roofs not considered part of sewer walls and roofs through the manholes; chimneys; roofs; platforms (topsides and undersides)) shall be performed and costs included as specified herein.

The Contractor shall furnish all labor, materials and equipment and shall do all work necessary to remove and dispose of all loose debris, grease, oil and silt from all surfaces of all existing manholes which are shown on the plans or specified in the contract documents to be reconstructed. The Contractor shall also do all work necessary to clean all exposed steel of rust, masonry, etc.

After all debris (of any kind), grease, and fines have been physically removed from the manholes, the manhole surfaces shall receive a thorough cleaning by high-pressure water blasting or other approved method, to remove any silt, grease, oil, laitance or any other substance which could interfere with the bond of the newly placed lining with the surfaces of the manholes.

Unless otherwise approved, the water-blast pump shall have a minimum capacity of 5,000-psi pressure. The Contractor shall refer to SSPC-SP13/NACE 6 "Surface Preparation Of Concrete" for detailed guidelines. The surface preparation requirement is to expose aggregate to sound concrete and obtain a uniform surface texture of CSP 4-6 ICRI Guideline 03732. If the surface texture is greater than CSP-6, the substrate may require resurfacing as directed by the Engineer. The surface preparation must provide a sound, clean, neutralized surface with a minimum pH of 8.

For areas where exposed rebar is present, abrasive blasting or grinding is required to thoroughly remove rust and scale from the rebar. Any loose concrete around or behind the rebar must be removed. Chipping concrete away from behind the rebar may be required to ensure the rebar is rust free prior to application of the resurfacing material.

All material removed from the manholes under this contract shall become the property of the Contractor and shall be properly disposed of away from the site, at the Contractor's expense.

In the event that the cleaning of manholes is subcontracted, it shall be Contractor's responsibility to ensure that the subcontractor properly disposes of the material removed away from the site.

(2) For Manholes On Existing Sewers Using Centrifugally-Cast-Concrete-Pipe (CCCP) Lining Method ONLY - After cleaning is performed, the Contractor shall apply a Con^{mic}Shield[®] corrosion protection rinse to all surfaces of the existing manhole to ensure the complete kill of acid producing bacterial. The corrosion resistant rinse shall be applied in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

(3) Connections To Hydrants - The Contractor shall strictly comply with the New York State Department of Health's Public Water Supply Guide on "CROSS-CONNECTION CONTROL". In order to insure strict compliance with the State Guide, all connections to Hydrants shall be provided with an approved and certified "REDUCED PRESSURE ZONE BACKFLOW PREVENTER" in accordance with the Department's Standards and as directed by the Engineer. The cost for all labor, materials and equipment required to complete this work shall be deemed included in the prices bid for all items of this contract.

5.07D.4 MANHOLE REPAIR

Upon completion of the cleaning of the existing manholes to be reconstructed the Contractor shall inform the Engineer of such and shall perform no further work until such time that the Engineer inspects and notifies the Contractor, in writing within twenty-four (24) hours, that the manholes have been cleaned to the satisfaction of the Engineer. At the time of this inspection the Engineer shall inform the Contractor of all areas (including those shown on the plans) that require manhole repair. If it is determined by the Engineer that the manhole has been damaged and/or that injection grouting is required to fill surrounding voids and/or stop infiltration/exfiltration of the existing manhole to be reconstructed, the Contractor shall perform the manhole repair work as follows:

- (1) For Manholes On Existing Sewers Using Centrifugally-Cast-Concrete-Pipe (CCCP) Lining Method:
 - (a) Manhole repair work shall be done in accordance with **Section 5.20C - Mortar For Sewer/Manhole Repair Work (For CCCP Lining Method)**.
 - (b) Injection grouting shall be done in accordance with **Section 5.20A - Portland Cement (Type V) - Injection Grouting**.
- (2) For Manholes On Existing Sewers Using Polymer Lining Method:
 - (a) Manhole repair work shall be done in accordance with **Section 5.20D - Material For Sewer/Manhole Repair Work (For Polymer Lining Method)**.
 - (b) Injection grouting shall be done in accordance with **Section 5.20E - Hydroactive Polyurethane - Injection Grouting (For Polymer Lining Method)**.
- (3) For Manholes On Existing Sewers Using Polyurethane Lining Method:
 - (a) Manhole repair work shall be done in accordance with **Section 5.20F - Material For Sewer/Manhole Repair Work (For Polyurethane Lining Method)**.
 - (b) Injection grouting shall be done in accordance with **Section 5.20G - Hydroactive Polyurethane - Injection Grouting (For Polyurethane Lining Method)**.

Damaged or unsafe steps and aluminum gratings shall be removed and replaced with new Standard Manhole Steps and Aluminum Gratings, as directed and approved by the Engineer. Payment for the cost of all labor, material and equipment required to remove and replace damaged steps and aluminum gratings shall be made under the price bid for Standard Highway Specification Item No. 6.22 F - ADDITIONAL HARDWARE.

Manhole frames and covers that are damaged, defective, twenty-four (24) inches in diameter or nonstandard shall be removed and replaced in accordance with **Section 5.07B - Replacement Of Existing Manhole Frame And Cover**. Payment for all cost required for removing and replacing existing manhole frames and covers shall be made under the price bid for Item No. 51.23RF - REPLACEMENT OF EXISTING MANHOLE FRAME AND COVER

5.07D.5 RECONSTRUCTION OF EXISTING MANHOLE

- (A) FOR MANHOLES ON EXISTING SEWERS USING CENTRIFUGALLY-CAST-CONCRETE-PIPE (CCCP) LINING METHOD:
- (1) Materials: CCCP lining mortar, corrosion protection and curing compound shall be in accordance with **Subsection 5.05I.9(A), (D) and (E)** respectively.
 - (2) Mixing And Equipment: Mixing and equipment shall be in accordance with **Subsection 5.05I.10(B) and (C)** respectively.
 - (3) Lining Thickness: Prior to the start of work on existing manhole, the Contractor will be required to submit design calculations together with shop drawing for liner thickness to the Engineer. These design calculations shall be done in accordance with the manufacturer's design instructions, recommendations, specifications and standard.

Under no circumstances shall the finished thickness of liner be less than as follows:

- (a) For sewer portions through the manholes (i.e. sewer troughs through the manholes; sewer walls, invert floors and roof portions through the manholes) from invert of the manholes to wall height in manholes equal to the inner top of existing sewers (including troughs, benches, walls, invert floors and roof portions):
 - (i) For Manhole On Sewer Pipe Less Than 60" In Diameter - one and one-quarter (1-1/4) inch in thickness.
 - (ii) For Manhole On Sewer Pipe Greater Than Or Equal To 60" In Diameter - one and one-half (1-1/2) inch in thickness.

- (b) For the rest of the manholes from wall height in manholes equal to the inner top of existing sewers to the bottom of manhole frame and cover castings (including walls, topside and underside of platforms, roofs and chimneys):
- (i) For Manhole On Any Diameter Sewer - three-quarter (3/4) inch in thickness.

Note: Diameter means diameter of circular pipe, and equivalent circular diameter for other shape sewers.

The liner thickness shall be designed to adequately resist all external pressures and conditions required by the Engineer.

- (4) Means And Methods: Upon completion of the cleaning, corrosion protection application and repair of the existing manholes to be reconstructed using centrifugally-cast-concrete-pipe (CCCP) lining method, the Contractor shall inform the Engineer of such and shall perform no further work until such time that the Engineer inspects and notifies the Contractor, in writing, that the manholes have been cleaned, corrosion protected, repaired and that the quality of the substrate is to the satisfaction of the Engineer and that the Contractor may proceed with the centrifugally-cast-concrete-pipe (CCCP) lining installation. After such notification, the Contractor shall proceed with the centrifugally-cast-concrete-pipe (CCCP) lining installation for manholes in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

Small plastic depth gauges shall be attached to the manholes at location specified by the Engineer. The depth gauges shall show the thickness as designed or specified. The preset depth gauge guides shall be positioned just below the designed or specified finished cementitious layer. The gauges will be left in place within the cementitious layer. The Contractor shall be required to hit the approved designed or specified liner thickness. Additional material thicknesses applied by the Contractor will be at the Contractor's own expense. No separate or additional payment will be made for any extra material thicknesses applied above the approved designed or specified liner thickness.

The Contractor shall furnish all labor, materials, and equipment and shall do all work necessary to place the cementitious layer over the entire surface area of the interior of the existing manhole, in accordance with the plans and specifications, the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

- (5) Application Conditions: The cementitious layer can be applied over a damp substrate. However, pools of water should be removed before start of application of cementitious layer.

The mortar shall not be applied when ambient and substrate temperatures are 100°F and above. Shade the material and prepared surfaces to keep them cool. To extend work time, mix the material with cool water or ice-cooled water. The substrate shall be in a saturated surface-dry (SSD) condition before application begins.

The mortar shall not be applied when ambient and surface temperatures are expected to fall below 45°F within 72-hours of placement. Both ambient and surface temperatures must be at least 45°F at time of placement. For applying mortar at temperatures below 45°F, the material, water and substrate shall be warmed to above a temperature of 45°F. The area when heating shall be properly ventilated. The newly installed liner shall be protected from freezing.

- (6) Application: The rotating casting applicator shall be positioned within the center of the manhole and pumping of the mixed mortar shall then commence. As the mortar begins to centrifugally cast evenly around the interior, the applicator head shall be retrieved at the best speed for applying the thickness that has been selected. If flows are interrupted, simply arrest the retrieval of the applicator head until flows are restored. Retrieval speed can easily be varied to create the required thicknesses.

Built-in bonding agents allow for additional layers to be applied at any time.

The pressure application from the centrifugal casting of the mortar produces a finely textured surface that requires no additional troweling or finishing.

Other methods of application recommended by the manufacturer and approved by the Engineer, may be used for application of the cementitious lining material to the existing manhole.

- (7) Curing: After the new lining is installed and initial set is complete as determined by the Engineer, the Contractor shall apply Cor+Gard Cure 'N Seal curing compound to the interior surface of the newly installed lining. The curing compound shall be applied in accordance with the manufacturer's instructions, recommendations, specifications and standards. All fluming and/or bypass pumping shall be maintained during the curing process.
- (8) Testing - Test Cubes: The determination of the strength of the mortar by the making and testing of test cubes shall be in accordance with **Subsection 5.05I.10(K)**, except with the following modification:
 - (i) The Total Minimum Number of Test Cube Sets required to be taken by the Engineer shall be a minimum of one (1) set of two (2) test cubes at the start of the project for each manhole lined.
- (9) Determination Of Payment: Determination of payment for the reconstruction of existing manhole using D.E.P. approved centrifugally-cast-concrete-pipe (CCCP) lining method shall be based on the average strength of the test cubes in accordance with **Subsection 5.05I.14**.

(B) FOR MANHOLES ON EXISTING SEWERS USING POLYMER LINING METHOD:

- (1) Materials: Polymer lining material shall be in accordance with **Subsection 5.05J.9(A)**.
- (2) Mixing And Equipment: Mixing and equipment shall be in accordance with **Subsection 5.05J.10(B) and (C)** respectively.
- (3) Lining Thickness: Prior to the start of work on existing manhole, the Contractor will be required to submit design calculations together with shop drawing for liner thickness to the Engineer. These design calculations shall be done in accordance with the manufacturer's design instructions, recommendations, specifications and standard.

Under no circumstances shall the finished thickness of liner be less than as follows:

- (i) For Application Of Restorative And Protective Lining On Manholes For Sewer Pipe Less Than 60" In Diameter - sixty (60) mils in thickness, for entire manholes from invert of the manholes to the bottom of manhole frame and cover castings (including troughs, benches, walls, invert floors, roof portions, topside and underside of platforms, roofs and chimneys).
 - (ii) For Application Of Restorative And Protective Lining On Manholes For Sewer Pipe Greater Than Or Equal To 60" In Diameter - sixty (60) mils in thickness, for manholes from above a level that is 25-percent of the diameter (height) above the invert of the manhole to the bottom of manhole frame and cover castings (including troughs, benches, walls, invert floors, roof portions, topside and underside of platforms, roofs and chimneys).
- (4) Means And Methods: Upon completion of the cleaning and repair of the existing manholes to be reconstructed using polymer lining method, the Contractor shall inform the Engineer of such and shall perform no further work until such time that the Engineer inspects and notifies the Contractor, in writing, that the manholes have been cleaned, repaired and that the quality of the substrate is to the satisfaction of the Engineer and that the Contractor may proceed

with the polymer lining installation. After such notification, the Contractor shall proceed with the polymer lining installation for manholes in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

The Contractor shall furnish all labor, materials, and equipment and shall do all work necessary to place the polymer layer(s) over the entire surface area of the interior of the existing manhole, in accordance with the plans and specifications, the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

A Wet Film Thickness Gauge shall be used as the lining process progresses to measure the depth of application to ensure that the designed or specified thickness is achieved. Four (4) depth tests shall be done for every one hundred (100) square feet of liner application. The locations of depth tests shall be random as directed by the Engineer. The Contractor shall be required to hit the approved designed liner thickness. Additional material thicknesses applied by the Contractor will be at the Contractor's own expense. No separate or additional payment will be made for any extra material thicknesses applied above the approved designed liner thickness.

- (5) Application Conditions: The polymer layer can be applied over a slightly damp substrate. However, pools of water should be removed before start of application of polymer layer. If the substrate is wet to the touch the substrate shall be dried at a minimum to the slightly damp condition.

The component materials and substrate shall be kept at 55°-80°F for at least 48-hours prior to application.

The polymer liner shall not be applied when ambient and surface temperatures are expected to fall below 50°F within 72-hours of placement. Both ambient and surface temperatures must be at least 50°F at time of placement. For applying polymer liner at temperatures below 50°F, the material and substrate shall be warmed to above a temperature of 50°F. The area when heating shall be properly ventilated. The newly installed liner shall be protected from freezing.

- (6) Application: The polymer liner shall be applied in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.
- (7) Curing: After the new lining is installed cure time shall be in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer. All fluming and/or bypass pumping shall be maintained during the curing process.
- (8) Testing: The following tests shall be performed:
- (a) Sample Test Panel: Prior to start of polymer lining process at each new existing manhole location set up, the Contractor shall construct one (1) 1/2" x 24" x 24" sample test panel for the purpose of establishing an accepted standard for quality of placement of polymer liner material (One test panel for application of the design thickness or minimum 60-mil thickness). The 1/2" x 24" x 24" panel shall be Cement Board. The polymer lining shall be applied to the test panel with the same manner of application that will be used in lining the existing manhole. The Engineer shall measure the depth of application using a Wet Film Thickness Gauge supplied by the Contractor at four locations on the test panel. The Engineer shall also make a determination as to the quality of the application. Test panels that fail the Engineer's inspections shall be discarded, remade and replaced with an acceptable test panel.

All sample test panels shall be made in the presence of the Engineer. Test panels shall become the property of the Engineer.

- (b) Testing Of Installed Liner: After the polymer liner has achieved a hardened surface, a holiday detector shall be utilized to test the entire liner so as to ensure a continuous pinhole-free lining. Pinholes shall be repaired in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

Installed protective epoxy lining shall be tested for pinholes after a minimum 24-hour cure at a temperature of 70°F. Pinhole testing shall be accomplished in accordance with ASTM D4787, using a Tinker Razor Holiday Detector, San Gabriel, CA, Model AP/W, or an approved equal device. Test voltage of 100-volts/mil of coating thickness shall be applied. All pinholes shall be marked and repaired using manufacturer's approved method (ASTM G62).

All holiday testing shall be done in the presence of the Engineer.

(C) FOR MANHOLES ON EXISTING SEWERS USING POLYURETHANE LINING METHOD:

- (1) Materials: Polyurethane lining material shall be in accordance with **Subsection 5.05K.9(A)**.
- (2) Mixing And Equipment: Mixing and equipment shall be in accordance with **Subsection 5.05K.10(B) and (C)** respectively.
- (3) Lining Thickness: Prior to the start of work on existing manhole, the Contractor will be required to submit design calculations together with shop drawing for liner thickness to the Engineer. These design calculations shall be done in accordance with the manufacturer's design instructions, recommendations, specifications and standard.

Under no circumstances shall the finished thickness of liner be less than as follows:

- (a) For sewer portions through the manholes (i.e. sewer troughs through the manholes; sewer walls, invert floors and roof portions through the manholes) from invert of the manholes to wall height in manholes equal to the inner top of existing sewers (including troughs, benches, walls, invert floors and roof portions):
- (i) For Manhole On Sewer Pipe Less Than 60" In Diameter - seven hundred and fifty (750) mils in thickness.
 - (ii) For Manhole On Sewer Pipe Greater Than Or Equal To 60" In Diameter - one thousand (1,000) mils in thickness.
- (b) For the rest of the manholes from wall height in manholes equal to the inner top of existing sewers to the bottom of manhole frame and cover castings (including walls, topside and underside of platforms, roofs and chimneys):
- (i) For Manhole On Any Diameter Sewer - three hundred (300) mils in thickness.

Note: Diameter means diameter of circular pipe, and equivalent circular diameter for other shape sewers.

The liner thickness shall be designed to adequately resist all external pressures and conditions required by the Engineer.

- (4) Means And Methods: Upon completion of the cleaning and repair of the existing manholes to be reconstructed using polyurethane lining method, the Contractor shall inform the Engineer of such and shall perform no further work until such time that the Engineer inspects and notifies the Contractor, in writing, that the manholes have been cleaned, repaired and that the quality of the substrate is to the satisfaction of the Engineer and that the Contractor may proceed with the polyurethane lining installation. After such notification, the Contractor shall

proceed with the polyurethane lining installation for manholes in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

Small plastic depth gauges shall be attached to the manholes at location specified by the Engineer. The depth gauges shall show the thickness as designed or specified. The preset depth gauge guides shall be positioned just below the designed or specified finished polyurethane layer. The gauges will be left in place within the polyurethane layer. The Contractor shall be required to hit the approved designed or specified liner thickness. Additional material thicknesses applied by the Contractor will be at the Contractor's own expense. No separate or additional payment will be made for any extra material thicknesses applied above the approved designed or specified liner thickness.

The Contractor shall furnish all labor, materials, and equipment and shall do all work necessary to place the polyurethane layer(s) over the entire surface area of the interior of the existing manhole, in accordance with the plans and specifications, the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

- (5) Application Conditions: The polyurethane layer must be applied over a clean and thoroughly dry substrate to achieve optimum technical performance of the product.

The substrate shall be kept at 60°-80°F for at least 48-hours prior to application. The component material shall be heated to temperatures specified by the manufacturer.

The polyurethane liner shall not be applied when ambient and surface temperatures are expected to fall below 60°F within 72-hours of placement. Both ambient and surface temperatures must be at least 60°F at time of placement. For applying polyurethane liner at temperatures below 60°F, the ambient and surface temperatures shall be warmed to a minimum temperature of 60°F for at least 48-hours prior to application. The area when heating shall be properly ventilated. The newly installed liner shall be protected from freezing. Heating devices and other special equipment approved by the manufacturer and the Engineer shall be used to achieve the optimum application environment.

- (6) Application: The polyurethane liner shall be applied in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

- (7) Curing: After the new lining is installed cure time shall be in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer. All fluming and/or bypass pumping shall be maintained during the curing process.

- (8) Testing: The following tests shall be performed:

- (a) Sample Test Panel: Prior to start of polyurethane lining process at each new existing manhole location set up, the Contractor shall construct three (3) 1/2" x 24" x 24" sample test panels for the purpose of establishing an accepted standard for quality of placement of polyurethane liner material (One test panel for application of the design thickness or minimum 300-mil thickness, one test panel for application of the design thickness or minimum 750-mil thickness, and one test panel for application of the design thickness or minimum 1,000-mil thickness). The 1/2" x 24" x 24" panels shall be Cement Board. Four (4) small plastic depth gauges shall be attached at four locations on each test panel. The polyurethane lining shall be applied to the test panels with the same manner of application that will be used in lining the existing manhole. The Engineer shall verify that the design or specified thickness has been achieved and also make a determination as to the quality of the application. Test panels that fail the Engineer's inspections shall be discarded, remade and replaced with an acceptable test panel.

All sample test panels shall be made in the presence of the Engineer. Test panels shall become the property of the Engineer.

- (b) Testing Of Installed Liner: After the polyurethane liner has achieved a hardened surface, a holiday detector shall be utilized to test the entire liner so as to ensure a continuous pinhole-free lining. Pinholes shall be repaired in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

Installed protective polyurethane lining shall be tested for pinholes after a minimum 24-hour cure at a temperature of 70°F. Pinhole testing shall be accomplished in accordance with ASTM D4787, using a Tinker Razor Holiday Detector, San Gabriel, CA, Model AP/W, or an approved equal device. Test voltage of 100-volts/mil of coating thickness shall be applied. All pinholes shall be marked and repaired using manufacturer's approved method (ASTM G62).

All holiday testing shall be done in the presence of the Engineer.

5.07D.6 MEASUREMENT

The quantity to be measured for payment shall be the number of existing manholes reconstructed on each size, type, shape and kind of existing sewer using each specified D.E.P. approved lining method completely, as shown, specified, or ordered, and which are accepted by the Engineer.

5.07D.7 PRICE TO COVER

- (A) FOR MANHOLES ON EXISTING SEWERS USING CENTRIFUGALLY-CAST-CONCRETE-PIPE (CCCP) LINING METHOD:

The contract price for "RECONSTRUCTION OF EXISTING MANHOLES ON EXISTING SEWERS USING D.E.P. APPROVED CCCP LINING METHOD" shall be the unit price bid per each existing manhole reconstructed on each size, type, shape and kind of existing sewer using D.E.P. approved centrifugally-cast-concrete-pipe (CCCP) lining method and shall cover the cost of all labor, materials, plant, equipment, samples and tests required or necessary to reconstruct the existing manhole as specified herein, including the taking, storing and protecting of test cubes; all submittals; fluming and/or diversion of the flow in the existing manhole; applying Con^{mic}Shield[®] corrosion protection rinse; walk-through inspection prior to lining; applying Cor+Gard Cure 'N Seal curing compound; and furnishing and installing all other items necessary to complete this work and do all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

The contract price hereunder shall also include the cost of all labor and materials required and necessary to provide for safe environment and temporary lighting.

- (B) FOR MANHOLES ON EXISTING SEWERS USING POLYMER LINING METHOD:

The contract price for "RECONSTRUCTION OF EXISTING MANHOLES ON EXISTING SEWERS USING D.E.P. APPROVED POLYMER LINING METHOD" shall be the unit price bid per each existing manhole reconstructed on each size, type, shape and kind of existing sewer using D.E.P. approved polymer lining method and shall cover the cost of all labor, materials, plant, equipment, samples and tests required or necessary to reconstruct the existing sewer as specified herein, including the making of sample test panels, holiday testing; pinhole repair, all submittals; fluming and/or diversion of the flow in the existing manhole; walk-through inspection prior to lining; and furnishing and installing all other items necessary to complete this work and do all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

The contract price hereunder shall also include the cost of all labor and materials required and necessary to provide for safe environment and temporary lighting.

(C) FOR MANHOLES ON EXISTING SEWERS USING POLYURETHANE LINING METHOD:

The contract price for "RECONSTRUCTION OF EXISTING MANHOLES ON EXISTING SEWERS USING D.E.P. APPROVED POLYURETHANE LINING METHOD" shall be the unit price bid per each existing manhole reconstructed on each size, type, shape and kind of existing sewer using D.E.P. approved polyurethane lining method and shall cover the cost of all labor, materials, plant, equipment, samples and tests required or necessary to reconstruct the existing manhole as specified herein, including the making of sample test panels, holiday testing; pinhole repair, all submittals; fluming and/or diversion of the flow in the existing manhole; walk-through inspection prior to lining; and furnishing and installing all other items necessary to complete this work and do all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

The contract price hereunder shall also include the cost of all labor and materials required and necessary to provide for safe environment and temporary lighting.

Payment for Reconstruction Of Existing Manholes On Existing Sewers Using D.E.P. Approved Lining Methods will be made under the Item Number as calculated below:

The Item Numbers for Reconstruction Of Existing Manholes On Existing Sewers Using D.E.P. Approved Lining Methods have fifteen characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Reconstruction Of Existing Manholes On Existing Sewers Using D.E.P. Approved Lining Methods:

51.24

(2) The sixth character shall define the Type of D.E.P. Approved Lining Method to be used to reconstruction the existing manhole:

C - CCCP (Centrifugally-Cast-Concrete-Pipe) Lining Method

P - Polymer Lining Method

U - Polyurethane Lining Method

(3) The seventh character shall define the Type of Sewer Effluent of the existing sewer the existing manhole is on:

S - Sanitary Sewer

M - Storm Sewer

C - Combined Sewer

I - Interceptor Sewer

(4) The eighth, ninth and tenth characters shall define either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Sewers of Other Shapes the existing manhole is on (e.g. Rectangular, Arched, Elliptical, and Egg). (The eighth, ninth and tenth characters representing the unit of inches for either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Sewers of Other Shapes.) See examples below:

060 - 60"

096 - 96"

108 - 108"

120 - 120"

(5) The eleventh character shall define the Shape of the Existing Sewer the existing manhole is on:

D - Circular (Diameter)

- R - Rectangular (Single Barrel)
- B - Double Barrel Rectangular
- T - Triple Barrel Rectangular
- A - Arch-Shaped
- H - Horizontal Elliptical
- V - Vertical Elliptical
- E - Egg-Shaped

(6) The twelfth character shall define the Kind of Existing Sewer the existing manhole is on:
 B - Brick
 C - Concrete

(7) The thirteenth, fourteenth and fifteenth characters shall define either Circular and Arch-Shaped or the Height of the Sewer for Existing Sewers of Other Shapes the existing manhole is on (e.g. Rectangular, Elliptical, and Egg). (The thirteenth, fourteenth and fifteenth characters representing the unit of inches for the Height of the Sewer for Existing Sewers of Other Shapes.) See examples below:

- 000 - Circular and Arch-Shaped
- 087 - 87"
- 096 - 96"
- 108 - 108"
- 120 - 120"

(8) The Item Numbers together with Description and Pay Unit as provided in the Bid Schedule are provided below:

Item No.	Description	Pay Unit
51.24CS054DB000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 54" DIAMETER CIRCULAR BRICK SANITARY SEWER USING D.E.P. APPROVED CCCP LINING METHOD	EACH
51.24CS054DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 54" DIAMETER CIRCULAR CONCRETE SANITARY SEWER USING D.E.P. APPROVED CCCP LINING METHOD	EACH
51.24PS054DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 54" DIAMETER CIRCULAR CONCRETE SANITARY SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	EACH
51.24US054DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 54" DIAMETER CIRCULAR CONCRETE SANITARY SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	EACH
51.24CS051RC048	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 51"W X 48"H RECTANGULAR CONCRETE SANITARY SEWER USING D.E.P. APPROVED CCCP LINING METHOD	EACH
51.24PS084AB000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 84"W ARCH-SHAPED BRICK SANITARY SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	EACH
51.24CS048VB076	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 48"W X 76"H VERTICAL ELLIPTICAL BRICK SANITARY SEWER USING D.E.P. APPROVED CCCP LINING METHOD	EACH
51.24US043VC068	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 43"W X 68"H VERTICAL ELLIPTICAL CONCRETE SANITARY SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	EACH
51.24PS040EB060	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 40"W X 60"H EGG-SHAPED BRICK SANITARY SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	EACH
51.24CM060DB000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60" DIAMETER CIRCULAR BRICK STORM SEWER USING D.E.P. APPROVED CCCP LINING METHOD	EACH

51.24UM060DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60" DIAMETER CIRCULAR CONCRETE STORM SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	EACH
51.24PM060RC051	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60"W X 51"H RECTANGULAR CONCRETE STORM SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	EACH
51.24CM108AB000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 108"W ARCH-SHAPED BRICK STORM SEWER USING D.E.P. APPROVED CCCP LINING METHOD	EACH
51.24UM053VB083	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 53"W X 83"H VERTICAL ELLIPTICAL BRICK STORM SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	EACH
51.24PM058VC091	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 58"W X 91"H VERTICAL ELLIPTICAL CONCRETE STORM SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	EACH
51.24CM047EB070	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 47"W X 70"H EGG-SHAPED BRICK STORM SEWER USING D.E.P. APPROVED CCCP LINING METHOD	EACH
51.24PM052EC065	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 52"W X 65"H EGG-SHAPED CONCRETE STORM SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	EACH
51.24UM072BC072	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 72"W X 72"H DOUBLE BARREL RECTANGULAR CONCRETE STORM SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	EACH
51.24CM087TC060	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 87"W X 60"H TRIPLE BARREL RECTANGULAR CONCRETE STORM SEWER USING D.E.P. APPROVED CCCP LINING METHOD	EACH
51.24CC072DB000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 72" DIAMETER CIRCULAR BRICK COMBINED SEWER USING D.E.P. APPROVED CCCP LINING METHOD	EACH
51.24PC072DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 72" DIAMETER CIRCULAR CONCRETE COMBINED SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	EACH
51.24UC126RC075	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 126"W X 75"H RECTANGULAR CONCRETE COMBINED SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	EACH
51.24CC132AB000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 132"W ARCH-SHAPED BRICK COMBINED SEWER USING D.E.P. APPROVED CCCP LINING METHOD	EACH
51.24PC063VB098	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 63"W X 98"H VERTICAL ELLIPTICAL BRICK COMBINED SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	EACH
51.24UC077VC121	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 77"W X 121"H VERTICAL ELLIPTICAL CONCRETE COMBINED SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	EACH
51.24CC050EB074	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 50"W X 74"H EGG-SHAPED BRICK COMBINED SEWER USING D.E.P. APPROVED CCCP LINING METHOD	EACH
51.24UC058EC077	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 58"W X 77"H EGG-SHAPED CONCRETE COMBINED SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	EACH
51.24CI060DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED CCCP LINING METHOD	EACH
51.24PI060DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	EACH

51.24UI060DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	EACH
51.24CI064RC048	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 64"W X 48"H RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED CCCP LINING METHOD	EACH
51.24PI060BC060	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60"W X 60"H DOUBLE BARREL RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED POLYMER LINING METHOD	EACH
51.24UI078TC060	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 78"W X 60"H TRIPLE BARREL RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	EACH

(18) Refer to Section 5.11 - Outfall Structures, Subsection 5.11.2 - Materials, Page V-95:

Delete from Subsection 5.11.1, paragraph (A) in its entirety:

Substitute the following:

(A) Concrete used for outfall structure (including headwalls, reinforced concrete sewer outfalls, cradles and encasements, chambers, manholes and catch basins) shall comply with the requirements of **General Specification 11 - Concrete, as modified in Section 2.15**; and, shall contain entrained air of six percent (6%), and a corrosion inhibitor. The corrosion inhibitor shall consist of a calcium nitrite solution, containing 30 ±2% calcium nitrite solids by weight and having a specific gravity of 1.27 ±0.02. The corrosion inhibitor when used in the manufacturing process shall not produce a significant amount of chloride ions in the final product (less than 1,000-ppm). The ph shall be greater than 8. The admixture shall not contain chemicals that produce a condition injurious to the quality and durability of the concrete or reinforcing steel. Calcium nitrite, which acts as an accelerator, may be used in conjunction with compatible retarding admixtures to control setting time and workability of the concrete, consult the manufacturer of the product. The corrosion inhibitor must be added to the mix immediately after air entraining and retarding admixtures have been introduced into the batch. Acceptance of calcium nitrite based corrosion inhibitor shall be based upon it being listed in the most current New York State Department of Transportation's "Approved List Of Calcium Nitrite Based Corrosion Inhibitors".

(19) Refer to Section 5.18A - Sewer Cleaning, Subsection 5.18A.3 - Disposal, Page V-124:

Delete from Subsection 5.18A.3, the first paragraph in its entirety:

Substitute the following:

All material removed from the sewers and sewer portions through the manholes under this contract shall become the property of the Contractor and shall be properly disposed of away from the site, at the Contractor's expense.

(20) Refer to Page V-126:

Add the following new **Section 5.18C**:

**SECTION 5.18C
CLEANING OF EXISTING SEWERS**

5.18C.1 INTENT

This section describes the cleaning of existing sewers that are to be reconstructed by the following lining methods:

- (a) D.E.P. approved centrifugally-cast-concrete-pipe (CCCP) lining method;
- (b) D.E.P. approved polymer lining method; and,

- (c) D.E.P. approved polyurethane lining method.

5.18C.2 WORK INCLUDED

The Contractor shall furnish all labor, materials and equipment and shall do all work necessary to remove and dispose of all loose debris, grease, oil and silt from all surfaces of all existing sewers and sewer portions through the manholes which are shown on the plans or specified in the contract documents to be reconstructed. The Contractor shall also do all work necessary to clean all exposed steel of rust, masonry, etc.

Prior to the start of work the Contractor will be required to submit a fluming detail in accordance with **Subsection 1.06.12 - (3) Existing Flow**. This fluming diagram shall detail the Contractor's method to prevent debris, silt, and grease from migrating downstream during the cleaning operation. The Contractor shall be required to clean the downstream sewer if the debris, grease, oil and silt from the cleaning are not captured and removed at no additional cost to the City.

After all debris (of any kind), grease, and fines have been physically removed from the sewers and sewer portions through the manholes, the sewer surfaces and sewer portion through the manhole surfaces shall receive a thorough cleaning by high-pressure water blasting or other approved method, to remove any silt, grease, oil, laitance or any other substance which could interfere with the bond of the newly placed lining with the surfaces of the sewers and sewer portions through the manholes.

Unless otherwise approved, the water-blast pump shall have a minimum capacity of 5,000-psi pressure. The Contractor shall refer to SSPC-SP13/NACE 6 "Surface Preparation Of Concrete" for detailed guidelines. The surface preparation requirement is to expose aggregate to sound concrete and obtain a uniform surface texture of CSP 4-6 ICRI Guideline 03732. If the surface texture is greater than CSP-6, the substrate may require resurfacing as directed by the Engineer. The surface preparation must provide a sound, clean, neutralized surface with a minimum pH of 8.

For areas where exposed rebar is present, abrasive blasting or grinding is required to thoroughly remove rust and scale from the rebar. Any loose concrete around or behind the rebar must be removed. Chipping concrete away from behind the rebar may be required to ensure the rebar is rust free prior to application of the resurfacing material.

5.18C.3 DISPOSAL

All material removed from the sewers and sewer portions through the manholes under this contract shall become the property of the Contractor and shall be properly disposed of away from the site, at the Contractor's expense.

In the event that the cleaning of sewers and sewer portions through the manholes is subcontracted, it shall be Contractor's responsibility to ensure that the subcontractor properly disposes of the material removed away from the site.

5.18C.4 MEASUREMENT

The quantity of existing sewer cleaning to be measured for payment shall be the number of linear feet of each size in-place existing sewers actually cleaned of loose debris, grease, oil, and silt to the satisfaction of the Engineer, measured along the centerline of the sewer and along the centerline of the sewer portions through the manholes.

The quantity to be measured for payment per linear foot for existing sewer cleaning of multiple barrel sewers shall be measured once for all barrels within that linear section. Measurement for payment will not be made for each multiple barrel cleaned.

5.18C.5 PRICE TO COVER

The contract price for "CLEANING OF EXISTING SEWERS" shall be the unit price bid per linear foot for each size, shape, kind and type of existing sewer cleaned and shall cover the cost of all labor, materials and equipment required or necessary for the cleaning of and proper removal and disposal of all loose debris, grease, oil, laitance, and silt in the existing sewers and sewer portions through the manholes, including fluming, dewatering and/or diversion of the flow in the existing sewers and sewer portions through the manholes, abrasive water blasting, grinding and furnishing and installing all other items necessary to complete this work, together with all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

5.18C.6 ADDITIONAL PAYMENT

For the purposes of payment, loose debris shall be defined as solids not larger than twelve (12) inches in their greatest dimension that can be removed from the invert area of existing sewers and sewer portions through the manholes without chipping to facilitate removal. Loose debris shall also be defined as loose concrete around or behind rebar that require removal. Chipping shall mean removal by pneumatic or conventional hand held hammers and chisels. Silt shall be defined as all sedimentary material.

Should the Contractor be required to remove and dispose of any debris not falling within the guidelines specified herein, then payment for the cost of all labor, material, equipment, etc. shall be made in accordance with **Articles 25 and 26** of the Contract.

Payment for Cleaning Of Existing Sewers will be made under the Item Number as calculated below:

The Item Numbers for Cleaning Of Existing Sewers have fourteen characters. (The decimal point is considered a character, the third character.)

- (1) The first five characters shall define Cleaning Of Existing Sewers:
54.14

- (2) The sixth character shall define the Type of Sewer Effluent:
S - Sanitary Sewer
M - Storm Sewer
C - Combined Sewer
I - Interceptor Sewer

- (3) The seventh, eighth and ninth characters shall define either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Sewers of Other Shapes (e.g. Rectangular, Arched, Elliptical, and Egg). (The seventh, eighth and ninth characters representing the unit of inches for either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Sewers of Other Shapes.) See examples below:

060 - 60"
096 - 96"
108 - 108"
120 - 120"

- (4) The tenth character shall define the Shape of the Existing Sewer:
D - Circular (Diameter)
R - Rectangular (Single Barrel)
B - Double Barrel Rectangular
T - Triple Barrel Rectangular
A - Arch-Shaped
H - Horizontal Elliptical
V - Vertical Elliptical
E - Egg-Shaped

- (5) The eleventh character shall define the Kind of Existing Sewer:

B - Brick
C - Concrete

(6) The twelfth, thirteenth and fourteenth characters shall define either Circular and Arch-Shaped or the Height of the Sewer for Existing Sewers of Other Shapes (e.g. Rectangular, Elliptical, and Egg). (The twelfth, thirteenth and fourteenth characters representing the unit of inches for the Height of the Sewer for Existing Sewers of Other Shapes.) See examples below:

000 - Circular and Arch-Shaped
087 - 87"
096 - 96"
108 - 108"
120 - 120"

(7) Examples of Item Numbers together with Description and Pay Unit as provided in the Bid Schedule are provided below:

Item No.	Description	Pay Unit
54.14S054DB000	CLEANING OF EXISTING 54" DIAMETER CIRCULAR BRICK SANITARY SEWER	L.F.
54.14S054DC000	CLEANING OF EXISTING 54" DIAMETER CIRCULAR CONCRETE SANITARY SEWER	L.F.
54.14S051RC048	CLEANING OF EXISTING 51"W X 48"H RECTANGULAR CONCRETE SANITARY SEWER	L.F.
54.14S084AB000	CLEANING OF EXISTING 84"W ARCH-SHAPED BRICK SANITARY SEWER	L.F.
54.14S048VB076	CLEANING OF EXISTING 48"W X 76"H VERTICAL ELLIPTICAL BRICK SANITARY SEWER	L.F.
54.14S043VC068	CLEANING OF EXISTING 43"W X 68"H VERTICAL ELLIPTICAL CONCRETE SANITARY SEWER	L.F.
54.14S040EB060	CLEANING OF EXISTING 40"W X 60"H EGG-SHAPED BRICK SANITARY SEWER	L.F.
54.14S045EC060	CLEANING OF EXISTING 45"W X 60"H EGG-SHAPED CONCRETE SANITARY SEWER	L.F.
54.14M060DB000	CLEANING OF EXISTING 60" DIAMETER CIRCULAR BRICK STORM SEWER	L.F.
54.14M060DC000	CLEANING OF EXISTING 60" DIAMETER CIRCULAR CONCRETE STORM SEWER	L.F.
54.14M060RC051	CLEANING OF EXISTING 60"W X 51"H RECTANGULAR CONCRETE STORM SEWER	L.F.
54.14M108AB000	CLEANING OF EXISTING 108"W ARCH-SHAPED BRICK STORM SEWER	L.F.
54.14M053VB083	CLEANING OF EXISTING 53"W X 83"H VERTICAL ELLIPTICAL BRICK STORM SEWER	L.F.
54.14M058VC091	CLEANING OF EXISTING 58"W X 91"H VERTICAL ELLIPTICAL CONCRETE STORM SEWER	L.F.
54.14M047EB070	CLEANING OF EXISTING 47"W X 70"H EGG-SHAPED BRICK STORM SEWER	L.F.
54.14M052EC065	CLEANING OF EXISTING 52"W X 65"H EGG-SHAPED CONCRETE STORM SEWER	L.F.
54.14M072BC072	CLEANING OF EXISTING 72"W X 72"H DOUBLE BARREL RECTANGULAR CONCRETE STORM SEWER	L.F.
54.14M087TC060	CLEANING OF EXISTING 87"W X 60"H TRIPLE BARREL RECTANGULAR CONCRETE STORM SEWER	L.F.
54.14C072DB000	CLEANING OF EXISTING 72" DIAMETER CIRCULAR BRICK COMBINED SEWER	L.F.
54.14C072DC000	CLEANING OF EXISTING 72" DIAMETER CIRCULAR CONCRETE	L.F.

54.14C126RC075	COMBINED SEWER CLEANING OF EXISTING 126"W X 75"H RECTANGULAR CONCRETE COMBINED SEWER	L.F.
54.14C132AB000	CLEANING OF EXISTING 132"W ARCH-SHAPED BRICK COMBINED SEWER	L.F.
54.14C063VB098	CLEANING OF EXISTING 63"W X 98"H VERTICAL ELLIPTICAL BRICK COMBINED SEWER	L.F.
54.14C077VC121	CLEANING OF EXISTING 77"W X 121"H VERTICAL ELLIPTICAL CONCRETE COMBINED SEWER	L.F.
54.14C050EB074	CLEANING OF EXISTING 50"W X 74"H EGG-SHAPED BRICK COMBINED SEWER	L.F.
54.14C058EC077	CLEANING OF EXISTING 58"W X 77"H EGG-SHAPED CONCRETE COMBINED SEWER	L.F.
54.14I060DC000	CLEANING OF EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER	L.F.
54.14I064RC048	CLEANING OF EXISTING 64"W X 48"H RECTANGULAR CONCRETE INTERCEPTOR SEWER	L.F.
54.14I060BC060	CLEANING OF EXISTING 60"W X 60"H DOUBLE BARREL RECTANGULAR CONCRETE INTERCEPTOR SEWER	L.F.
54.14I078TC060	CLEANING OF EXISTING 78"W X 60"H TRIPLE BARREL RECTANGULAR CONCRETE INTERCEPTOR SEWER	L.F.

(21) Refer to Page V-132:

Add the following new Section 5.20C:

**SECTION 5.20C
MORTAR FOR SEWER/MANHOLE REPAIR WORK (FOR CCCP LINING METHOD)**

5.20C.1 INTENT

This section describes repair work that is required to repair the existing sewer/manhole that is to be reconstructed by a D.E.P. approved centrifugally-cast-concrete-pipe (CCCP) lining method, to its original structural (surface plane) lines.

5.20C.2 MATERIALS

(A) Repair mortar shall be PERMACAST® PL-12000 as manufactured by AP/M PERMAFORM available from the following distributors/installers: (i) Arold Construction Company Incorporated, 51 Powder Mill Bridge Road, Kingston, NY 12401-7210, Contact: Ryan Arold, Tel. No. 845-336-8753, rarold@aroldcompanies.com; (ii) Centrifugal Lining Incorporated, 1201 Edgely Road, Levittown, PA 19057-4801, Contact: Scott Benner, Tel. No. 215-269-6180, sbenner@centlining.com; (iii) Truax Corporation, PO Box 2186, Plainville MA 02762, Contact: Lloyd Truax, Tel. No. 508-316-0979, truaxcorporation@comcast.net; or approved equal.

PERMACAST® PL-12000 comes in dry mix packages of 50-lbs each. PERMACAST® PL-12000 is an ultra-high-strength, high build, abrasion resistant, and; with the additive Con^{mic}Shield®; corrosion resistant mortar. The hardened material is dense and highly impermeable. The composition also possesses excellent thin-section toughness, high modulus of elasticity and self-bonding. Graded quartz sands are used to enhance particle packing and further improve the fluidity and hardened density.

Physical Properties:

Set Time At 70°F ASTM C403:

Initial Set -----approx. 150-minutes

Final Set -----approx. 240-minutes

Flexural Strength ASTM C293:

24-hours -----min. 800-psi

28-days -----	min. 1,200-psi
Compressive Strength ASTM C109:	
24-hours -----	5,000-psi
28-days -----	11,500-psi
Tensile Strength ASTM C496 -----	670-psi
Slant Shear Bond ASTM C882 -----	1,720-psi
Modulus Of Elasticity ASTM C469:	
28-days -----	min. 3.48×10^6 -psi
Freeze Thaw ASTM C666 -----	300 Cycle Pass

(B) Water shall be fresh, clean and free from oils, acids, alkali or organic matter.

(C) Reinforcement shall comply with the requirements of **General Specification 11 - Concrete, as modified in Section 2.15 and Section 5.38.**

5.20C.3 CONSTRUCTION METHOD

(A) DESCRIPTION - The Contractor will be responsible for repairing the existing sewer/manhole as directed by the Engineer, to its original structural (surface plane) lines. This repair work shall be accomplished in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as specified herein.

(B) MIXING

- (1) PERMACAST® PL-12000 repair mortar shall be mixed by combining 50-lbs packaged dry mix with potable water in an amount as specified by the manufacturer (6 to 6.5-pints @ 50°-70°F). The mortar shall be mixed with a high-speed shear mixer until proper consistency is obtained. Continue to agitate the mortar to prevent thickening beyond desired fluidity. The working time of the mix is approximately thirty (30) minutes depending on conditions.

The water content shall be as required by the Engineer, and as specified by the manufacturer, and can achieve consistencies ranging from free flowing to plastic.

- (2) Con^{mic}Shield® additive shall be added to the PERMACAST® PL-12000 repair mortar mix above in the amounts prescribed by the manufacturer for Microbiologically Induced Corrosion (MIC) protection. No other additives shall be used unless approved by the manufacturer and the Engineer.

(C) EQUIPMENT

- (1) Mortar mixers, spray guns, gun tips, compressors, pumps, hoses, tools, etc. shall be standard commercial models as specified by the manufacturer. Mixing equipment shall be capable of thoroughly mixing the materials in sufficient quantity to maintain placing continuity. Compressor shall be of sufficient capacity to maintain, without interruption, the pressures and volume necessary for delivery.
- (2) The Contractor shall prepare and inspect all necessary tools and any spare parts that are required for equipment that suffer frequent breakdowns, and shall ensure that said tools and spare parts are available at the site. Supporting equipment, such as pumps and generators, shall be provided at the site in the event there is a fluid surge and pumping is required on an emergency basis. The Contractor shall also prepare and make operable all necessary communication equipment for the Contractor's field crew.

(D) DAMAGED INVERT - If the existing invert is found to be damaged and lower than its original designed elevation, as determined by the Engineer, the Contractor shall restore the invert up to its original structural (surface plane) line as follows:

- (i) For Severely Eroded Inverts: The Contractor shall place Number Four (4) Steel Reinforcing Bars at twelve (12) inches spacing in both directions throughout the depressed and damaged area and then apply sufficient quantities of PERMACAST® PL-12000 repair mortar to restore the surface of the sewer/manhole to its original structural (surface plane) lines. There shall be a minimum clearance of three-quarter (3/4) inch between steel reinforcement and the surface of the PERMACAST® PL-12000 repair mortar.
- (ii) For Moderately Eroded Inverts: The Contractor shall apply sufficient quantities of PERMACAST® PL-12000 repair mortar to restore the surface of the sewer/manhole to its original structural (surface plane) lines.

PERMACAST® PL-12000 repair mortar shall be applied by placing material hose at the far end of the deteriorated pipe and commence pumping. As the mortar fills the invert void, retrieve the hose backward to the entry end. The mortar shall be shaped to conform generally to the original structural (surface plane) lines. If additional thickness is desired, additional mortar may be overlaid within the first 60-minutes without creating cold joints.

(E) CRACKS IN WALLS AND MISSING BRICK, MASONRY OR CONCRETE

- (1) The following repair procedure is to be used only when in the opinion of the Engineer the structural integrity of the sewer/manhole has not been compromised.
 - (i) Isolated cracks up to five (5) linear feet long and up to one-half (1/2) inch wide and voids created by three (3) or less missing bricks or created by missing masonry or concrete less than one (1) square foot in area, are to be considered nonthreatening and shall be repaired by the Contractor by apply sufficient quantities of PERMACAST® PL-12000 repair mortar into the cracks and voids to restore the surface of the sewer/manhole to its original structural (surface plane) lines.
 - (ii) Where cracks and voids exceed the listed parameters specified in subparagraph (i) above, the Contractor shall repair the sewer/manhole by mechanically raking out loose or crumbling material from the opening, flush the void with water from a pressure hose, place Number Three (3) Steel Reinforcing Bars at six (6) inches spacing in both directions throughout the area of the void, properly anchoring the steel reinforcement bars to the existing sewer/manhole, and apply sufficient quantities of PERMACAST® PL-12000 repair mortar into the opening so as to completely fill the void in order to restore the surface of the sewer/manhole to its original structural (surface plane) lines. There shall be a minimum clearance of three-quarter (3/4) inch between steel reinforcement and the surface of the PERMACAST® PL-12000 repair mortar.
- (2) The following repair procedure is to be used only when, in the opinion of the Engineer, the structural integrity of the sewer/manhole has been compromised because of cracks and voids to the extent that the sewer/manhole is considered unsafe.

The Contractor shall cease work in that unsafe section of the sewer/manhole. The Contractor shall then submit for the Engineer's review and approval, the Contractor's recommendation (including an estimate of costs) for repairing the damage so as to make the sewer/manhole safe as well as operable. The Contractor shall not perform any remedial work prior to receiving written notification of the Engineer's approval. This "make safe" work shall be considered as extra work, and shall be paid for in accordance with **Articles 25 and 26** of the Contract.

(F) CURING - After the repair mortar is installed and initial set is complete as determined by the Engineer, the Contractor shall apply Cor+Gard Cure 'N Seal curing compound to the interior surface of the newly placed repair mortar. The curing compound shall be applied in accordance with the manufacturer's instructions, recommendations, specifications and standards.

(G) All house connection piping spigots intruding into the sewer to be lined shall be trimmed back so that the ends of their spigots will line up with the proposed inside face of the lined sewer.

5.20C.4 MEASUREMENT

(A) The quantity of repair mortar for repair work will be measured on the basis of the actual number of cubic feet of repair mortar used to repair the damages to the invert, fill cracks in the walls, and fill voids created by missing brick, masonry or concrete) placed in the work to the satisfaction of the Engineer, in conformity with the contract documents.

(B) The quantity of steel used for repair work will be measured on the basis of the actual number of pounds of additional steel reinforcement bars placed in the work to the satisfaction of the Engineer, in conformity with the contract documents.

5.20C.5 PRICE TO COVER

(A) The contract price for Item No. 54.32MR - MORTAR FOR SEWER/MANHOLE REPAIR WORK (FOR CCCP LINING METHOD) shall be the unit price bid per cubic foot and shall cover the cost of all labor, materials and equipment required or necessary to repair the existing sewer/manhole as specified herein, including fluming and/or diversion of the flow in the existing sewer/manhole, trimming back of house connections and furnishing and installing all other items necessary to complete this work, together with all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer. Note that mortar repair work performed for sewer/manhole repair is not the equivalent of lining mortar work performed for sewer reconstruction.

(B) Payment for the cost of all labor, material and equipment required or necessary to properly place in the existing sewer/manhole steel reinforcing bars used for repair work shall be made under Item No. 73.51AS - ADDITIONAL STEEL REINFORCING BARS.

Payment for Mortar For Sewer/Manhole Repair Work (For CCCP Lining Method) will be made under the Item Number as calculated below:

The Item Number for Mortar For Sewer/Manhole Repair Work (For CCCP Lining Method) has seven characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Mortar For Sewer/Manhole Repair Work (For CCCP Lining Method):

54.32

(2) The sixth and seventh characters shall define Mortar For Sewer/Manhole Repair Work (For CCCP Lining Method):

MR - Mortar For Sewer/Manhole Repair Work
(For CCCP Lining Method)

(3) The Item Number together with Description and Pay Unit as provided in the Bid Schedule is provided below:

Item No.	Description	Pay Unit
54.32MR	MORTAR FOR SEWER/MANHOLE REPAIR WORK (FOR CCCP LINING METHOD)	C.F.

(22) Refer to Page V-132:

Add the following new Section 5.20D:

**SECTION 5.20D
MATERIAL FOR SEWER/MANHOLE REPAIR WORK (FOR POLYMER LINING METHOD)**

5.20D.1 INTENT

This section describes repair work that is required to repair the existing sewer/manhole that is to be reconstructed by a D.E.P. approved polymer lining method, to its original structural (surface plane) lines.

5.20D.2 MATERIALS

(A) REPAIR MATERIAL: Selection of the material for repair shall be dependent upon concrete condition, depth and extent of voids and cracks, type of defect, whether application is on vertical, horizontal or overhead surfaces, manufacturer's instructions, recommendations, specifications and standards and direction of the Engineer.

The repair materials and substrate shall be kept at 55°-80°F for at least 48-hours prior to application.

The repair material shall not be applied when ambient and surface temperatures are expected to fall below 50°F within 72-hours of placement. Both ambient and surface temperatures must be at least 50°F at time of placement. For applying repair material at temperatures below 50°F, the material and substrate shall be warmed to above a temperature of 50°F. The area when heating shall be properly ventilated. The newly installed repair material shall be protected from freezing.

- (1) Repair material for underlayment and filling substrate irregularities shall be UNDERLAYMENT NO. F-120 as manufactured by SAUREISEN available from the following installers: (i) Alpine Painting And Sandblasting, 17 Florida Avenue, Paterson, NJ 07503, Contact: Sam Scaturro, Tel. No. 973-279-3200 Ext. 14, Fax No. 973-279-3991, sam@alpinepainting.com ; (ii) Entech Corporation, 304 Harrington Avenue, Closter, NJ 07624, Contact: Robert Benz, Tel. No. 201-784-1034, Fax No. 201-784-0855, rbenz@en-techcorp.com ; (iii) Pullman Services, 127 Salem Avenue, Thorofare, NJ 08086, Contact: John Guinta, Tel. No. 877-701-5236, jguinta@pullman-services.com ; (iv) SWERP Incorporated, 1237 Hayes Boulevard, Bristol, PA 19007, Contact: Fred DeVincent, Tel. No. 215-785-2242, Fax No. 610-834-9522, swerpinc@aol.com ; (v) Waterware Corporation, 2502 Edgemont Street, P.O. Box 3609, Philadelphia, PA 19125, Contact: Steve Byrnes, Tel. No. 215-426-5225, Fax No. 215-739-1729, steveb@waterwarecorp.com ; or approved equal.

UNDERLAYMENT NO. F-120 comes in moisture-resistant bags of 50-lbs each. UNDERLAYMENT NO. F-120 is a fast setting, high-early-strength, Portland cement and modified calcium aluminate blend-based substrate repair material available in three formulations - Trowelable, Castable or Gunitite. Where concrete deterioration is less than 1/2-inch depth and on vertical or overhead surfaces, Trowelable formulation is recommended for resurfacing or patching substrate voids or irregularities to original structural (surface plane) lines. Where concrete deterioration exceeds 1/2-inch depth, Castable or Gunitite formulation is recommended. When UNDERLAYMENT NO. F-120 is applied to vertical or overhead surfaces at a thickness greater than 1-inch it must be reinforced or anchored. "T" type anchors or 2-inch x 2-inch mesh are suitable to secure UNDERLAYMENT NO. F-120 Castable or Gunitite grade material.

Physical Properties:	Trowelable	Castable	Gunitite
Abrasion Resistance ASTM C704:			
Volume loss, cm ³	5.14	1.66	No data
Volume loss, %	0.65	0.16	No data
Compressive Strength (psi):			
24-hours	4,500	1,900	2,500
7-days	5,000	7,000	5,000
14-days	5,000	7,000	5,000
28-days	6,000	7,000	6,000
Density (pcf)	137	148	144

- (2) Repair material for filling substrate irregularities shall be SUBSTRATE RESURFACER™ NO. F-121 as manufactured by SAUREISEN available from the installers specified above.

SUBSTRATE RESURFACER™ NO. F-121 comes in moisture-resistant bags of 50-lbs each. SUBSTRATE RESURFACER™ NO. F-121 is a high-strength, Portland cement-based substrate repair material. SUBSTRATE RESURFACER™ NO. F-121 is Trowelable and Sprayable, and can be Spincast. SUBSTRATE RESURFACER™ NO. F-121 may be applied at a thickness greater than 1-inch and when applied to vertical or overhead surfaces must be reinforced or anchored. "T" type anchors or 2-inch x 2-inch mesh are suitable to secure SUBSTRATE RESURFACER™ NO. F-121 material.

Physical Properties:

Bond Strength By Slant Shear ASTM C882	-----	No data
Compressive Strength ASTM C109:		
24-hours	-----	3,900-psi
7-days	-----	5,000-psi
14-days	-----	5,500-psi
28-days	-----	7,000-psi
Density ASTM C20	-----	137-pcf
Flexural Strength ASTM C580	-----	1,500-psi
Freeze Thaw ASTM C666 Method A	-----	100-cycles: Durability Factor >78
Tensile Strength ASTM C307	-----	822-psi

- (3) Repair material for filling voids, substrate irregularities, and air pockets shall be FILLER COMPOUND NO. 209 and FILLER COMPOUND NO. 209FS as manufactured by SAUERISEN available from the installers specified above.

FILLER COMPOUND NO. 209 and FILLER COMPOUND NO. 209FS comes in components of three parts; (i) Part A Hardener, (ii) Part B Liquid Resin, (iii) Part C Filler Powder. (Containers are filled by weight, not by volume. Container size does not indicate volume of contents.) FILLER COMPOUND NO. 209 and FILLER COMPOUND NO. 209FS are a Trowelable, fast setting, high-strength and durable, epoxy formulated material.

Physical Properties:

	No. 209FS	No. 209
Working Time At 70°F	5-minutes	15-minutes
Minimum Cure Time Prior To Topcoating At 70°F	1-hour	3-hours
Bond Strength To Concrete ASTM D4541	Concrete Failure	Concrete Failure
Compressive Strength:		
28-day	10,000-psi	10,000-psi
Density ASTM C905	87.2-pcf	87.2-pcf
Flexural Strength ASTM C580	4,000-psi	4,000-psi
Maximum Service Temperature	150°F	150°F
Modulus Of Elasticity ASTM C580	5.2 x 10 ⁴ -psi	5.2 x 10 ⁴ -psi
Moisture Absorption ASTM C413	<0.025%	<0.025%
Shrinkage ASTM C531	<0.2%	<0.2%
Tensile Strength ASTM C307	2,200-psi	2,200-psi

- (B) Water shall be fresh, clean and free from oils, acids, alkali or organic matter.

- (C) Reinforcement shall comply with the requirements of **General Specification 11 - Concrete, as modified in Section 2.15 and Section 5.38.**

5.20D.3 CONSTRUCTION METHOD

(A) DESCRIPTION - The Contractor will be responsible for repairing the existing sewer/manhole as directed by the Engineer, to its original structural (surface plane) lines. This repair work and choice of material for repair shall be accomplished in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as approved by the Engineer.

- (B) MIXING

- (1) UNDERLAYMENT NO. F-120 and SUBSTRATE RESURFACER™ NO. F-121 mortar repair material shall be mixed by combining 50-lbs packaged dry mix with potable water in an amount and in the manner specified by the manufacturer. The material shall be mixed with a low-speed mortar mixer until proper consistency is obtained. The working time of the mix is approximately thirty (30) minutes for UNDERLAYMENT NO. F-120 and twenty (20) minutes for SUBSTRATE RESURFACER™ NO. F-121 depending on conditions. Mix only the amount of material that can be applied within the working time. Material which has begun to set must be discarded. Do not try to retemper the material.
- (2) FILLER COMPOUND NO. 209 and FILLER COMPOUND NO. 209FS epoxy repair material shall be mixed in the proportions specified by the manufacturer and as follows:
 - (i) Remix contents of Part A Hardener by shaking;
 - (ii) Remix contents of Part B Liquid Resin component for a minimum of 2-minutes with a slow speed paddle or "Jiffy" mixer;
 - (iii) Then add Part A Hardener to Part B Liquid Resin and mix for a minimum of 3-minutes with a slow speed paddle or "Jiffy" mixer until thoroughly blended;
 - (iv) Add Part C Filler Powder and continue mixing until thoroughly blended.
 - (v) Mix only the amount of material that can be applied within the working time. The working time of the mix is approximately fifteen (15) minutes for FILLER COMPOUND NO. 209 and five (5) minutes for FILLER COMPOUND NO. 209FS depending on conditions.
 - (vi) Material which has begun to set must be discarded. Do not try to retemper the material.

(C) EQUIPMENT

- (1) Mortar mixers, spray guns, gun tips, compressors, pumps, hoses, tools, etc. shall be standard commercial models as specified by the manufacturer. Mixing equipment shall be capable of thoroughly mixing the materials in sufficient quantity to maintain placing continuity. Compressor shall be of sufficient capacity to maintain, without interruption, the pressures and volume necessary for delivery.
- (2) The Contractor shall prepare and inspect all necessary tools and any spare parts that are required for equipment that suffer frequent breakdowns, and shall ensure that said tools and spare parts are available at the site. Supporting equipment, such as pumps and generators, shall be provided at the site in the event there is a fluid surge and pumping is required on an emergency basis. The Contractor shall also prepare and make operable all necessary communication equipment for the Contractor's field crew.

(D) DAMAGED INVERT - If the existing invert is found to be damaged and lower than its original designed elevation, as determined by the Engineer, the Contractor shall restore the invert up to its original structural (surface plane) line as follows:

- (i) For Severely Eroded Inverts: The Contractor shall place Number Four (4) Steel Reinforcing Bars at twelve (12) inches spacing in both directions throughout the depressed and damaged area and then apply sufficient quantities of UNDERLAYMENT NO. F-120 or SUBSTRATE RESURFACER™ NO. F-121 mortar repair material to restore the surface of the sewer/manhole to its original structural (surface plane) lines. There shall be a minimum clearance of three-quarter (3/4) inch between steel reinforcement and the surface of the UNDERLAYMENT NO. F-120 or SUBSTRATE RESURFACER™ NO. F-121 mortar repair material.
- (ii) For Moderately Eroded Inverts: The Contractor shall apply sufficient quantities of UNDERLAYMENT NO. F-120 or SUBSTRATE RESURFACER™ NO. F-121 mortar repair material to restore the surface of the sewer/manhole to its original structural (surface plane) lines.

UNDERLAYMENT NO. F-120 or SUBSTRATE RESURFACER™ NO. F-121 mortar repair material shall be applied as specified by the manufacturer and as approved by the Engineer. The mortar repair material shall be shaped to conform generally to the original structural (surface plane) lines. The Contractor shall perform a broom or brush finish to provide a more desirable bonding surface.

(E) CRACKS IN WALLS, AIR POCKETS, SUBSTRATE IRREGULARITIES AND VOIDS DUE TO MISSING BRICK, MASONRY OR CONCRETE

- (1) The following repair procedure is to be used only when in the opinion of the Engineer the structural integrity of the sewer/manhole has not been compromised.
 - (i) Areas containing large and/or extensive air pockets, isolated cracks up to five (5) linear feet long and up to one-half (1/2) inch wide, substrate irregularities up to five (5) linear feet long and up to twelve (12) inches wide and voids created by three (3) or less missing bricks or created by missing masonry or concrete less than one (1) square foot in area, are to be considered nonthreatening and shall be repaired by the Contractor by apply sufficient quantities of FILLER COMPOUND NO. 209 or FILLER COMPOUND NO. 209FS epoxy repair material into the air pockets, cracks and voids to restore the surface of the sewer/manhole to its original structural (surface plane) lines. T" type anchors or 2-inch x 2-inch mesh shall be used where conditions require use.
 - (ii) Where cracks, substrate irregularities and voids exceed the listed parameters specified in subparagraph (i) above, the Contractor shall repair the sewer/manhole by mechanically raking out loose or crumbling material from the opening, flush the void with water from a pressure hose, place Number Three (3) Steel Reinforcing Bars at six (6) inches spacing in both directions throughout the area of the void, properly anchoring the steel reinforcement bars to the existing sewer/manhole, and apply sufficient quantities of UNDERLAYMENT NO. F-120 or SUBSTRATE RESURFACER™ NO. F-121 mortar repair material into the opening so as to completely fill the void in order to restore the surface of the sewer/manhole to its original structural (surface plane) lines. There shall be a minimum clearance of three-quarter (3/4) inch between steel reinforcement and the surface of the UNDERLAYMENT NO. F-120 or SUBSTRATE RESURFACER™ NO. F-121 mortar repair material.
- (2) The following repair procedure is to be used only when, in the opinion of the Engineer, the structural integrity of the sewer/manhole has been compromised because of cracks and voids to the extent that the sewer/manhole is considered unsafe.

The Contractor shall cease work in that unsafe section of the sewer/manhole. The Contractor shall then submit for the Engineer's review and approval, the Contractor's recommendation (including an estimate of costs) for repairing the damage so as to make the sewer/manhole safe as well as operable. The Contractor shall not perform any remedial work prior to receiving written notification of the Engineer's approval. This "make safe" work shall be considered as extra work, and shall be paid for in accordance with **Articles 25 and 26** of the Contract.

(F) CURING

- (1) UNDERLAYMENT NO. F-120 and SUBSTRATE RESURFACER™ NO. F-121 mortar repair material must be properly cured in a high humidity environment (fog spray or equivalent). The time for initial set and final set shall be as specified by the manufacturer. UNDERLAYMENT NO. F-120 and SUBSTRATE RESURFACER™ NO. F-121 mortar repair material may be top coated after initial set has occurred.
- (2) FILLER COMPOUND NO. 209 and FILLER COMPOUND NO. 209FS epoxy repair material shall be cured as specified by the manufacturer and approved by the Engineer. The time for initial set and final set shall be as specified by the manufacturer. FILLER COMPOUND NO. 209 and FILLER COMPOUND NO. 209FS epoxy repair material may be top coated after initial set has occurred.

(G) All house connection piping spigots intruding into the sewer to be lined shall be trimmed back so that the ends of their spigots will line up with the proposed inside face of the lined sewer.

5.20D.4 MEASUREMENT

(A) The quantity of repair material for repair work will be measured on the basis of the actual number of cubic feet of repair material used to repair the damages to the invert, fill cracks in the walls, fill air pockets, fill substrate irregularities and fill voids created by missing brick, masonry or concrete) placed in the work to the satisfaction of the Engineer, in conformity with the contract documents.

(B) The quantity of steel used for repair work will be measured on the basis of the actual number of pounds of additional steel reinforcement bars placed in the work to the satisfaction of the Engineer, in conformity with the contract documents.

5.20D.5 PRICE TO COVER

(A) The contract price for Item No. 54.33MRP - MATERIAL FOR SEWER/MANHOLE REPAIR WORK (FOR POLYMER LINING METHOD) - PORTLAND CEMENT-BASED shall be the unit price bid per cubic foot and shall cover the cost of all labor, materials and equipment required or necessary to repair the existing sewer/manhole (using UNDERLAYMENT NO. F-120 and SUBSTRATE RESURFACER™ NO. F-121) as specified herein, including fluming and/or diversion of the flow in the existing sewer/manhole, anchors and/or mesh, trimming back of house connections and furnishing and installing all other items necessary to complete this work, together with all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

(B) The contract price for Item No. 54.33MRE - MATERIAL FOR SEWER/MANHOLE REPAIR WORK (FOR POLYMER LINING METHOD) - EPOXY FORMULATION shall be the unit price bid per cubic foot and shall cover the cost of all labor, materials and equipment required or necessary to repair the existing sewer/manhole (using FILLER COMPOUND NO. 209 and FILLER COMPOUND NO. 209FS) as specified herein, including fluming and/or diversion of the flow in the existing sewer/manhole, anchors and/or mesh, trimming back of house connections and furnishing and installing all other items necessary to complete this work, together with all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

(C) Payment for the cost of all labor, material and equipment required or necessary to properly place in the existing sewer/manhole steel reinforcing bars used for repair work shall be made under Item No. 73.51AS - ADDITIONAL STEEL REINFORCING BARS.

Payment for Material For Sewer/Manhole Repair Work (For Polymer Lining Method) will be made under the Item Number as calculated below:

The Item Number for Material For Sewer/Manhole Repair Work (For Polymer Lining Method) has eight characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Material For Sewer/Manhole Repair Work (For Polymer Lining Method):

54.33

(2) The sixth and seventh characters shall define Material For Sewer/Manhole Repair Work (For Polymer Lining Method):

MR - Material For Sewer/Manhole Repair Work
(For Polymer Lining Method)

(3) The eighth character shall define Type of Repair Material Used For Sewer/Manhole Repair Work (For Polymer Lining Method):

P - Portland Cement-Based
E - Epoxy Formulation

(4) The Item Number together with Description and Pay Unit as provided in the Bid Schedule is provided below:

Item No.	Description	Pay Unit
54.33MRP	MATERIAL FOR SEWER/MANHOLE REPAIR WORK (FOR POLYMER LINING METHOD) - PORTLAND CEMENT-BASED	C.F.
54.33MRE	MATERIAL FOR SEWER/MANHOLE REPAIR WORK (FOR POLYMER LINING METHOD) - EPOXY FORMULATION	C.F.

(23) Refer to Page V-132:

Add the following new **Section 5.20E**:

**SECTION 5.20E
HYDROACTIVE POLYURETHANE - INJECTION GROUTING
(FOR POLYMER LINING METHOD)**

5.20E.1 INTENT

This section describes injection grouting that is required to fill surrounding voids and/or stop infiltration/exfiltration of the existing sewer/manhole to be reconstructed by a D.E.P. approved polymer lining method.

5.20E.2 MATERIALS

(A) Injection Grout shall be HYDROACTIVE POLYURETHANE GROUT NO. F-370 as manufactured by SAUREISEN available from the following installers: (i) Alpine Painting And Sandblasting, 17 Florida Avenue, Paterson, NJ 07503, Contact: Sam Scaturro, Tel. No. 973-279-3200 Ext. 14, Fax No. 973-279-3991, sam@alpinepainting.com ; (ii) Entech Corporation, 304 Harrington Avenue, Closter, NJ 07624, Contact: Robert Benz, Tel. No. 201-784-1034, Fax No. 201-784-0855, rbenz@entechcorp.com ; (iii) Pullman Services, 127 Salem Avenue, Thorofare, NJ 08086, Contact: John Guinta, Tel. No. 877-701-5236, jguinta@pullman-services.com ; (iv) SWERP Incorporated, 1237 Hayes Boulevard, Bristol, PA 19007, Contact: Fred DeVincent, Tel. No. 215-785-2242, Fax No. 610-834-9522, swerpinc@aol.com ; (v) Waterware Corporation, 2502 Edgemont Street, P.O. Box 3609, Philadelphia, PA 19125, Contact: Steve Byrnes, Tel. No. 215-426-5225, Fax No. 215-739-1729, steveb@waterwarecorp.com ; or approved equal.

HYDROACTIVE POLYURETHANE GROUT NO. F-370 comes in components of two parts, and is a hydrophobic, injection-applied material that expands when it meets any source of moisture before it cures and adheres tenaciously to practically any wet or dry substrate.

Physical Properties:

Low Temperature Aging (% Volume Change At -25°F) ASTM D2126:	
1-day -----	0.00%
7-day -----	0.10%
Density, Molded Core ASTM D1622 -----	2.03-pcf
Elongation ASTM D1623:	
Perpendicular -----	9.8%
Shear Modulus ASTM C273:	
Perpendicular -----	117-psi
Shear Strength ASTM C273:	
Perpendicular -----	14.5-psi
Tensile Strength ASTM D1623:	
Perpendicular -----	15.6-psi
Viscosity -----	500-cps
Water Absorption (% Weight Change) ASTM D2127 -----	<1%

(B) HYDROACTIVE POLYURETHANE GROUT NO. F-370 injection grout material shall be mixed in the proportions specified by the manufacturer and as follows:

(1) For Application By Pumping:

- (i) Remix contents of Part A Liquid Resin component for a minimum of 2-minutes with a slow speed paddle or "Jiffy" mixer;
- (ii) Then add Part B Liquid Catalyst to Part A Liquid Resin and mix with a slow speed paddle or "Jiffy" mixer to avoid whipping air, which contains moisture into the grout (The grout may begin to react if too much moisture contaminates the mix.);
- (iii) Mix only complete batches that can be used within eight (8) hours;
- (iv) It is rare that more than 1-pint of Liquid Catalyst is needed for each 5-gallon pail of Liquid Resin. It is best to use less than a pint (90% of the pint) and then increase depending on need.
- (v) If thickening occurs, Sauereisen Pump Flush can be added to return the material to its original viscosity. However no more than 10% by volume of Pump Flush shall be added. If more than 10% by volume of Pump Flush would need to be added then material shall be discarded.
- (vi) It is normal for a thin crust to develop on the surface of the material, removal of this thin crust is not required. This crust is formed as a result of moisture in the air. Simply pump the material underneath the crust. Do not use the crusted material.

(C) Sauereisen Pump Flush is clear, nonflammable and odorless. It is a medium viscosity, solvent-free liquid which can be used as a flush for urethane pumps. Sauereisen Pump Flush is not harmful to the pumps, hoses or rings and can be left in the pumps and hoses until further use of the equipment is required.

(D) Mixers, injection packers, compressors, pumps, hoses, tools, etc. shall be standard commercial models as specified by the manufacturer. Mixing equipment shall be capable of thoroughly mixing the materials in sufficient quantity to maintain placing continuity. Compressor and pumps shall be of sufficient capacity to maintain, without interruption, the pressures and volume necessary for delivery. (The minimum pump capacity shall be 1,000-psi and shall be suitable for void size and water flow rate.)

The Contractor shall prepare and inspect all necessary tools and any spare parts that are required for equipment that suffer frequent breakdowns, and shall ensure that said tools and spare parts are available at the site. Supporting equipment, such as pumps and generators, shall be provided at the site in the event there is a fluid surge and pumping is required on an emergency basis. The Contractor shall also prepare and make operable all necessary communication equipment for the Contractor's field crew.

5.20E.3 CONSTRUCTION METHOD

(A) Injection Packers shall be placed in pre-drilled 5/8-inch diameter holes located at strategic locations in the concrete sewer/manhole to ensure complete injection grout penetration of the hydroactive polyurethane grout. The location of the injection grout holes shall be determined in accordance with manufacturer's recommendations and as directed and approved by the Engineer. Injection Packers used shall be 5/8-inch diameter by 2.25-inch long packers with male zerk fittings and check valves (available from Sauereisen). The packers shall be inserted into the hole with the zerk fitting pointed outward. The packer shall be tightened very tight so as to prevent it from coming out of the concrete. Packers are not to be reused.

(B) The pump and all hoses shall be flushed with Sauereisen Pump Flush prior to pumping grout so as to remove all traces of water and other contaminants. Do not add this contaminated material to the mixed grout.

(C) The hydroactive polyurethane grout shall be injected through the injection packers to ensure filling of the voids to block infiltration/exfiltration. Pump the grout for a short time and wait for the material to flow into all of the cracks and crevices under its own pressure. This will eliminate material waste and will prevent surrounding areas from exposure to traveling material. Watch for material flow to appear in surrounding cracks, and for water leakage to decrease. After the material stops moving, drill another hole near the end of the material vein and repeat. As the job progresses, return at least twice

to previously injected ports and re-inject with more grout, this procedure aids in getting a denser resin into all sections of the void. It is recommended that each port be injected three separate times.

(D) Injection grouting pressure shall be the minimum pressure required to overcome the hydrostatic pressures. (In no case shall they be less than 1,000-psi.)

(E) Injection grouting shall commence from the upstream end of the void and/or infiltration/exfiltration area of the sewer/manhole and as directed by the Engineer.

(F) Depending upon the conditions encountered in the existing sewer/manhole, injection grouting shall be performed prior to the repair of any damaged areas as directed by the Engineer.

(G) After completion of grouting, the injection packers shall be cut off flush with the concrete surface.

(H) Immediately after using a pump and/or during breaks in grouting, the pump and all hoses shall be flushed with Sauereisen Pump Flush so that all the grout is cleared from the pump and hoses. If grout is left in the pump and/or hoses, it will react with moisture (even from the air), and render the pump useless. **NEVER FLUSH THE PUMP AND HOSES WITH WATER!**

5.20E.4 MEASUREMENT

The quantity of injection grout used for injection grouting will be measured on the basis of the actual cubic feet of hydroactive polyurethane grout mixed and placed (prior to expansion) in the work to the satisfaction of the Engineer, in conformity with the contract documents. Hydroactive polyurethane grout used for injection grout which remains in the grout hose, mixing pails, grout machine, or for waste grout which re-enters the interior of the sewer/manhole as the result of improper sealing, or as a result of improper work on the part of the Contractor, shall be deducted from the measurement.

5.20E.5 PRICE TO COVER

The contract price for Item No. 54.22HP - HYDROACTIVE POLYURETHANE - INJECTION GROUTING (FOR POLYMER LINING METHOD) shall be the unit price bid per cubic foot of hydroactive polyurethane grout used for injection grouting under and around the sewer/manhole and shall cover the cost of all labor, materials and equipment required or necessary for the proper placement of the injection grout around the existing sewer/manhole, including fluming and/or diversion of the flow in the existing sewer/manhole, installation of injection packers, flushing of equipment and furnishing and installing all other items necessary to complete this work, together with all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

Payment for Hydroactive Polyurethane - Injection Grouting (For Polymer Lining Method) will be made under the Item Number as calculated below:

The Item Number for Hydroactive Polyurethane - Injection Grouting (For Polymer Lining Method) has seven characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Hydroactive Polyurethane - Injection Grouting (For Polymer Lining Method):

54.22

(2) The sixth and seventh characters shall define Hydroactive Polyurethane - Injection Grouting (For Polymer Lining Method):

HP - Hydroactive Polyurethane - Injection Grouting (For Polymer Lining Method)

(3) The Item Number together with Description and Pay Unit as provided in the Bid Schedule is provided below:

Item No.	Description	Pay Unit
----------	-------------	----------

54.22HP HYDROACTIVE POLYURETHANE - INJECTION GROUTING (FOR C.F.
POLYMER LINING METHOD)

(24) Refer to Section 5.23 - Decking, Subsection 5.23.1 - Description, Page V-161:

Delete from Subsection 5.23.1, the third paragraph in its entirety:

Substitute the following:

Steel plates that are resting on pavement, that are not part of a decking system, and are used to temporarily span trenches and excavations for vehicular traffic and for pedestrian crossings and walkways shall not be included for payment under this decking section. The cost of all labor, materials, equipment, insurance and incidentals necessary to furnish, place, anchor and ramp these temporary steel plates, when and where directed, in order to comply with the requirements of the NYCDOT Office of Construction Mitigation and Coordination (OCMC) traffic stipulations, the directions of the Engineer, and the Contractor's construction operations shall be deemed included in the prices bid for all contract items of work.

(25) Refer to Section 5.23 - Decking, Subsection 5.23.4 - Design Criteria, Page V-162:

Add the following to Subsection 5.23.4:

(C) The Contractor may substitute skid resistant steel plates (Non-Skid Textured Plates) for timber mats, subject to approval in accordance with Subsection 4.05.5. These steel plates shall be placed flush with the existing roadway and shall be installed in compliance with the requirements of Subsection 4.05.6(G).

(26) Refer to Section 5.36 - Additional Earth Excavation Including Test Pits, Subsection 5.36.4 - Price To Cover, Paragraph (3), fifth line, Page V-195:

Change 16", to 16'.

D. AMENDMENTS TO THE STANDARD WATER MAIN SPECIFICATIONS

- (1) **Refer** to Subsection 1.06.3 - Hours Of Work, Page I-4:

Add the following to Subsection 1.06.3:

- (A) **HOLIDAY CONSTRUCTION EMBARGO** - A special Holiday Construction Embargo shall be in effect on the Friday of the week preceding Thanksgiving Day week from 6:00 AM to 11:59 PM and again from the Monday of Thanksgiving Day week from 6:00 AM through January 2, at 11:59 PM. Roadway and sidewalk construction activities will be restricted during the embargo period on the streets listed below*.

Any permits issued prior to the date of this notice, for work during this embargo period on the streets listed below which do not already have the permit stipulation "410" are hereby suspended for the period noted above. All permittees must comply with this embargo unless a special waiver is granted by OCMC. Waiver requests must be filed at least thirteen (13) days before Thanksgiving Day, in the Permit Office by filing a "Request for Roadway/Sidewalk Permits During Embargo Periods" and submitting supporting documentation. Waiver requests should only be submitted for critical reasons for a specific project. If a waiver is granted, the applicant will be notified so they can apply for the approved permits. Waivers **are not** required for ongoing Building Construction Activity Permits which already include the "410" permit stipulation. Waiver request forms may be obtained at any Permit Office or on the Department of Transportation's website at:

<http://www.nyc.gov/html/dot/downloads/pdf/holidayembapp.pdf>

Prior to this embargo period all necessary measures must be taken so that all roadways and sidewalks are in proper condition to allow for the expeditious and safe movement of vehicular, bicycle and pedestrian traffic. Tool carts, cable reels, containers, and material stored on roadways must be removed during the embargo period.

The opening of utility access covers is prohibited on any of the streets noted below between the hours of 6:00 AM and midnight unless the utility or contractor files for an Emergency Authorization Number as required by section 2-07 of the Department of Transportation's Highway Rules. The planned opening of utility access covers may occur during the hours of 12:01 AM and 5:59 AM where no authorization number is required.

Temporary restoration of the streets and sidewalks and removal thereof, if required for the Holiday Embargo period, will be paid for under the appropriate scheduled items.

No extension of time due to the shutdown period will be granted to the Contractor for completion of the work.

* **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/trafart.shtml>**

- (2) **Refer** to Subsection 1.06.27 - Salvageable Materials, Page I-14:

Delete the paragraph starting with the words, "No salvageable material...", and ending with the words, "...from the site.", in its entirety:

Substitute the following:

Except as specified below, no salvageable material shall be returned to the New York City Department of Environmental Protection regardless of condition. It shall become the property of the Contractor for removal and disposal, by the Contractor, away from the site.

The Contractor shall salvage and deliver to a designated NYCDEP yard all Metropolitan Valves (6" thru 20") removed during construction of the contract.

- (3) **Refer** to Standard Water Main Specifications (August 1, 2009), **Subsection 1.06.29 - Contractor To Provide For Traffic**, Page I-15:

Add the following to **Subsection 1.06.29**:

See amended Standard Sewer Specifications (August 1, 2009) **Subsection 1.06.29 - Contractor To Provide For Traffic** of this addendum.

- (4) **Refer** to **Section 1.08 - Miscellaneous Provisions**, Page I-19:

Delete Subsection 1.08.2 - Vendors in its entirety:

Substitute the following new **Subsection 1.08.2**:

1.08.2 VENDORS

Prior to starting work, the Contractor shall submit in writing to the Engineer the names of all vendors and manufacturers the Contractor intends to use. Unless otherwise specified in the contract documents or a written exception is granted by NYCDDC, the Contractor shall submit only one (1) vendor or manufacturer for each product that is to be incorporated in the contract. The use of multiple vendors or manufacturers to supply the same product will be prohibited, unless otherwise specified in the contract documents or a written exception is granted by NYCDDC. If the vendor or manufacturer is not approved, the Contractor will be notified to either submit another vendor or manufacturer, or have their proposed vendor or manufacturer submit a request for approval from NYCDDC. The Contractor will be prohibited from using the vendor or manufacturer until approval of the vendor or manufacturer has been acquired from NYCDDC.

- (5) **Refer** to **Section 1.08 - Miscellaneous Provisions**, Page I-20:

Add the following new **Subsection 1.08.7**:

1.08.7 SUBMITTAL OF SCHEDULE LOG

The Contractor's attention is directed to **Article 9 - Progress Schedule** of the Contract. The Contractor shall submit along with the proposed progress schedule the following: A schedule log in Excel Format (tied to the proposed progress schedule) indicating a description of and the schedule submission dates for all required submittals, shop drawings, approval requests, design mixes, reports, samples, etc., as required by the specifications and the terms of the contract.

- (6) **Refer** to **Section 2.15 - Concrete, Subsection 2.15.3 - Modifications**, Page II-11:

Delete from **Subsection 2.15.3, Reference Number D 3.2.1** together with its paragraphs in their entirety:

Substitute the following:

D 3.2.1 **DELETE** 3.2.1 to 3.2.9 of GS11 and **SUBSTITUTE** the following:

All concrete mix designs shall be subject to approval by DDC's Quality Assurance and Construction Safety (QACS) Bureau and in accordance with their "MIX DESIGN, LABORATORY AND PLANT APPROVAL PROTOCOL". Copies of this protocol may be obtained at the preconstruction meeting or from the Engineer. Before the Contractor begins to manufacture concrete, the Contractor shall secure DDC's QACS approval of the mix design the Contractor proposes to use.

The Contractor shall submit for this purpose a statement, in writing, of the sources of all ingredient materials, the type and brand of the cement and the number of pounds of each of the materials in a saturated surface-dry condition making up one (1) cubic yard of concrete. The range of water-cement ratios within which the concrete will be

manufactured and the method of mixing to be employed shall also be stated. The mix design submittal shall include gradation of aggregates, specific gravities of ingredients, unit weight, mix proportion for each batch (a minimum of four (4) batches except in case of precast plants where one specific mix may be proposed), compressive strength test results for each mix at 7-days, 28-days (high-early strength mixes may require 6-hours, 24-hours, 3-days and shrinkage test as per the requirements), and graphical representation of strength vs. W/C projected in hours/days.

The Contractor may submit for approval concrete mixes that (within one (1) year of the contract) have been previously approved and used on other jobs with any Bureau of the Department of Environmental Protection or the Department of Design and Construction. Such submittals shall contain evidence that the concrete mix was approved within one (1) year of this contract and shall show that the concrete will be produced at the same mix plant, that the cement and admixtures are the same type (though not necessarily the same brand), that the water/cement ratio is the same and that adjustments have been made in the mix for air content, specific gravity and gradation of the aggregates.

If the Contractor elects to submit a concrete mix that was not previously approved, the Contractor shall submit the new concrete mix in accordance with Chapters 2 and 3 of General Specification 11 as modified herein.

- (7) **Refer to Section 2.15 - Concrete, Subsection 2.15.3 - Modifications, Page II-13:**
Add to Subsection 2.15.3, before Reference Number D 8.2 the following:

D 7.3.3 ADD the following to Subsection 7.3.3 of GS11:

Each Portland cement concrete batching plant shall be subject to approval by DDC's Quality Assurance and Construction Safety (QACS) Bureau and in accordance with their "MIX DESIGN, LABORATORY AND PLANT APPROVAL PROTOCOL". Copies of this protocol may be obtained at the preconstruction meeting or from the Engineer. The minimum requirement for approval is that the proposed Portland cement concrete batching plant must be on the New York State Department of Transportation (NYSDOT) approved list for the current construction season.

The minimum requirement for approval of a precast concrete plant is that the proposed plant must be on the NYSDOT approved list. A waiver for this requirement may be granted by the DDC's Quality Assurance and Construction Safety (QACS) Director for special products that no NYSDOT approved plant is capable of producing.

Each Portland cement concrete batching plant shall also be subject to auditing and approval of the DDC's Director of Quality Assurance and Construction Safety (QACS). The Director of QACS may at any time discontinue the use of any previously approved equipment if nonconformance with the specifications results during the progress of the work. When the Director of QACS discontinues the use of the plant, production will not be acceptable for Department work until corrective measures satisfactory to the Director are carried out.

- (8) **Refer to Section 2.15 - Concrete, Subsection 2.15.3 - Modifications, Page II-14:**
Delete from **Subsection 2.15.3, Reference Number D 16.3** together with its paragraphs in their entirety:
Substitute the following:

D 16.3 Testing Service - ADD the following:

The Contractor shall retain the services of an independent testing laboratory to provide for the services outlined in 16.3.1.4 to 16.3.1.11 of GS11, with the exception of those tests specified herein to be performed by the Engineer and the City Retained Laboratory.

All laboratories shall be subject to approval by DDC's Quality Assurance and Construction Safety (QACS) Bureau and in accordance with their "MIX DESIGN, LABORATORY AND PLANT APPROVAL PROTOCOL". Copies of this protocol may be obtained at the pre-construction meeting or from the Engineer. The minimum requirement for approval is that the laboratory must have the current AMRL/AASHTO R-18 accreditation in the category of service proposed and must be currently licensed by the NYC Department of Buildings (DOB).

(9) Refer to Section 2.15 - Concrete, Subsection 2.15.3 - Modifications, Page II-14:

Delete from **Subsection 2.15.3, Reference Number D 16.8** together with its paragraphs in their entirety:

Substitute the following:

D 16.8 Responsibilities and Duties of Contractor - **ADD** the following:

The Contractor may, if the Contractor so desires, take cylinders corresponding to those taken by the Engineer for the City Retained Laboratory. However, determination of payment will be based solely on the cylinders taken by the Engineer for the City Retained Laboratory.

CONCRETE TEST CYLINDERS

The Contractor will be responsible for safe delivery of concrete cylinders to the Department of Design and Construction Laboratory, within two (2) days after molding, where they will be properly stored and cured until the date of test, and tested by others, upon removal from the curing room. The Department of Design and Construction testing laboratory will provide the services for the curing and breaking of the test cylinders.

The Contractor shall provide empty cylinder molds and facilities for the proper care of these cylinders while on the site, and shall safeguard them against injury and protect them from the elements.

The Engineer will be responsible for the preparation, documentation and labeling of the cylinders and for notifying the Contractor, at least twenty-four (24) hours in advance, when a shipment of cylinders is ready for delivery, so that cylinders can be tested for the standard twenty-eight (28) day and seven (7) day tests. Cylinders are to be delivered by the Contractor to a designated area near 30-30 Thomson Avenue, Long Island City, New York, or where otherwise directed within the City of New York.

The Contractor shall make arrangements to protect all cylinders from damage during loading, transport to, and unloading at a Department of Design and Construction designated testing laboratory, and shall obtain a receipt for delivered cylinders, which shall be submitted to the Engineer.

(10) Refer to Section 4.06 - Backfilling, Subsection 4.06.3 - Method Of Depositing All Backfill, Page IV-18:

(A) Add the following paragraph to beginning of **Subsection 4.06.3:**

At the preconstruction meeting, the Contractor shall submit for approval a full description of the Contractor's proposed methods to be used for all backfilling operations including, but not limited to, equipment, backfill material, depth of compaction layers, and trench locations where each is to be

employed. In the field, the Contractor shall be required to demonstrate that the Contractor's methods of backfilling and compaction shall obtain a minimum of ninety-five (95) percent of Standard Proctor Maximum Dry Density.

(B) Delete from **Subsection 4.06.3**, the fourth paragraph in its entirety:
Substitute the following:

Unless otherwise approved in writing by the Engineer, backfilling of the remainder of the trenches and excavations from a point not less than twelve (12) inches above the top of the barrel of the water main pipe to the underside of the pavement shall be progressively deposited in uniform and successive horizontal layers not exceeding twelve (12) inches in depth for the entire width of the trench or excavation and each successive layer shall be solidly compacted by mechanical tamping or other approved means so as to achieve the required density. In deep trenches defined as those requiring sheeting, the Contractor may submit to the Engineer, for approval, an alternate backfill method (i.e. jetting, deeper deposited layers not exceeding twenty-four (24) inches, etc.) for depositing and compacting the backfill from twelve (12) inches above the top of the barrel of the water main pipe to a plane five (5) feet below final surface elevation. However, approval of any alternate backfill method shall not relieve the Contractor from obtaining a minimum of ninety-five (95) percent of Standard Proctor Maximum Dry Density. Should the Engineer determine that the specified density is not being obtained, the area must be re-excavated and backfilled at the Contractor's own cost until the required compaction density is achieved.

(C) Delete from **Subsection 4.06.3**, the seventh paragraph in its entirety:
Substitute the following:

Backfill shall proceed simultaneously with the withdrawal of sheeting but at no time shall the withdrawal of sheeting exceed a height of six (6) inches above the deposited backfill. Withdrawal of sheeting below levels previously backfilled and compacted is prohibited.

(11) Refer to **Section 5.02 - Laying Ductile Iron Pipe And Fittings, Subsection 5.02.3(F) - Bedding And Foundation Of Pipes**, Page V-8:

Delete from **Subsection 5.02.3(F)**, Paragraph (5) - Pier And Plate, in its entirety:
Substitute the following new Paragraph (5):

(5) Shallow Cover: Where mains 24-inches and smaller are laid with covers of 2'-0" or less, the Contractor shall provide protection in accordance with **Standard Drawing No. 42063-Y** or as directed by the Engineer.

Where mains 24-inches and smaller are laid with covers between 2'-6" and 2'-0", the Contractor shall provide steel plates only over the main with dimensions as shown on **Standard Drawing No. 46464-Z** or as directed by the Engineer.

Where mains 30-inches and larger are laid with covers of 2'-6" or less, the Contractor shall provide protection in accordance with **Standard Drawing No. 46464-Z** or as directed by the Engineer.

Covers over the new mains shall not be less than 1'-6".

(12) Refer to **Section 5.02 - Laying Ductile Iron Pipe And Fittings, Subsection 5.02.3 - Construction Methods, Paragraph (M) - Laying Temporary Connections**, Page V-12:

Delete Paragraph (M), in its entirety:
Substitute the following:

(M) LAYING TEMPORARY CONNECTIONS AND INSTALLING TEMPORARY CAP ASSEMBLIES AND/OR BULKHEADS

- (1) When new water mains are laid and it becomes necessary to provide a temporary connection between the existing main and new mains laid under this contract (regardless of whether the new and existing water mains are in the same trench or are offset in two different trenches), the Contractor shall, if ordered, provide all labor, equipment and facilities for laying, maintaining and removing when directed, temporary connections and appurtenances. If City forces do laying of temporary connections, the Contractor shall make all required equipment and facilities available to them. No payment will be made for providing temporary house services which may be required when making a temporary connection between the existing and new main.
- (2)
 - (a) Temporary cap assemblies on distribution water mains (20" and less in diameter) shall consist of a 2-foot long spigot/spigot ductile iron pipe with a mechanical joint cap restrained to the pipe with a "wedge-type" retainer gland and a minimum 2-inch tap on the pipe section.
 - (b) Temporary cap assemblies on distribution water mains (20" and less in diameter) shall be restrained and braced in a manner sufficient to support system working pressures, and thrust forces.
 - (c) The 2-inch tap required as part of the temporary cap assembly is to be utilized to allow air to escape while filling the main in addition to allow for proper flushing of the main.
 - (d) Restraint and bracing as well as temporary cap assemblies/bulkheads for water mains greater than 20" in diameter shall be submitted for approval by the Engineer prior to being utilized.

(13) Refer to Section 5.02 - Laying Ductile Iron Pipe And Fittings, Subsection 5.02.5 - Price To Cover, Paragraph (10), Page V-16:

Delete Paragraph (10), in its entirety:

Substitute the following:

- (10)(a) No separate or additional payment will be made to the Contractor for furnishing, delivering, installing, restraining, bracing and removing temporary cap assemblies/bulkheads for water mains as ordered by the Engineer. The costs thereof shall be deemed included in the unit prices bid for all items of the contract.
- (b) Payment for temporary valves (i.e. construction valves) and its associated fittings ordered by the Engineer during the course of the work to be installed will be paid for at the same rates as for valves and fittings permanently installed.
- (c) If ordered by the Engineer, removal of valves (i.e. construction valves) and its associated fittings, including their transfer and disposal shall be deemed included in the prices bid for all items of the contract. No separate or additional payment will be made for this work.
- (d) Payment For Temporary Connections: When new mains are laid and it becomes necessary to provide a temporary connection between the existing and new mains the following method of payment shall apply: The Contractor shall be paid once for furnishing and delivering pipes and fittings used in temporary connections. The Contractor shall also be paid for laying the temporary pipe connection and fitting using the appropriate pipe laying item for each time that the Contractor is directed to use them throughout the project as directed by the Engineer.

(14) Refer to Subsection 5.04.4 - Furnishing, Delivering And Installing Steel Tee, Paragraph (5), Item Numbers list, Page V-23:

Delete Item No. "60.23ST20T48", together with Description "FURNISHING, DELIVERING AND INSTALLING 48-INCH X 20-INCH STEEL TEE", and Pay Unit "EACH":

(15) Refer to Section 5.05 - Furnishing And Delivering Gate Valves, Page V-35:

(A) **Delete** from **Subsection 5.05.1 - Description**, the first paragraph in its entirety:
Substitute the following:

This specification describes furnishing and delivering of double disc 3-inch to 20-inch gate valves, resilient seated 3-inch to 20-inch gate valves and resilient seated 3-inch to 12-inch tapping valves.

Unless otherwise specified in the contract documents or ordered in writing by the Engineer, only resilient seated gate valves and tapping valves shall be furnished and delivered by the Contractor on the contract.

(B) **Delete** from **Subsection 5.05.2 - Materials**, second paragraph, first line, the words, "6-inch hydrant":
Substitute the following words, "3-inch to 20-inch":

(16) **Refer** to **Section 5.06 - Setting Gate Valves**, Page V-38:

(A) **Delete** from **Subsection 5.06.1 - Description**, the first paragraph in its entirety:
Substitute the following:

This specification describes the installation of double disc 3-inch to 20-inch gate valves, resilient seated 3-inch to 20-inch gate valves and resilient seated 3-inch to 12-inch tapping valves. It also describes the installing of manhole frames (skirts and heads) and covers.

Unless otherwise specified in the contract documents or ordered in writing by the Engineer, only resilient seated gate valves and tapping valves shall be installed by the Contractor on the contract.

(B) **Delete** from **Subsection 5.06.2 - Materials**, second paragraph, first line, the words, "6-inch hydrant":
Substitute the following words, "3-inch to 20-inch":

(17) **Refer** to **Section 5.23 - Decking, Subsection 5.23.1 - Description**, Page V-73:

Delete from **Subsection 5.23.1**, the third paragraph in its entirety:
Substitute the following:

Steel plates that are resting on pavement, that are not part of a decking system, and are used to temporarily span trenches and excavations for vehicular traffic and for pedestrian crossings and walkways shall not be included for payment under this decking section. The cost of all labor, materials, equipment, insurance and incidentals necessary to furnish, place, anchor and ramp these temporary steel plates, when and where directed, in order to comply with the requirements of the NYCDOT Office of Construction Mitigation and Coordination (OCMC) traffic stipulations, the directions of the Engineer, and the Contractor's construction operations shall be deemed included in the prices bid for all contract items of work.

(18) **Refer** to **Section 5.23 - Decking, Subsection 5.23.4 - Design Criteria**, Page V-74:

Add the following to **Subsection 5.23.4**:

(C) The Contractor may substitute skid resistant steel plates (Non-Skid Textured Plates) for timber mats, subject to approval in accordance with **Subsection 4.05.5**. These steel plates shall be placed flush with the existing roadway and shall be installed in compliance with the requirements of **Subsection 4.05.6(G)**.

(19) **Refer** to **Section 5.36 - Additional Earth Excavation Including Test Pits, Subsection 5.36.4 - Price To Cover**, Paragraph (3), fifth line, Page V-114:

Change 16", to 16'.

E. SPECIAL PROVISIONS

The following shall become a part of and apply to the contract:

- (A) VEHICLES. The Contractor shall be required to furnish one (1) vehicle to be used by New York City Department of Design and Construction (DDC) personnel as assigned by the Deputy Commissioner of the Department, during the life of the Contract. No direct payment will be made for the vehicle(s), or associated costs. All costs shall be deemed to be included in all scheduled items.

The Contracted vehicle(s) shall be a new small SUV hybrid vehicle as approved by DDC's Director of Fleet Administration; and shall be equipped with a standard equipment package, and meet the following minimum specification:

- (1) Engine: Manufacturer's Standard 4 cylinder.
- (2) Transmission: Automatic.
- (3) Drive: Manufacturer's Standard 4 wheel drive.
- (4) Steering: Power.
- (5) Air Conditioning.
- (6) Body: 4 Doors.
- (7) Color: Manufacturer's Standard White.
- (8) Mirror: Left and Right.
- (9) Radio: AM/FM.
- (10) Electric Rear Defogger.
- (11) Brakes: Anti-Lock.
- (12) Air Bag: Dual
- (13) Anti-theft device (optional).
- (14) Power Windows and Locks.
- (15) Two sets of keys.
- (16) GPS navigation.
- (17) Hands-free telecommunication technology.
- (18) Fire Extinguisher.
- (19) First Aid Kit.
- (20) Any additional equipment will not be accepted by DDC.

The Contractor shall provide fuel, oil, proper maintenance, tires and replacement parts, to keep the vehicle(s) in a safe operating condition, and shall undertake all repairs, including repairs arising from vandalism, accidents, or other damages. A Gas Company Card shall be furnished with each vehicle for fueling purposes. In the event that any vehicle requires maintenance or repairs which cannot be completed the same day, a comparable replacement vehicle shall be provided while the vehicle is out of service. If the vehicle is lost or stolen, the Contractor shall replace the vehicle within five (5) business days with a comparable vehicle.

The vehicle(s) shall be provided for the entire duration of this Contract, and shall be returned to the Contractor within thirty (30) days after final acceptance of work or twelve (12) months after substantial completion, whichever comes first. Contractor owned/leased vehicle(s) provided pursuant to this contract shall remain the property of the Contractor/Leaser throughout the contract period, and shall be registered in the City's name. If leased vehicles are provided, the Contractor shall obtain from the leasing company the necessary documents allowing the vehicle(s) to be registered as an official City of New York vehicle(s). The Contractor shall provide insurance for vehicle(s) as set forth in Schedule "A".

Within five (5) business days of receipt of notice to provide specified vehicle(s), the Contractor shall make the vehicle(s) available for inspection by Fleet Administration. Upon determination by Fleet Administration that the vehicle(s) satisfy requirements, the Contractor shall make arrangements through DDC's Fleet Administration for delivery to the DDC. The Contractor shall submit to Fleet Administration a signed MV-82 Part 10 authorizing registration in the City's name together with, in the

case of a previously unregistered vehicle, the manufacturer's certification of origin or, in the case of a currently registered vehicle, a copy of the title.

All required transmittals to Fleet Administration shall be made as follows:

Agency Fleet Administrator
NYC Department of Design and Construction
30 - 30 Thomson Avenue, 4th Floor
Long Island City, New York 11101
Telephone No.: (718) 391-1852

When vehicles are no longer required under this contract, as described above, they shall be de-registered by the City and promptly returned to the Contractor.

(B) 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.

END OF ADDENDUM NO. 2
This Addendum consists of sixty-nine (69) pages.

NO TEXT ON THIS PAGE

NYC DDC Project No. PS-312KR
Rehabilitation of Interceptor Sewers & Appurtenances in Brooklyn & Staten Island

ADDENDA 1 & 2 Dated 1/2/2014 were received with the Bid Documents

EN-TECH CORP

Name of Bidder

By: _____





ATTACH TO CONTRACT DOCUMENTS

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

PROJECT ID: PS-312KR

FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES IN:

BROOKLYN:

IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET AND RYDER STREET; RALPH AVENUE BETWEEN PRESTON COURT AND FOSTER AVENUE; RALPH AVENUE BETWEEN AVENUE L AND AVENUE K.

STATEN ISLAND:

RICHMOND TERRACE BETWEEN MORNINGSTAR ROAD AND NEWARK AVENUE; RICHMOND TERRACE BETWEEN WINANT STREET AND MORNINGSTAR ROAD; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND WINANT STREET; RICHMOND TERRACE BETWEEN VAN NAME AVENUE AND SIMONSON AVENUE; RICHMOND TERRACE BETWEEN VAN PELT AVENUE AND VAN NAME AVENUE; RICHMOND TERRACE BETWEEN DE HART AVENUE AND VAN PELT AVENUE; RICHMOND TERRACE BETWEEN BUSH AVENUE AND UNION AVENUE; RICHMOND TERRACE BETWEEN HARBOR ROAD AND BUSH AVENUE; RICHMOND TERRACE AND MAPLE AVENUE; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND HOUSEMAN AVENUE; CEDAR GROVE AVENUE AND EBBITS STREET.

Together With All Work Incidental Thereto

CITY WIDE

ADDENDUM NO.3

DATED: April 28, 2014

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made a part of said Contract Documents to the same extent as though it were originally included therein



1. Refer to the Bid and Contract Documents, VOLUME 1 OF 3, PAGE A-1, Attachment 1- Bid Information;

Change the dates shown for Submission of Bids To: and for Bid Opening: from "Wednesday, April 30, 2014" to read "Wednesday, May 21, 2014"

2. Refer to the Bid and Contract Documents, VOLUME 1 OF 3, PAGE 13 of the Bid Booklet, Schedule B – MWBE;

Change the dates shown for Bid /Proposal Response Date: from "Wednesday, April 30, 2014" to read "Wednesday, May 21, 2014"

By signing in the space provided below, the bidder acknowledges receipt of two (2) pages of this Addendum.

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



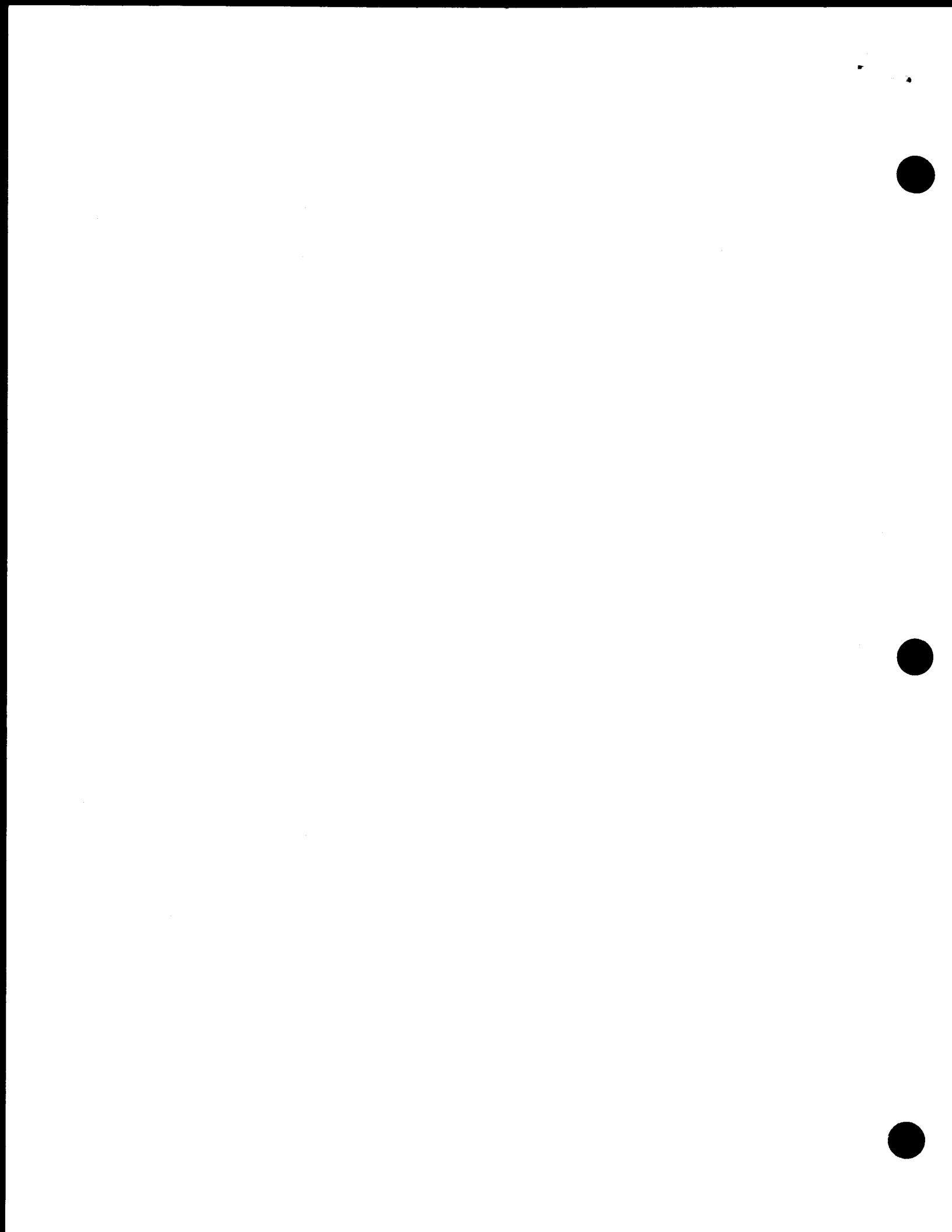
GURDIP SAINI, P.E.
Assistant Commissioner

EN-TECH CORP

Name of Bidder

By:





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

PROJECT ID: PS-312KR

FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES IN:

BROOKLYN

IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET AND RYDER STREET;
RALPH AVENUE BETWEEN PRESTON COURT AND FOSTER AVENUE; AND, RALPH AVENUE
BETWEEN AVENUE L AND AVENUE K

STATEN ISLAND

RICHMOND TERRACE BETWEEN MORNINGSTAR ROAD AND NEWARK AVENUE; RICHMOND
TERRACE BETWEEN WINANT STREET AND MORNINGSTAR ROAD; RICHMOND TERRACE
BETWEEN GRANITE AVENUE AND WINANT STREET; RICHMOND TERRACE BETWEEN VAN
NAME AVENUE AND SIMONSON AVENUE; RICHMOND TERRACE BETWEEN VAN PELT AVENUE
AND VAN NAME AVENUE; RICHMOND TERRACE BETWEEN DE HART AVENUE AND VAN PELT
AVENUE; RICHMOND TERRACE BETWEEN BUSH AVENUE AND UNION AVENUE; RICHMOND
TERRACE BETWEEN HARBOR ROAD AND BUSH AVENUE; RICHMOND TERRACE AND MAPLE
AVENUE; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND HOUSEMAN AVENUE; AND,
CEDAR GROVE AVENUE AND EBBITS STREET;

Together With All Work Incidental Thereto

BOROUGHES OF THE BROOKLYN AND STATEN ISLAND

ADDENDUM NO. 4

DATED: May 15, 2014

This Addendum is issued for the purpose of amending the requirements of the contract documents and is hereby made part of said contract documents to the same extent as if it was originally included therein.

- (1) Refer to the Bid and Contract Documents, VOLUME 1 OF 3, Page A-1, Attachment 4 - Bid Information;
Change the dates shown for Submission of Bids To: and for Bid Opening: from "Wednesday, May 21, 2014" to read "Wednesday, June 4, 2014."

Refer to the Bid and Contract Documents, VOLUME 1 OF 3, Page 13, Schedule B - MWBE;
Change the dates shown for Bid/Proposal Response Date: from "May 21, 2014" to read "June 4, 2014".
- (2) Refer to the Bid and Contract Documents, VOLUME 3 OF 3, Addendum No. 2, Page A2-24, Subsection 5.05J.6 - SUBMITTALS;
Delete the last paragraph of the section beginning with the words, "The liner thickness ", and ending with the words, "...required by the Engineer.", in its entirety."
- (3) In response to questions from a contractor (See letter (Attachment A) consisting of three (3) pages which are attached to the end of this addendum) the answers to the questions are as following:

Answer to Question No. 1: Site Specific Items

- (a) Location No. 2, Location No. 5, Location No. 10, Location No. 11, Location No. 19 and Location No. 23 - See as-built "APPENDIX - A(1) to APPENDIX - A(14)" for additional information consisting of fourteen (14) pages which are attached to the end of this addendum.



(b) Location No. 3 and Location No. 6 - Refer to Table 1 on Sheet No. 13 of 14 of the contract drawings and Subsection 5.05J.6 of Addendum No. 2, the length specified in Item 005 is the total restorative length outside of and including the limit of repair work from manhole to manhole as shown on the contract drawings.

Answer to Question No. 2: Items 007, 008, 009 - The reconstruction of existing manholes to be determined in the field as directed by the Engineer.

Answer to Question No. 3: MWL - Sheet 13 of 14, section 3 and 4 pertaining to polymer lining method, the area to be lined shall be the area above twenty-five percent (25%) of the height of the interceptor sewer, above the invert. The Contractor is advised to reduce the water level in the sewer as needed through bypass pumping or any other means, to perform this operation. Mean Water Level (MWL) as per NYCDEP records are shown on the contract drawings.

Answer to Question No. 4: Temporary Lighting - The Contractor shall provide adequate and appropriate temporary lighting during repair and lining of the sewer. Temporary lighting during rehabilitation shall be chosen taking into consideration the method of rehabilitation required for a particular location. Such temporary lighting shall be as recommended by the manufacturer. The temporary lighting shall not interfere with the lining process nor create any deficiency and/or rebound in the liner. In addition, strict quality control shall be maintained so as to produce a high quality lining to the lining thicknesses required.

Answer to Question No. 5: Inspection Prior To Lining - The water level in the sewer during inspection shall be such so as to permit the safe walk through inspection by the Engineer and the Contractor.

Answer to Question No. 6: Design Calculations - The following parameters shall be assumed for determination of the liner thickness:

- Approximate soil depth above crown of the sewer is given as approximate depth for each location on the contract drawings.
- The depth of the water table shall be taken as five (5) feet from the street surface for design purpose.
- Soil density shall be 120-pcf.
- The condition of the existing sewer pipe shall be "fully deteriorated".

Answer to Question No. 7: General Requests - The Contractor may review the available copies of TV recordings at the Department of Design and Construction (DDC), Infrastructure, Program Administration, located at 30-30 Thomson Avenue, 3rd Floor, Long Island City, New York, by contacting Mr. Fahid Nammour, at 718-391-2331 to set up an appointment for review.

Answer to Question No. 8: Contact Information - In Addendum No. 2, Page A2-27, Subsection 5.05J.9, paragraph (D), the address of Entech Corporation shall be changed to 91 Ruckman Road, Closter, NJ 07624.

By signing in the space provided below, the bidder acknowledges receipt of the two (2) pages of this Addendum plus three (3) pages of attachments plus fourteen (14) sheets of as-built drawings.

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

Purnima Dharie
for GURDIP SAINI, P.E.
Assistant Commissioner

EN-TECH CORP
Name of Bidder
By: [Signature]



ATTACHMENT "A"



NEW YORK - NEW JERSEY - PENNSYLVANIA

April 21, 2014

Sent by FAX to (718) 391-1885
& (718) 391-2615NYC Department of Design & Construction
Mr. Ramon Rodríguez, Agency Chief Contracting Officer
30-30 Thomson Avenue
Long Island City, NY 11101Re: NYCDDC Bid Project ID PS-312KR
Information for Bidders, Clause 9.(A)
Request for Interpretation or Correction

Dear Mr. Rodriguez:

We request interpretation or correction of the following items:

Site Specific Items:

(1) Location 2-

Manhole RH_24 could not be located. Please provide additional information/plans to locate it.

Location 3-

The plan lists a sewer rehab quantity of 50 LF, but bid item 005 lists a quantity of 521 LF which corresponds to the distance shown on the plan between manholes. (The only other item for a similar size pipe, bid item 004, matches Location 6.) Please explain or correct the bid documents.

Location 5-

Although manholes were found at this location, we could not confirm the correct manholes. Provide additional information/plans to identify the correct manholes.

Location 10-

Neither manhole could not be located. Provide additional information/plans to locate both MH's.

Location 11-

Manhole PR_W_22 (also on Location 10) could not be located. Provide additional information/plans to locate this manhole.

Location 19-

Manhole PR_W_9 could not be located. Provide additional information/plans to locate this MH.

Location 23-

The street names on the location plan do not match the location name. Consequently, neither manhole could not be located. Provide additional information/plans to identify the correct manholes.



ATTACHMENT "A"

Page 2 of 3

- (2) **Items 007, 008, 009 -**
Please identify the specific manholes to be reconstructed under Items 007 & 008. We assume that the two manholes included under Item 009 for reconstruction are the manholes bounding Location 6. Please correct us if we are mistaken.
- (3) **MWL-**
On Sheet 13 of 14, Section 3 and Section 4 each include a horizontal line with the entry "MWL 25%" on the line. The title under the sections states "Typical Sections for Repair and Rehabilitation of Interceptor Sewer." Sections 3 and 4 pertain to the polymer lining method, where the diameter is greater than or equal to 60". Of the fifteen locations included in the bid documents, three locations are specified for the polymer lining method with diameters equal to or greater than 60" (including the two 10' x 10' locations with perimeters greater than that of a 60" pipe). Of these three locations, none shows a MWL of 25%. All of the locations show an MWL higher than 25%. What is the definition of MWL as used in this bid? Sections 3 and 4 appear to show that the repairs and lining begin at or slightly below MWL and include the pipe above. Please quantify the extent of pipe to be repaired and rehabilitated at each location by this method.
- (4) **Temporary Lighting-**
Subsection 5.05I.3, Safety and Temporary Lighting, describes the installation and maintenance of temporary lighting to be provided by the contractor. This section, 5.05I, is titled "RECONSTRUCTION OF EXISTING SEWERS USING D.E.P. APPROVED CENTRIFUGALLY-CAST-CONCRETE-PIPE (CCCP) LINING METHOD." We note that the CCCP method involves the spraying of the lining material from robotic equipment as it moves along the sewer. The installation of temporary lighting would appear to interfere with the lining methodology specified, creating holidays in the liner. Please explain.
- (5) **Inspection Prior to Lining-**
Subsection 5.05J.5 specifies a walk through inspection to be performed with the Engineer prior to reconstruction. How much water is permissible in the pipe in order to perform the inspection? (See MWL question, above.)
- (6) **Design Calculations -**
Subsections 5.05I.6 and 5.05J.6 both require... "the contractor to submit design calculations...for liner thickness... in accordance with the manufacturer's design instructions, recommendations, specifications and standard." And, "The liner thickness shall be designed to adequately resist all external pressures and conditions required by the Engineer." Please provide the information to determine the external pressures and conditions required by the Engineer for each location.



ATTACHMENT "A"

Page 3 of 3

(1) General Requests:

Please make available copies of any TV recordings of the various sewers to be reconstructed/rehabilitated on this project.

Please remove the deleted locations from the plans, and renumber the included locations consecutively.

(2) Contact Information-

Subsection 5.05J.9 includes an incorrect address for EN-TECH Corp. Please correct your records to show our current address at 91 Ruckman Road, Closter, NJ 07624.

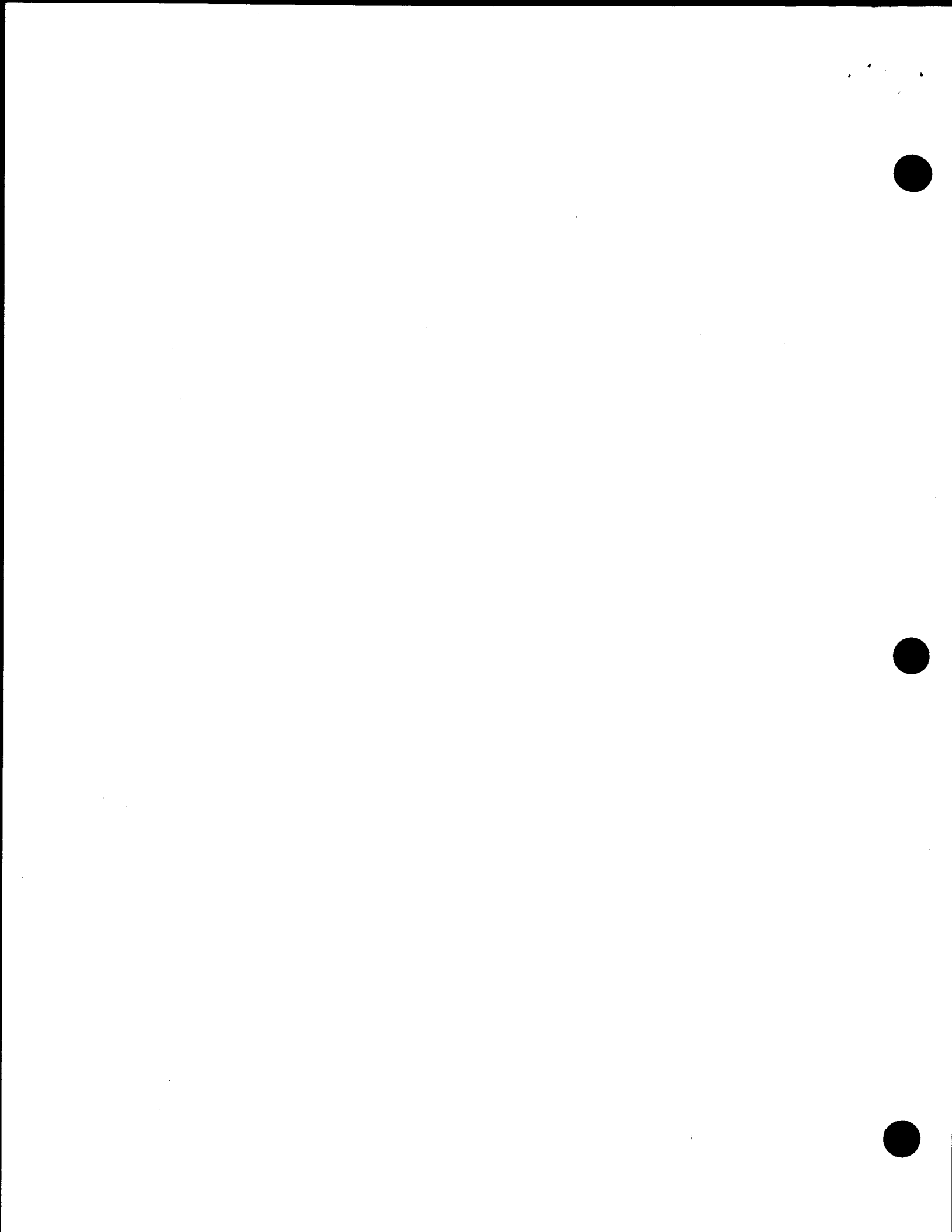
We request that the bid be postponed for two weeks beyond the current bid date.

Sincerely,

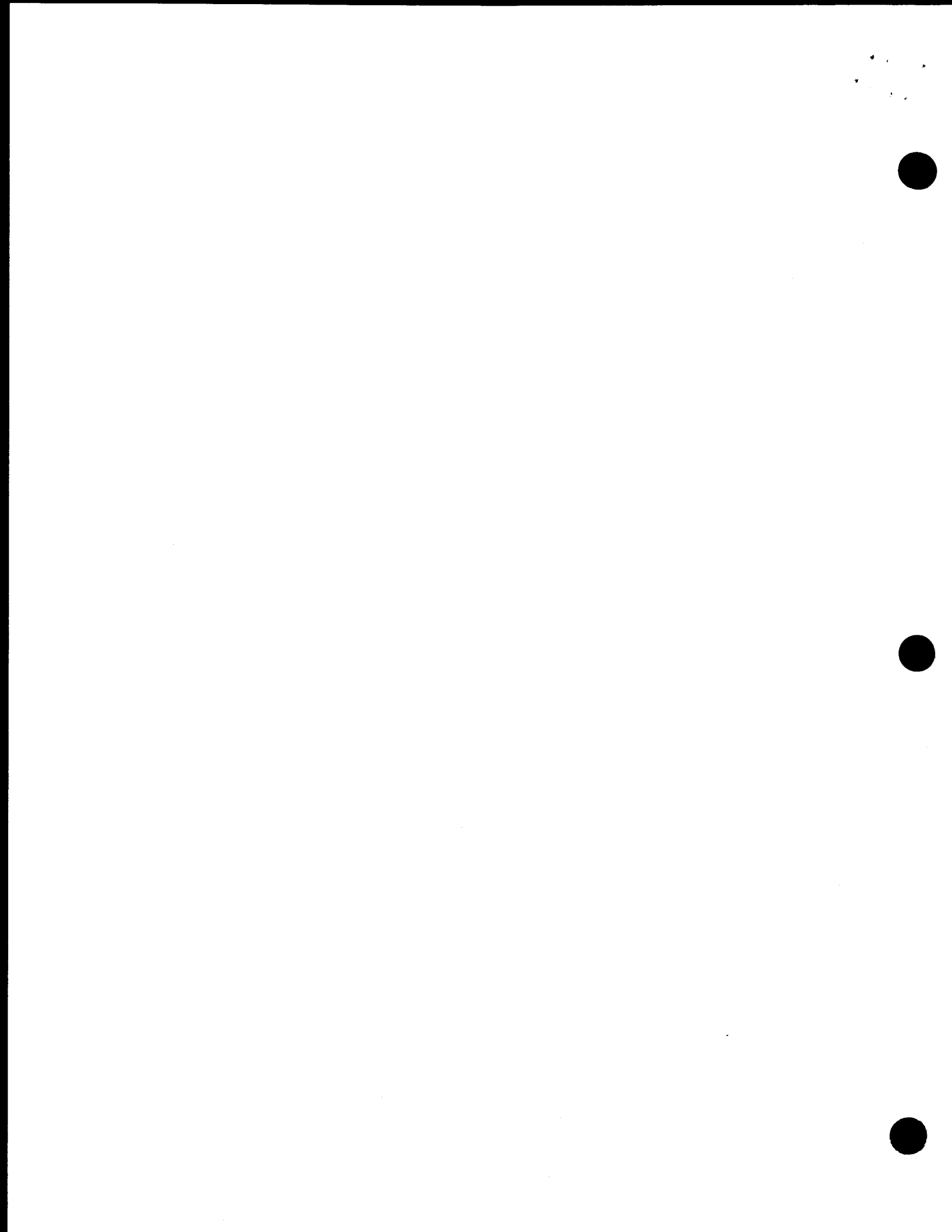
Robert Benz,

Project Manager
EN-TECH Corp.

CC Lorraine Holley



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

PROJECT ID: PS-312KR

FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES IN:

BROOKLYN

IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET AND RYDER STREET;
RALPH AVENUE BETWEEN PRESTON COURT AND FOSTER AVENUE; AND, RALPH AVENUE
BETWEEN AVENUE L AND AVENUE K

STATEN ISLAND

RICHMOND TERRACE BETWEEN MORNINGSTAR ROAD AND NEWARK AVENUE; RICHMOND
TERRACE BETWEEN WINANT STREET AND MORNINGSTAR ROAD; RICHMOND TERRACE
BETWEEN GRANITE AVENUE AND WINANT STREET; RICHMOND TERRACE BETWEEN VAN
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AND VAN NAME AVENUE; RICHMOND TERRACE BETWEEN DE HART AVENUE AND VAN PELT
AVENUE; RICHMOND TERRACE BETWEEN BUSH AVENUE AND UNION AVENUE; RICHMOND
TERRACE BETWEEN HARBOR ROAD AND BUSH AVENUE; RICHMOND TERRACE AND MAPLE
AVENUE; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND HOUSEMAN AVENUE; AND,
CEDAR GROVE AVENUE AND EBBITS STREET;

Together With All Work Incidental Thereto

BOROUGHES OF BROOKLYN AND STATEN ISLAND

ADDENDUM NO. 5

DATED: June 4, 2014

This Addendum is issued for the purpose of amending the requirements of the contract documents and is hereby made part of said contract documents to the same extent as if it was originally included therein.

(1) Refer to the Bid and Contract Documents, VOLUME 1 OF 3, Page A-1, Attachment 1 - Bid Information;

Change the dates shown for Submission of Bids To: and for Bid Opening: from "June 4, 2014" to read "July 23, 2014."

Refer to the Bid and Contract Documents, VOLUME 1 OF 3, Page 13, Schedule B - MWBE;

Change the dates shown for Bid/Proposal Response Date: from "June 4, 2014" to read "July 23, 2014".



By signing in the space provided below, the bidder acknowledges receipt of the two (2) pages of this Addendum.

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



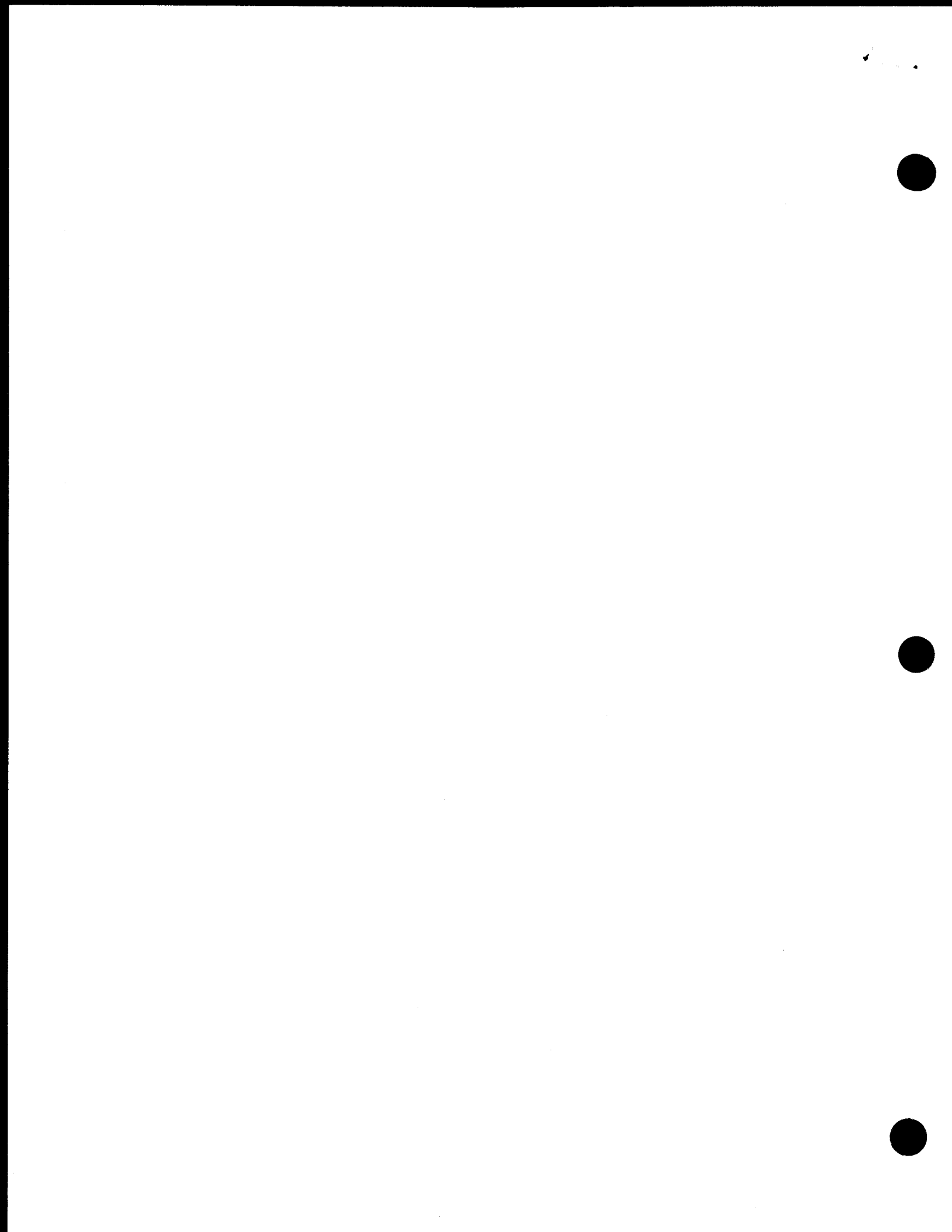
GURDIP SAINI, P.E.
Assistant Commissioner

EN-TECH CORP

Name of Bidder

By:

Wahid Malik



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

PROJECT ID: PS-312KR

FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES IN:

BROOKLYN

IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET AND RYDER STREET;
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AVENUE; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND HOUSEMAN AVENUE; AND,
CEDAR GROVE AVENUE AND EBBITS STREET;

Together With All Work Incidental Thereto

BOROUGHS OF BROOKLYN AND STATEN ISLAND

ADDENDUM NO. 6

DATED: July 14, 2014

This Addendum is issued for the purpose of amending the requirements of the contract documents and is hereby made part of said contract documents to the same extent as if it was originally included therein.

- (1) Refer to the Bid and Contract Documents, VOLUME 1 OF 3, Page A-1, Attachment 1 - Bid Information;
Change the dates shown for Submission of Bids To: and for Bid Opening: from "July 23, 2014" to read "September 4, 2014."

Refer to the Bid and Contract Documents, VOLUME 1 OF 3, Page 13, Schedule B - MWBE;
Change the dates shown for Bid/Proposal Response Date: from "July 23, 2014" to read "September 4, 2014."



By signing in the space provided below, the bidder acknowledges receipt of the two (2) pages of this Addendum.

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

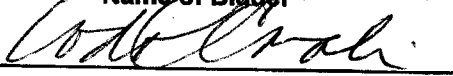


GURDIP SAINI, P.E.
Assistant Commissioner

EN-TECH CORP

Name of Bidder

By:





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

PROJECT ID: PS-312KR

FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES IN:

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IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET AND RYDER STREET;
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CEDAR GROVE AVENUE AND EBBITS STREET;

Together With All Work Incidental Thereto

BOROUGHES OF BROOKLYN AND STATEN ISLAND

ADDENDUM NO. 7

DATED: August 29, 2014

This Addendum is issued for the purpose of amending the requirements of the contract documents and is hereby made part of said contract documents to the same extent as if it was originally included therein.

- (1) Refer to the Bid and Contract Documents, VOLUME 1 OF 3, Page A-1, Attachment 1 - Bid Information;
Change the dates shown for Submission of Bids To: and for Bid Opening: from "September 4, 2014" to read "September 18, 2014."

Refer to the Bid and Contract Documents, VOLUME 1 OF 3, Page 13, Schedule B - MWBE;
Change the dates shown for Bid/Proposal Response Date: from "September 4, 2014" to read "September 18, 2014."

- (2) Refer to the Bid and Contract Documents, VOLUME 3 OF 3, Page A2-3; Article (9) and Article (10) under "A. NOTICE TO BIDDERS"
Delete these Articles in its entirety;
Substitute the following new Articles (9) and (10):

"(9) Maintenance of Traffic shall be done in accordance with the New York City Department of Design and Construction "MAINTENANCE AND PROTECTION OF TRAFFIC" sketches provided (see MPT General Notes) at the end of the contract drawings. Payment for the maintenance and protection of traffic work required by the traffic stipulations acquired by the Contractor and in accordance with the MPT sketches shall be made under the respective maintenance of traffic bid items provided in the contract. Payment for maintenance and



protection work not provided for in the bid items shall be made in accordance with **Articles 25 and 26** of the Standard Construction Contract.

- (10) The Contractor shall, due to the complexity of the work and the extensive and continuous bypass operations required, obtain traffic stipulation permits from OCMC for maintenance and protection of traffic prior to commencement of work at any location. The cost for acquiring these permits shall be deemed included in the prices bid for all items of the contract.

The Contractor is informed that if due to the traffic stipulation permit(s), the Contractor is required to bury bypass piping. Payment for all costs required to bury the bypass piping shall be made in accordance with **Articles 25 and 26** of the Standard Construction Contract. These costs shall include, full-depth saw cutting, excavation, removal and disposal of pavements; earth excavation of all materials of whatever nature encountered and their disposal in order to bury bypass piping below grade; plating and securing plates over the trench; removing of plates; backfilling and compaction of trench; and, restoring the roadway to match the existing pavement, all in accordance with the standards and specification and as directed by the Engineer.

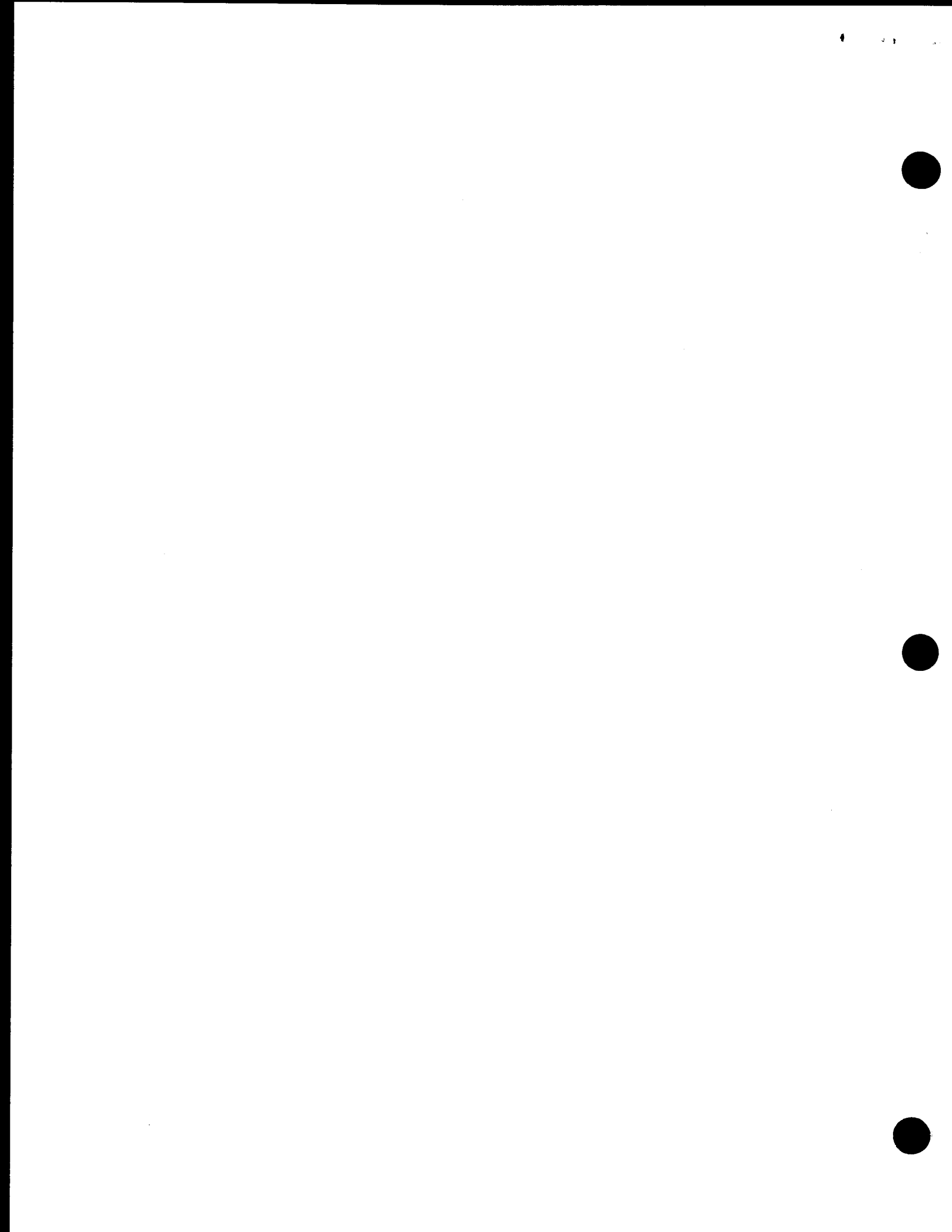
Payment for the maintenance and protection of traffic work required due to burying bypass pipe across intersections and driveways shall be made under the respective maintenance of traffic bid items provided in the contract. Payment for maintenance and protection work not provided for in the bid items shall be made in accordance with **Articles 25 and 26** of the Standard Construction Contract."

- (3) Refer to the Bid and Contract Documents, VOLUME 1 OF 3;
~~Delete~~ pages B-3 thru B-11 of the Bid Schedule in their entirety;
Substitute pages B-3 (REVISION # 1) thru B-12 (REVISION # 1) of the Bid Schedule which are attached to the end of this addendum.
- (4) In response to questions from a contractor (See attached letter (Attachment A) consisting of two (2) pages) the answer to the questions are as follows:

Answer to Question (1) - The Contractor's attention is directed to the Revised Contract Drawings attached to the end of this addendum. (The attachments consist of fourteen (14) sheets)

Answer to Question (2) - The Contractor is notified that at all locations the Contractor will **not** be permitted to excavate, shore nor remove portions of the existing sewer in order to provide for bypass. The Contractor will be allowed at location approved in writing by the Engineer, to remove the frames and covers together with the roof slabs from existing manholes to facilitate bypassing operation. Payment for this removal/demolition work shall be deemed included in the prices bid for all items of the contract. No separate or additional payment will be made for this removal/demolition work. The Contractor will be required to restore the roof slabs and manhole frames and covers in kind in accordance with the standards and specifications and as directed by the Engineer. Payment for this work shall be made under the respective Item No. 73.21AC - ADDITIONAL CONCRETE, Item No. 73.51AS - ADDITIONAL STEEL REINFORCING BARS, and, Item No. 51.23RF - REPLACEMENT OF EXISTING MANHOLE FRAME AND COVER. Payment for the removal of any existing roadway pavements and for any roadway restoration required due to removal of manhole slabs and frames and covers shall be deemed included in the prices bid for all items of the contract. No separate or additional payment will be made for this removal and restoration of roadway pavements work.

Answer to Question (3) - Payment for the maintenance and protection of traffic work required by the traffic stipulations acquired by the Contractor shall be made under the respective maintenance of traffic bid items provided in the contract. Payment for maintenance and protection work not provided for in the bid items shall be made in accordance with **Articles 25 and 26** of the Standard Construction Contract.



Answer to Question (4) - Payment for the maintenance and protection of traffic work required due to burying bypass pipe across intersections and driveways shall be made under the respective maintenance of traffic bid items provided in the contract. Payment for maintenance and protection work not provided for in the bid items shall be made in accordance with **Articles 25 and 26** of the Standard Construction Contract.

- (5) In response to question from a contractor (See attached letter (Attachment B) consisting of one (1) page) the answer to the question is as follows:

Answer to Question (1) - The Contractor is notified that the As-Built Drawings and Sketches are for Reference only. It shall be the Contractor's responsibility to verify the locations of all manholes shown on the As-Built Drawings and Sketches and to inform the Engineer in writing of any discrepancies between the field conditions and the information provided. Buried manhole shall be uncovered and rebuilt to grade as required by the Engineer. Payment for this work shall be made under the respective Item No. 73.21AC - ADDITIOJNAL CONCRETE, Item No. 73.51AS - ADDITIONAL STEEL REINFORCING BARS, and, Item No. 51.23RF - REPLACEMENT OF EXISTING MANHOLE FRAME AND COVER. Payment for the removal of any existing roadway pavements and for any roadway restoration required due to uncovering of existing buried manholes shall be deemed included in the prices bid for all items of the contract. No separate or additional payment will be made for this removal and restoration of roadway pavements work.

- (6) Refer to Page V-65:
Add the following new **Section 5.05K**:

**SECTION 5.05K
RECONSTRUCTION OF EXISTING SEWERS USING D.E.P. APPROVED
POLYURETHANE LINING METHOD**

5.05K.1 INTENT

It is the intent of this section to provide for the reconstruction of existing sewers by the use of D.E.P. approved uniform high-strength polyurethane material that cures in place to form an interior hardened, impermeable, abrasion resistant and corrosion resistant liner. Polyurethane shall be applied using a method approved by the manufacturer and the Engineer for the specific polyurethane material being used for the specific pipe to be lined. The polyurethane lining method shall extend over the specified length in a continuous application within the pipe.

5.05K.2 DESCRIPTION OF WORK

Unless otherwise specified in the contract, the Contractor shall use a Department of Environmental Protection (DEP) approved polyurethane lining method on all existing sewers shown, specified, or ordered to be reconstructed under this contract by use of an approved polyurethane lining method. All such work shall comply with the terms of this specification and with the manufacturer's instructions, recommendations, specifications and standards set forth for the lining method.

During the warranty period any defects that might affect the integrity or strength of the polyurethane liner shall be immediately repaired or replaced by the Contractor, at the Contractor's expense, pursuant to the manufacturer's instructions, recommendations, specifications and standards, and to the satisfaction of the Engineer.

The reconstruction of existing sewers using polyurethane lining method shall be performed in strict accordance with **Subsections 5.05K.3 through 5.05K.10**, inclusively.

5.05K.3 SAFETY AND TEMPORARY LIGHTING



- (1) **SAFE ENVIRONMENT** - The Contractor shall carry out the Contractor's operations in strict accordance with all OSHA and manufacturer's safety requirements. Emphasis shall be placed upon safety requirements for entering confined spaces.

The Contractor shall erect such signs and other devices as are necessary for the safety of the work site and shall secure the site and conform all work to the safety requirements of all pertinent regulatory agencies.

The Contractor is advised that all lining work shall be carried out in full compliance with all City, State, and Federal laws, rules, and regulations regarding Air Quality and Safety.

- (2) **TEMPORARY LIGHTING** - Prior to the start of reconstruction, the Contractor shall submit the Contractor's method of providing temporary lighting within the sewer section to be lined to the Engineer for approval. The Contractor shall furnish all labor, materials, and equipment and do all work necessary to install, maintain, and eventually remove all temporary lighting.
 - (a) Bulb wattage shall be sufficient to adequately light the section of sewer being worked on. Bulbs shall be replaced in kind as needed. Lighting shall be intrinsically safe (explosion proof).
 - (b) The Contractor shall maintain the temporary lighting until such time as the Engineer inspects and approves the newly lined sewer section. Temporary lighting may be removed as soon as the Engineer approves and accepts the newly lined sewer section.

5.05K.4 FLOW BYPASSING AND SERVICE CONNECTIONS

- (1) **FLOW BYPASSING** - Prior to the start of work the Contractor will be required to submit a fluming/bypass-pumping detail in accordance with **Subsection 1.06.12 - (3) Existing Flow**. The Contractor shall provide for the diversion of flow of existing sewers at existing upstream manholes (if available) and pump the flow into an existing downstream manhole. The pumps and bypass lines shall be of adequate capacity and size to handle the flow. The proposed bypassing system shall be submitted to the Engineer for approval and no work shall commence until such approval is granted. Bypass for man entry shall require dual plugs, back up pumps and an escape plan if failure of bypass occurs.
- (2) **SERVICE CONNECTIONS** - The Contractor shall be required to determine which service connections are active and shall be responsible for controlling (or maintaining) the flow for each active service connection along the line of the sewer to be rehabilitated. Where necessary, the flow from an active service connection shall be bypassed to a manhole downstream of the proposed work by means of pumping from the trap located in the basement of the affected building. However, should such bypassing be judged unfeasible by the Engineer, the Contractor shall excavate to the service connection outside the building area (sidewalk or roadway as determined by the Engineer) and bypass the connection from this point. The pump and bypass line for each service connection shall be of adequate capacity and size to handle the flow.

Prior to the commencement of any work, the Contractor shall make all necessary investigations and prepare a plan for the controlling (or maintaining) of the flow and, where necessary, for the bypassing of active service connections. This plan shall be submitted to the Engineer for approval and no work shall commence until such approval is granted.

- (3) The Contractor shall continue to divert the flow of the existing sewer and control (or maintain) the flow for active service connections during the installation of and curing of the polyurethane liner and during the final television inspection and digital audio-visual recording.

5.05K.5 INSPECTION PRIOR TO LINING

The Contractor along with the Engineer shall perform a walk through inspection of the existing sewer prior to reconstruction. This interior inspection shall be performed, in order to determine and locate



conditions which would prevent the proper installation of the lining and to identify the location of active service connections. Where existing sewers are of a size that does not permit a walk through inspection, the Contractor shall perform a television inspection and digital audio-visual recording of the existing sewer utilizing a radial eye camera.

5.05K.6 SUBMITTALS

Prior to the start of work on each size existing sewer, the Contractor will be required to submit design calculations together with shop drawing for liner thickness to the Engineer. These design calculations shall be done in accordance with the manufacturer's design instructions, recommendations, specifications and standard.

Under no circumstances shall the finished thickness of liner be less than as follows:

- (i) For Sewer Pipe Less Than 60" In Diameter - seven hundred and fifty (750) mils in thickness.
- (ii) For Sewer Pipe Greater Than Or Equal To 60" In Diameter - one thousand (1,000) mils in thickness.

Note: Diameter means diameter of circular pipe, and equivalent circular diameter for other shape sewers.

The liner thickness shall be designed to adequately resist all external pressures and conditions required by the Engineer.

5.05K.7 SEWER CLEANING AND REMOVAL OF OBSTRUCTIONS

Prior to performing the work of repairing and reconstructing the existing sewers the Contractor shall thoroughly clean the existing sewers and remove obstructions in accordance with **Section 5.18C - Cleaning Of Existing Sewers.**

5.05K.8 SEWER REPAIR

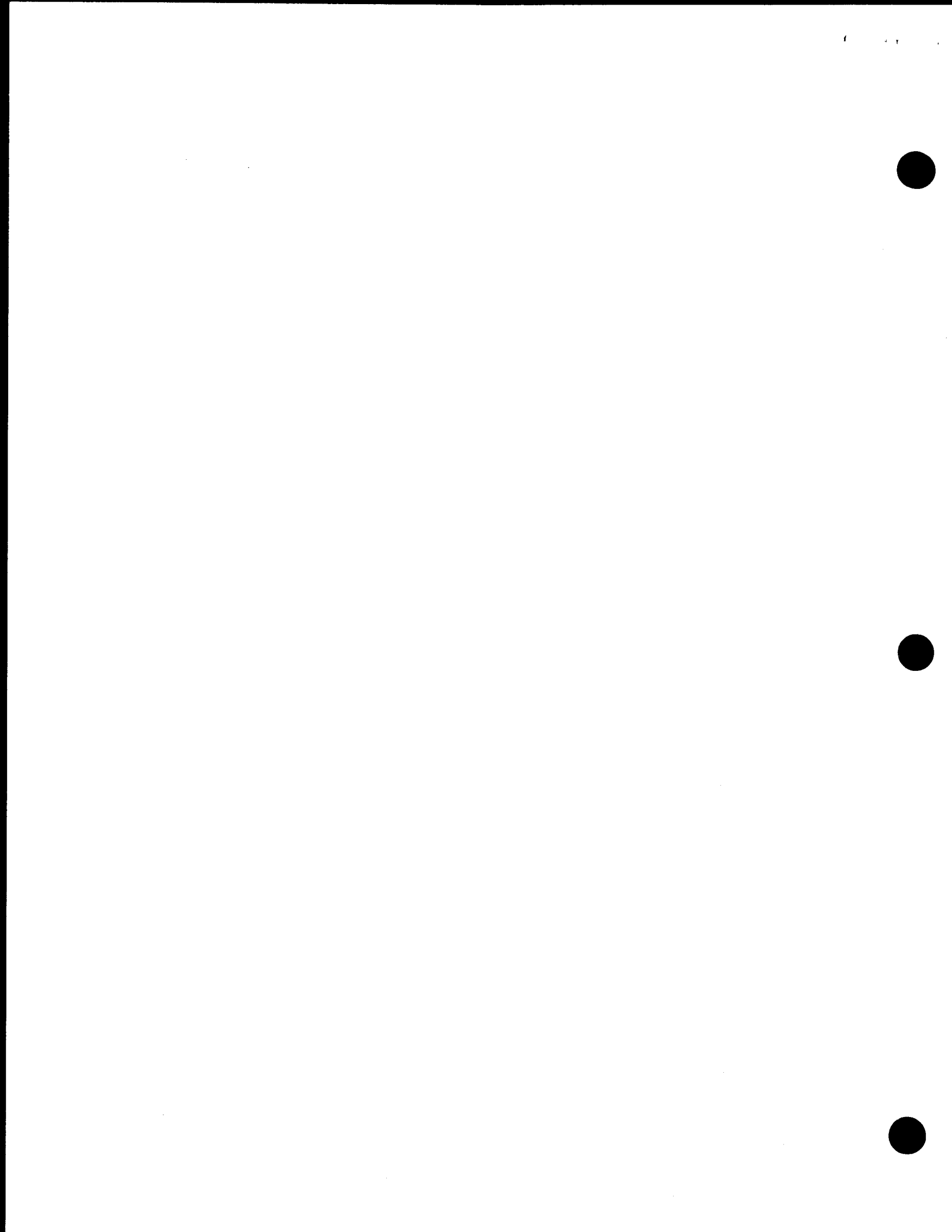
Upon completion of the cleaning of the existing sewers to be reconstructed the Contractor shall inform the Engineer of such and shall perform no further work until such time that the Engineer inspects and notifies the Contractor, in writing within twenty-four (24) hours, that the sewers have been cleaned to the satisfaction of the Engineer. At the time of this inspection the Engineer shall inform the Contractor of all areas (including those shown on the plans) that require sewer repair. If it is determined by the Engineer that the sewer has been damaged and/or that injection grouting is required to fill surrounding voids and/or stop infiltration/exfiltration of the existing sewer to be reconstructed, the Contractor shall perform the sewer repair work in accordance with **Section 5.20G - Hydroactive Polyurethane - Injection Grouting (For Polyurethane Lining Method)** and **Section 5.20F - Material For Sewer/Manhole Repair Work (For Polyurethane Lining Method).**

5.05K.9 MATERIALS

(A) POLYURETHANE LINING MATERIAL: Restorative and protective polyurethane lining material shall be SPRAYWALL[®] as manufactured by SPRAYROQ, INC. available from the following installers: (i) Songer Contracting, 44 Walnut Street, Montgomery, NY 12549, Contact: Perry Songer, Tel. No. 800-457-0747, Fax No. 845-457-9938, psonger@hvc.rr.com ; (ii) Abel Recon, 3925 Columbia Avenue, P.O. Box 476, Mountville, PA 17554-0476, Contact: Hap Witmer, Tel. No. 717-285-3103, Fax No. 717-285-2321, hwitmer@abelrec.com ; (iii) Infrastructure Rehab Service, 6104 Hardware Drive, Prince George, VA 23875-3049, Contact: Dan Gadams, Tel. No. 804-861-9888, dgadams@irs-rehab.com ; (iv) Osborn Contract Services, Inc., 125 Sunbelt Court, Greer, SC 19650, Contact: Jeff Hargett, Tel. No. 864-877-2535, Fax No. 864-877-5859, jeff@osborninc.com ; or approved equal.

SPRAYWALL[®] comes in components of two parts, and is a structural, spray-applied, fast-setting, impermeable, high-strength, durable, corrosion resistant and abrasion resistant polyurethane material.

Physical Properties:



Flexural Modulus ASTM D790	_____	>735,000-psi
Long Term Flexural Modulus Of Elasticity ASTM D6992	_____	529,000-psi
Tensile Strength ASTM D638	_____	>7,450-psi
Elongation ASTM D638	_____	<4%
Compressive Strength ASTM D695:		
28-day	_____	18,500-psi
Water Permeation ASTM E96	_____	1.65-g/day/m ²
Abrasion Resistance ASTM-D4060 (Tabor Abrader C-17 Wheel):		
1,000-gram load, 1,000-cycles	_____	17.7-mg average weight loss
Hardness, Shore D ASTM D2240	_____	85
Density ASTM D792	_____	87-lbs./ft ³
Manning "N" Factor	_____	0.009
NSF 61	_____	Yes

(B) REPAIR MATERIAL: Repair material shall be as specified in Section 5.20F - Material For Sewer/Manhole Repair Work (For Polyurethane Lining Method).

5.05K.10 RECONSTRUCTION OF EXISTING SEWERS (POLYURETHANE LINING METHOD)

(A) DESCRIPTION - The Contractor will be responsible for the reconstruction of existing sewers via the use of polyurethane lining method.

(B) MIXING

(1) POLURETHANE LINING MATERIAL:

SPRAYWALL[®] lining material shall be mixed in the proportions specified by the manufacturer and as follows:

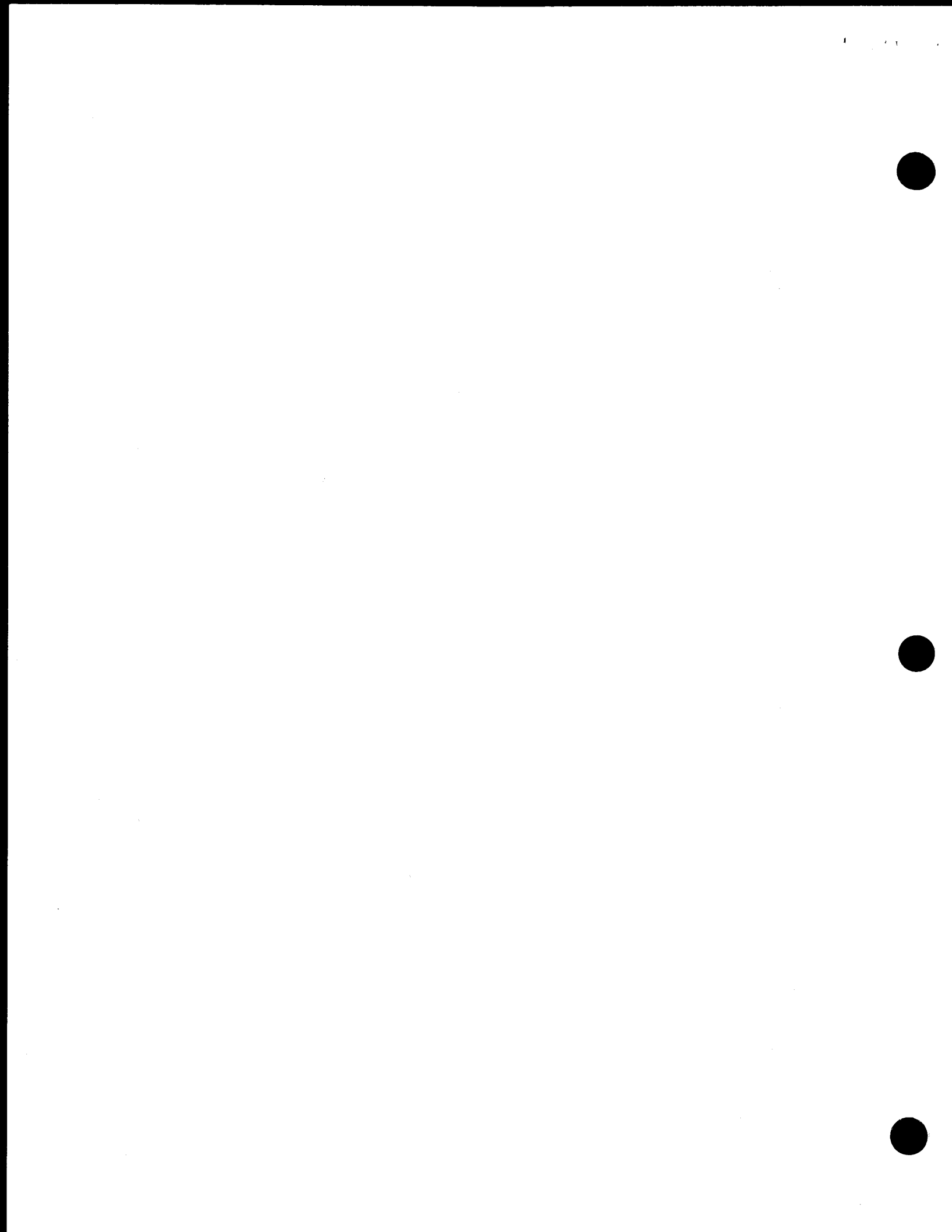
(1) For Application By Proprietary Heated Plural Component Spray System:

- (i) Premix contents of Part A Resin, and premix contents of Part B Hardener component with a slow speed paddle or "Jiffy" mixer separately until the components achieve required color and consistency;
- (ii) Do not add solvent, additive or adulterant to any component material.

(C) EQUIPMENT

- (1) Mixers, spray guns, gun tips, spray systems, compressors, pumps, hoses, tools, heating devices, etc. shall be standard commercial models as specified by the manufacturer. Mixing equipment shall be capable of thoroughly mixing the materials in sufficient quantity to maintain placing continuity. Spray systems and compressor shall be of sufficient capacity to maintain, without interruption, the pressures and volume necessary for delivery.
- (2) The Contractor shall prepare and inspect all necessary tools and any spare parts that are required for equipment that suffer frequent breakdowns, and shall ensure that said tools and spare parts are available at the site. Supporting equipment, such as pumps and generators, shall be provided at the site in the event there is a fluid surge and pumping is required on an emergency basis. The Contractor shall also prepare and make operable all necessary communication equipment for the Contractor's field crew.

(D) POLYURETHANE LINING MATERIAL CONTRACTOR - The Contractor is required to use one of the following installers to perform the polyurethane lining work: : (i) Songer Contracting, 44 Walnut Street, Montgomery, NY 12549, Contact: Perry Songer, Tel. No. 800-457-0747, Fax No. 845-457-9938, psonger@hvc.rr.com; (ii) Abel Recon, 3925 Columbia Avenue, P.O. Box 476, Mountville, PA 17554-0476, Contact: Hap Witmer, Tel. No. 717-285-3103, Fax No. 717-285-2321, hwitmer@abelrec.com; (iii) Infrastructure Rehab Service, 6104 Hardware Drive, Prince George, VA 23875-3049, Contact: Dan Gadams, Tel. No. 804-861-9888, dgadams@irs-rehab.com; (iv) Osborn Contract Services, Inc., 125 Sunbelt Court, Greer, SC 19650, Contact: Jeff Hargett, Tel. No. 864-877-2535, Fax No. 864-877-5859, jeff@osborninc.com; or approved equal.



(E) CONNECTIONS TO HYDRANTS - The Contractor shall strictly comply with the New York State Department of Health's Public Water Supply Guide on "CROSS-CONNECTION CONTROL". In order to insure strict compliance with the State Guide, all connections to Hydrants shall be provided with an approved and certified "REDUCED PRESSURE ZONE BACKFLOW PREVENTER" in accordance with the Department's Standards and as directed by the Engineer. The cost for all labor, materials and equipment required to complete this work shall be deemed included in the prices bid for all items of this contract.

(F) MEANS AND METHODS - Upon completion of the cleaning, obstruction removal and repair of the existing sewers to be reconstructed using polyurethane lining method, the Contractor shall inform the Engineer of such and shall perform no further work until such time that the Engineer inspects and notifies the Contractor, in writing, that the sewers have been cleaned, repaired and that the quality of the substrate is to the satisfaction of the Engineer and that the Contractor may proceed with the polyurethane lining installation. After such notification, the Contractor shall proceed with the polyurethane lining installation in accordance with the plans and specifications, the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

Four (4) small plastic depth gauges shall be attached as a ring around the inner surface of the sewer, one (1) at the crown, one (1) at the invert, and one (1) at each spring line. The depth gauges shall show the thickness as designed or specified. The gauge rings shall be placed five (5) linear feet apart parallel to the center line of the sewer. The preset depth gauge guides shall be positioned just below the designed or specified finished polyurethane layer. The gauges will be left in place within the polyurethane layer. The Contractor shall be required to hit the approved designed or specified liner thickness. Additional material thicknesses applied by the Contractor will be at the Contractor's own expense. No separate or additional payment will be made for any extra material thicknesses applied above the approved designed or specified liner thickness.

The Contractor shall furnish all labor, materials, and equipment and shall do all work necessary to place the polyurethane layer(s) over the specified surface area of the interior of the existing sewer, including the invert, walls and crown, to the thicknesses, and in accordance with the plans and specifications, the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

(G) APPLICATION CONDITIONS - The polyurethane layer must be applied over a clean and thoroughly dry substrate to achieve optimum technical performance of the product.

The substrate shall be kept at 60°-80°F for at least 48-hours prior to application. The component material shall be heated to temperatures specified by the manufacturer.

The polyurethane liner shall not be applied when ambient and surface temperatures are expected to fall below 60°F within 72-hours of placement. Both ambient and surface temperatures must be at least 60°F at time of placement. For applying polyurethane liner at temperatures below 60°F, the ambient and surface temperatures shall be warmed to a minimum temperature of 60°F for at least 48-hours prior to application. The area when heating shall be properly ventilated. The newly installed liner shall be protected from freezing. Heating devices and other special equipment approved by the manufacturer and the Engineer shall be used to achieve the optimum application environment.

(H) APPLICATION - The polyurethane liner shall be applied in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

(I) SERVICE CONNECTIONS - After the liner has been installed, the Contractor shall clean all existing active service connections and those inactive connections ordered by the Engineer of lining material that may hinder or block flow from the service connection.

(J) CURING - After the new lining is installed cure time shall be in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer. All fluming and/or bypass pumping shall be maintained during the curing process.



(K) TESTING

(1) Sample Test Panel: Prior to start of polyurethane lining process at each new location set up, the Contractor shall construct two (2) 1/2" x 24" x 24" sample test panels for the purpose of establishing an accepted standard for quality of placement of polyurethane liner material (One test panel for application of the design thickness or minimum 750-mil thickness and one test panel for application of the design thickness or minimum 1,000-mil thickness). The 1/2" x 24" x 24" panels shall be Cement Board. Four (4) small plastic depth gauges shall be attached at four locations on each test panel. The polyurethane lining shall be applied to the test panels with the same manner of application that will be used in lining the existing sewer. The Engineer shall verify that the design or specified thickness has been achieved and also make a determination as to the quality of the application. Test panels that fail the Engineer's inspections shall be discarded, remade and replaced with an acceptable test panel.

All sample test panels shall be made in the presence of the Engineer. Test panels shall become the property of the Engineer.

(2) Testing Of Installed Liner: After the polyurethane liner has achieved a hardened surface, a holiday detector shall be utilized to test the entire liner so as to ensure a continuous pinhole-free lining. Pinholes shall be repaired in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

Installed protective polyurethane lining shall be tested for pinholes after a minimum 24-hour cure at a temperature of 70°F. Pinhole testing shall be accomplished in accordance with ASTM D4787, using a Tinker Razor Holiday Detector, San Gabriel, CA, Model AP/W, or an approved equal device. Test voltage of 100-volts/mil of coating thickness shall be applied. All pinholes shall be marked and repaired using manufacturer's approved method (ASTM G62).

All holiday testing shall be done in the presence of the Engineer.

(L) **FINAL TELEVISION INSPECTION AND RECORDING** - Upon completion of the work the Contractor shall perform a final television inspection and digital audio-visual recording of the newly lined sewer in accordance with **Section 5.17** of the specifications, with the exception that all sewers regardless of size (including those larger than fifty-four (54) inches in their least inside dimension) shall receive this final television inspection and digital audio-visual recording. Payment for final television inspection and digital audio-visual recording shall be made under Item No. 53.11DR - TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS.

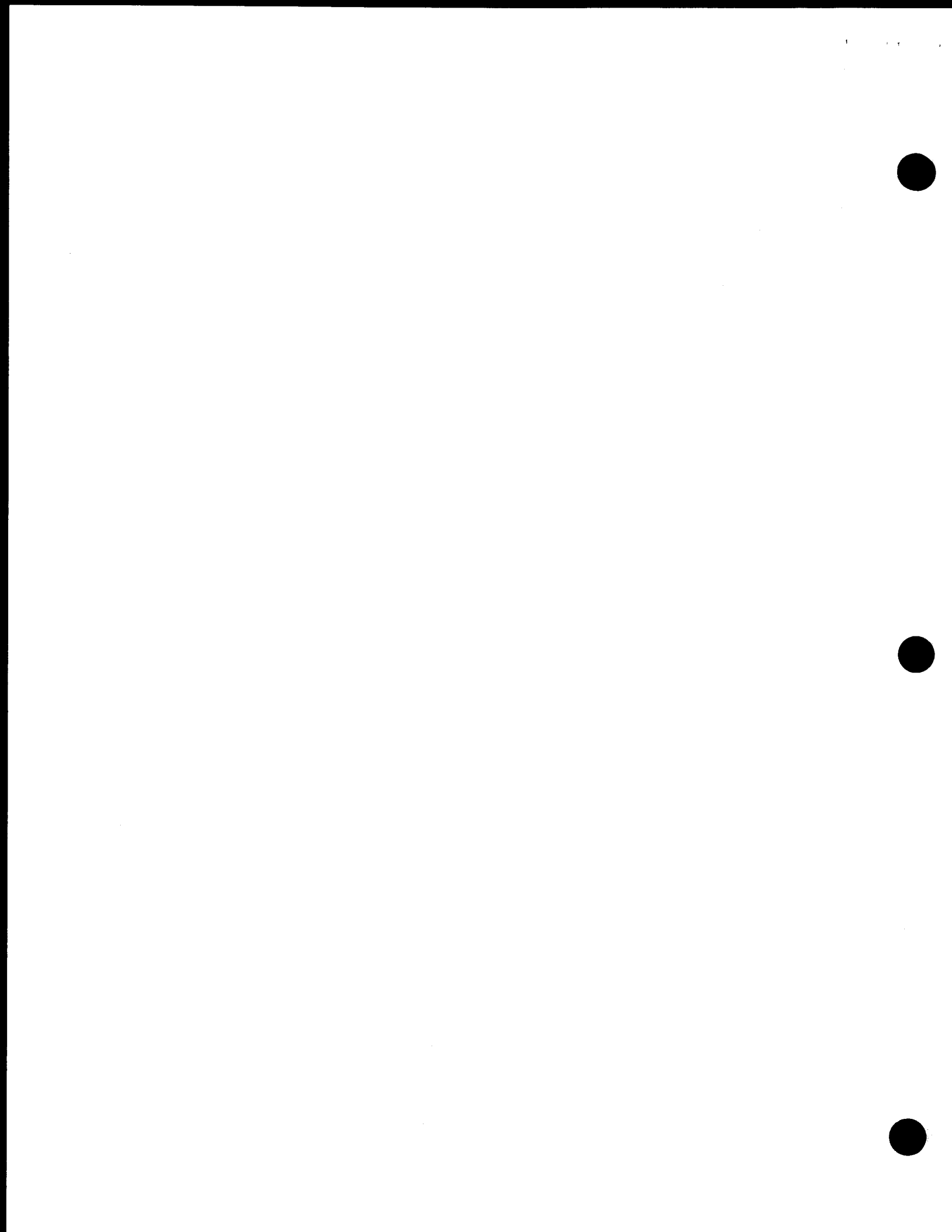
Should the results of this final inspection reveal any defects, as determined by the Engineer, the Contractor will be required to repair or replace these defects as ordered by the Engineer and in accordance with the manufacturer's instructions, recommendations, specifications and standards. Such repair work shall be done at the sole expense of the Contractor.

5.05K.11 MEASUREMENT

The quantity to be measured for payment shall be the number of linear feet of existing sewer reconstructed to the satisfaction of the Engineer, as shown, specified or required, measured horizontally along the centerline of the existing sewer from inside face of manhole to inside face of manhole.

The quantity to be measured for payment per linear foot for reconstruction of multiple barrel sewers shall be measured once for all barrels within that linear section. Measurement for payment will not be made for each multiple barrel reconstructed.

5.05K.12 PRICE TO COVER



The contract price for "RECONSTRUCTION OF EXISTING SEWERS USING D.E.P. APPROVED POLYURETHANE LINING METHOD" shall be the unit price bid per linear foot for each size, shape, kind and type of existing sewer and shall cover the cost of all labor, materials, plant, equipment, samples and tests required or necessary to reconstruct the existing sewer as specified herein, including the making of sample test panels, holiday testing; pinhole repair, all submittals; fluming and/or diversion of the flow in the existing sewer; walk-through inspection or television inspection prior to lining; cleaning of lining material from active and inactive service connection; furnishing and installing all other items necessary to complete this work and do all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

The contract price hereunder shall also include the cost of all labor and materials required and necessary to provide for the safe environment and temporary lighting as specified herein.

The contract price per linear foot for reconstruction of multiple barrel sewers shall be made once for all barrels within that linear foot section. Payment will not be made for each multiple barrel reconstructed.

5.05K.13 SEPARATE PAYMENT

Payment for this final television inspection will be made under Item No. 53.11DR - TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS.

Payment for Reconstruction Of Existing Sewers Using D.E.P. Approved Polyurethane Lining Method will be made under the Item Number as calculated below:

The Item Numbers for Reconstruction Of Existing Sewers Using D.E.P. Approved Polyurethane Lining Method have fourteen characters. (The decimal point is considered a character, the third character.)

- (1) The first five characters shall define Reconstruction Of Existing Sewers Using D.E.P. Approved Polyurethane Lining Method:

50.78

- (2) The sixth character shall define the Type of Sewer Effluent:

S - Sanitary Sewer
M - Storm Sewer
C - Combined Sewer
I - Interceptor Sewer

- (3) The seventh, eighth and ninth characters shall define either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Sewers of Other Shapes (e.g. Rectangular, Arched, Elliptical, and Egg). (The seventh, eighth and ninth characters representing the unit of inches for either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Sewers of Other Shapes.) See examples below:

060 - 60"
096 - 96"
108 - 108"
120 - 120"

- (4) The tenth character shall define the Shape of the Existing Sewer:

D - Circular (Diameter)
R - Rectangular (Single Barrel)
B - Double Barrel Rectangular
T - Triple Barrel Rectangular
A - Arch-Shaped
H - Horizontal Elliptical
V - Vertical Elliptical



E - Egg-Shaped

(5) The eleventh character shall define the Kind of Existing Sewer:

B - Brick

C - Concrete

(6) The twelfth, thirteenth and fourteenth characters shall define either Circular and Arch-Shaped or the Height of the Sewer for Existing Sewers of Other Shapes (e.g. Rectangular, Elliptical, and Egg). (The twelfth, thirteenth and fourteenth characters representing the unit of inches for the Height of the Sewer for Existing Sewers of Other Shapes.) See examples below:

000 - Circular and Arch-Shaped

087 - 87"

096 - 96"

108 - 108"

120 - 120"

(7) Examples of Item Numbers together with Description and Pay Unit as provided in the Bid Schedule are provided below:

Item No.	Description	Pay Unit
50.78S054DB000	RECONSTRUCTION OF EXISTING 54" DIAMETER CIRCULAR BRICK SANITARY SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78S054DC000	RECONSTRUCTION OF EXISTING 54" DIAMETER CIRCULAR CONCRETE SANITARY SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78S051RC048	RECONSTRUCTION OF EXISTING 51"W X 48"H RECTANGULAR CONCRETE SANITARY SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78S084AB000	RECONSTRUCTION OF EXISTING 84"W ARCH-SHAPED BRICK SANITARY SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78S048VB076	RECONSTRUCTION OF EXISTING 48"W X 76"H VERTICAL ELLIPTICAL BRICK SANITARY SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78S043VC068	RECONSTRUCTION OF EXISTING 43"W X 68"H VERTICAL ELLIPTICAL CONCRETE SANITARY SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78S040EB060	RECONSTRUCTION OF EXISTING 40"W X 60"H EGG-SHAPED BRICK SANITARY SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78S045EC060	RECONSTRUCTION OF EXISTING 45"W X 60"H EGG-SHAPED CONCRETE SANITARY SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78M060DB000	RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR BRICK STORM SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78M060DC000	RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR CONCRETE STORM SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78M060RC051	RECONSTRUCTION OF EXISTING 60"W X 51"H RECTANGULAR CONCRETE STORM SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78M108AB000	RECONSTRUCTION OF EXISTING 108"W ARCH-SHAPED BRICK STORM SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.



ADDENDUM NO. 7

PROJECT NO.: PS-312KR

50.78M053VB083	RECONSTRUCTION OF EXISTING 53"W X 83"H VERTICAL ELLIPTICAL BRICK STORM SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78M058VC091	RECONSTRUCTION OF EXISTING 58"W X 91"H VERTICAL ELLIPTICAL CONCRETE STORM SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78M047EB070	RECONSTRUCTION OF EXISTING 47"W X 70"H EGG-SHAPED BRICK STORM SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78M052EC065	RECONSTRUCTION OF EXISTING 52"W X 65"H EGG-SHAPED CONCRETE STORM SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78M072BC072	RECONSTRUCTION OF EXISTING 72"W X 72"H DOUBLE BARREL RECTANGULAR CONCRETE STORM SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78M087TC060	RECONSTRUCTION OF EXISTING 87"W X 60"H TRIPLE BARREL RECTANGULAR CONCRETE STORM SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78C072DB000	RECONSTRUCTION OF EXISTING 72" DIAMETER CIRCULAR BRICK COMBINED SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78C072DC000	RECONSTRUCTION OF EXISTING 72" DIAMETER CIRCULAR CONCRETE COMBINED SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78C126RC075	RECONSTRUCTION OF EXISTING 126"W X 75"H RECTANGULAR CONCRETE COMBINED SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78C132AB000	RECONSTRUCTION OF EXISTING 132"W ARCH-SHAPED BRICK COMBINED SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78C063VB098	RECONSTRUCTION OF EXISTING 63"W X 98"H VERTICAL ELLIPTICAL BRICK COMBINED SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78C077VC121	RECONSTRUCTION OF EXISTING 77"W X 121"H VERTICAL ELLIPTICAL CONCRETE COMBINED SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78C050EB074	RECONSTRUCTION OF EXISTING 50"W X 74"H EGG-SHAPED BRICK COMBINED SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78C058EC077	RECONSTRUCTION OF EXISTING 58"W X 77"H EGG-SHAPED CONCRETE COMBINED SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78I060DC000	RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78I064RC048	RECONSTRUCTION OF EXISTING 64"W X 48"H RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78I060BC060	RECONSTRUCTION OF EXISTING 60"W X 60"H DOUBLE BARREL RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.
50.78I078TC060	RECONSTRUCTION OF EXISTING 78"W X 60"H TRIPLE BARREL RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED POLYURETHANE LINING METHOD	L.F.

(7) Refer to Page V-65:Add the following new Section 5.05M:



**SECTION 5.05M
RECONSTRUCTION OF EXISTING SEWERS USING D.E.P. APPROVED
SPIN CAST GEOPOLYMER PIPE (SCGP) LINING METHOD**

5.05M.1 INTENT

It is the intent of this section to provide for the reconstruction of existing sewers by the use of a uniform high-strength factory blended layer of special geopolymer mortar that cures in place to form an interior hardened, abrasion resistant and corrosion resistant liner. This geopolymer layer shall be applied using a D.E.P approved spin cast geopolymer pipe (SCGP) lining method. The spin cast geopolymer pipe liner shall extend over the specified length in a continuous structural geopolymer pipe within a pipe.

5.05M.2 DESCRIPTION OF WORK

Unless otherwise specified in the contract, the Contractor shall use a Department of Environmental Protection (DEP) approved spin cast geopolymer pipe (SCGP) lining method on all existing sewers shown, specified, or ordered to be reconstructed under this contract by use of an approved spin cast geopolymer pipe (SCGP) lining method. All such work shall comply with the terms of this specification and with the manufacturer's instructions, recommendations, specifications and standards set forth for the lining method.

During the warranty period any defects that might affect the integrity or strength of the spin cast geopolymer pipe (SCGP) liner shall be immediately repaired or replaced by the Contractor, at the Contractor's expense, pursuant to the manufacturer's instructions, recommendations, specifications and standards, and to the satisfaction of the Engineer.

The reconstruction of existing sewers using spin cast geopolymer pipe (SCGP) lining method shall be performed in strict accordance with **Subsections 5.05M.3 through 5.05M.10**, inclusively.

5.05M.3 SAFETY AND TEMPORARY LIGHTING

- (1) **SAFE ENVIRONMENT** - The Contractor shall carry out the Contractor's operations in strict accordance with all OSHA and manufacturer's safety requirements. Emphasis shall be placed upon safety requirements for entering confined spaces.

The Contractor shall erect such signs and other devices as are necessary for the safety of the work site and shall secure the site and conform all work to the safety requirements of all pertinent regulatory agencies.

The Contractor is advised that all lining work shall be carried out in full compliance with all City, State, and Federal laws, rules, and regulations regarding Air Quality and Safety.

- (2) **TEMPORARY LIGHTING** - Prior to the start of reconstruction, the Contractor shall submit the Contractor's method of providing temporary lighting within the sewer section to be lined to the Engineer for approval. The Contractor shall furnish all labor, materials, and equipment and do all work necessary to install, maintain, and eventually remove all temporary lighting.
- (a) Bulb wattage shall be sufficient to adequately light the section of sewer being worked on. Bulbs shall be replaced in kind as needed. Lighting shall be intrinsically safe (explosion proof).
- (b) The Contractor shall maintain the temporary lighting until such time as the Engineer inspects and approves the newly lined sewer section. Temporary lighting may be removed as soon as the Engineer approves and accepts the newly lined sewer section.

5.05M.4 FLOW BYPASSING AND SERVICE CONNECTIONS



- (1) **FLOW BYPASSING** - Prior to the start of work the Contractor will be required to submit a fluming/bypass-pumping detail in accordance with **Subsection 1.06.12 - (3) Existing Flow**. The Contractor shall provide for the diversion of flow of existing sewers at existing upstream manholes (if available) and pump the flow into an existing downstream manhole. The pumps and bypass lines shall be of adequate capacity and size to handle the flow. The proposed bypassing system shall be submitted to the Engineer for approval and no work shall commence until such approval is granted. Bypass for man entry shall require dual plugs, back up pumps and an escape plan if failure of bypass occurs.
- (2) **SERVICE CONNECTIONS** - The Contractor shall be required to determine which service connections are active and shall be responsible for controlling (or maintaining) the flow for each active service connection along the line of the sewer to be rehabilitated. Where necessary, the flow from an active service connection shall be bypassed to a manhole downstream of the proposed work by means of pumping from the trap located in the basement of the affected building. However, should such bypassing be judged unfeasible by the Engineer, the Contractor shall excavate to the service connection outside the building area (sidewalk or roadway as determined by the Engineer) and bypass the connection from this point. The pump and bypass line for each service connection shall be of adequate capacity and size to handle the flow.

Prior to the commencement of any work, the Contractor shall make all necessary investigations and prepare a plan for the controlling (or maintaining) of the flow and, where necessary, for the bypassing of active service connections. This plan shall be submitted to the Engineer for approval and no work shall commence until such approval is granted.

- (3) The Contractor shall continue to divert the flow of the existing sewer and control (or maintain) the flow for active service connections during the installation of and curing of the spin cast geopolymer pipe (SCGP) liner and during the final television inspection and digital audio-visual recording.

5.05M.5 INSPECTION PRIOR TO LINING

The Contractor along with the Engineer shall perform a walk-through inspection of the existing sewer prior to reconstruction. This interior inspection shall be performed, in order to determine and locate conditions which would prevent the proper installation of the lining and to identify the location of active service connections. Where existing sewers are of a size that does not permit a walk-through inspection, the Contractor shall perform a television inspection and digital audio-visual recording of the existing sewer utilizing a radial eye camera.

5.05M.6 SUBMITTALS

Prior to the start of work on each size existing sewer, the Contractor will be required to submit design calculations together with shop drawing for liner thickness to the Engineer. These design calculations shall be done in accordance with the manufacturer's design instructions, recommendations, specifications and standard.

Under no circumstances shall the finished thickness of liner be less than as follows:

- (i) For Sewer Pipe Less Than 60" In Diameter - one and one-half (1-1/2) inch in thickness.
- (ii) For Sewer Pipe Greater Than Or Equal To 60" In Diameter - one and one-half (1-1/2) inch in thickness.

Note: Diameter means diameter of circular pipe, and equivalent circular diameter for other shape sewers. (e.g. Rectangular-Shaped Sewers, Egg-Shaped Sewers, Elliptical-Shaped Sewers, Arch-Shaped Sewers.)

The liner thickness shall be designed to adequately resist all external pressures and conditions required by the Engineer.



5.05M.7 SEWER CLEANING, REMOVAL OF OBSTRUCTIONS AND CORROSION PROTECTION APPLICATION

Prior to performing the work of repairing and reconstructing the existing sewers the Contractor shall perform the following:

- (1) Thoroughly clean the existing sewers and remove obstructions in accordance with **Section 5.18C - Cleaning Of Existing Sewers.**
- (2) Apply a GeoSpray™ AMS corrosion protection pre-treatment to all surfaces of the existing sewer to ensure the complete kill of acid producing bacterial. The corrosion resistant pre-treatment shall be applied in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

5.05M.8 SEWER REPAIR

Upon completion of the cleaning of the existing sewers to be reconstructed the Contractor shall inform the Engineer of such and shall perform no further work until such time that the Engineer inspects and notifies the Contractor, in writing within twenty-four (24) hours, that the sewers have been cleaned to the satisfaction of the Engineer. At the time of this inspection the Engineer shall inform the Contractor of all areas (including those shown on the plans) that require sewer repair. If it is determined by the Engineer that the sewer has been damaged and/or that injection grouting is required to fill surrounding voids and/or stop infiltration/exfiltration of the existing sewer to be reconstructed, the Contractor shall perform the sewer repair work in accordance with **Section 5.20A - Portland Cement (Type V) - Injection Grouting** and **Section 5.20C - Mortar For Sewer/Manhole Repair Work (For CCCP Lining Method).**

5.05M.9 MATERIALS

(A) SCGP LINING MORTAR: Pipe lining mortar shall be GeoSpray™ as manufactured by Milliken available from the following installers: (i) North American Pipeline Services, 3663 Route 9 North, Old Bridge, NJ 08857, Contact: Tom Mullen, GM, Tel No. 732-890-5321; (ii) Midas Utilities, 5101 Sunnyside Avenue, College Park, MD 20740, Contact: Dave Ventresca, GM, Tel No. 301-943-3375; (iii) Green Mountain Pipeline Services, 1887 River Street, Bethel, VT 05032, Contact: Tim Vivian, GM, Tel. No. 802-316-0057; and, (iv) IGV Incorporated, 399 Route 109 Suite 2, West Babylon, NY 11704, Contact: Tom Mina, GM, Tel. No. 917-517-3789; (v) Inland Pipe Rehabilitation (IPR), 2002 Timberloch Place, Suite 550, The Woodlands, TX 77380 Contact: Steve Henning, Tel. No. 281-651-8201, shenning@teamipr.com ; or approved equal.

GeoSpray™ geopolymer comes in dry mix packages of 50-lbs each and also in 2,000-lb super sacks. GeoSpray™ geopolymer is a high performance fiber reinforced mortar specifically designed for structural rehabilitation. This high-strength, ultra-low porosity material is made from natural mineral polymers and recycled industrial waste streams. GeoSpray™ is designed for use through multiple application techniques including pouring, placing, trowelling, spraying and centrifugally casting. The installed liner is highly chemically resistant, abrasion resistant, and extremely long lasting.

Physical Properties:

Set Time At 70°F ASTM C807:	
Initial Set	-----approx. 60 to 75-minutes
Final Set	-----approx. 90 to 110-minutes
Flexural Strength ASTM C78:	
28-days	-----min. 1,300-psi
Compressive Strength ASTM C39:	
24-hours	-----2,500-psi
28-days	-----8,000-psi
Tensile Strength ASTM C496	-----750-psi
Slant Shear Bond ASTM C882	-----2,500-psi
Modulus Of Elasticity ASTM C469:	
28-days	-----min. 6.5 x 10 ⁶ -psi



Freeze Thaw ASTM C666-----300 Cycle Zero Pass
 Chloride Ion Penetration ASTM C1543-----0.014% wt Cl at 55-65mm
 Antimicrobial Activity ISO22196
 24-hours-----99.7% Reduction

(B) MINIMUM LINER THICKNESS AFTER CURING: As specified in the table below, based on the maximum sewer depth for the segment being rehabilitated. The thickness installed must meet the manufacturers written requirements. The standard conditions utilized in the table below include: a pipe in the fully deteriorated condition, the water table is assumed to be at the surface, soil is assumed at 130 lbs/cubic foot, and a traffic loading of HS-20. The installed liner system, complete in place, must meet or exceed site specific conditions.

MINIMUM LINER THICKNESS

Sewer Pipe Diameter	Maximum Invert Depth 0 to 10 feet	Maximum Invert Depth 10-15 Feet	Maximum Invert Depth 15-20 feet	Maximum Invert Depth 20-25 Feet	Maximum Invert Depth 25-35 Feet	Maximum Invert Depth 35-50 Feet
30"	1.5"	1.5"	1.5"	1.5"	1.5"	1.5"
36"	1.5"	1.5"	1.5"	1.5"	1.5"	1.5"
48"	1.5"	1.5"	1.5"	1.5"	1.5"	1.6"
54"	1.5"	1.5"	1.5"	1.5"	1.5"	1.8"
60"	1.5"	1.5"	1.5"	1.5"	1.7"	1.9"
72"	1.5"	1.5"	1.6"	1.7"	1.9"	2.1"
84"	1.5"	1.5"	1.7"	1.9"	2.1"	2.3"
96"	1.5"	1.6"	1.8"	2.0"	2.3"	2.6"
108"	2.0"	1.7"	1.9"	2.1"	2.4"	2.7"
120"	***	1.8"	2.0"	2.2"	2.6"	2.9"

Note: If host pipe condition is deemed to be more severe than assumed conditions, liner thickness may be increased upon approval by the Engineer.

(C) REPAIR MATERIAL: Repair material shall be as specified in **Section 5.20C - Mortar For Sewer/Manhole Repair Work (For CCCP Lining Method)**.

(D) Water shall be fresh, clean and free from oils, acids, alkali or organic matter.

(E) CORROSION PROTECTION: Corrosion protection shall be GeoSpray™ AMS (Acid Mitigation System) as manufactured by Milliken available from the distributors/installers specified above. GeoSpray™ AMS is a liquid that is to be used both as a Pre-Treatment applied to existing concrete sewer surfaces, and as a Post-Coat applied to newly lined pipe. It is used as a pre-treatment over concrete and as post coating for the prevention of Microbiologically Induced Corrosion (MIC) common to concrete pipe and structures in sewer environments. As a pre-treatment it creates an environment incompatible to the growth of harmful bacteria. As bacterial growth is neutralized, hydrogen sulfide gases from raw sewerage cannot be metabolized and converted into sulfuric acid in concentrations sufficient to damage the impregnated concrete and lining mortar. Equipment required for application can include centrifugal spray mechanisms, pneumatic spray pumps, hand pumps or paint style rollers. Use the GeoSpray™ AMS full strength and undiluted, as received from the manufacturer. Apply GeoSpray™ AMS adequately to achieve surface saturation. The GeoSpray™ AMS Post Coat must be dry and non-tacky prior to releasing bypass.

(F) CURING COMPOUND: The use of curing compounds is not recommended or desired for geopolymer liners.

5.05M.10 RECONSTRUCTION OF EXISTING SEWERS (SPIN CAST GEOPOLYMER PIPE (SCGP) LINING METHOD)

(A) DESCRIPTION - The Contractor will be responsible for the reconstruction of existing sewers via the use of spin cast geopolymer pipe (SCGP) lining method.



(B) MIXING - Contractor shall add the geopolymer material to the batch water not to exceed a 0.20 water/material ratio. For example, add 100-lbs. of geopolymer powder to 19 to 20-lbs. batch water. Precision metering of water in a continuous mixing chamber is required to maintain the strict water to material ratio. It is important to maintain the specified water to polymer ratio throughout the application process. Uniform water to geopolymer ratio equates to consistent strength. The ability to closely adjust and monitor the addition of water through the use of a sight tube system is required.

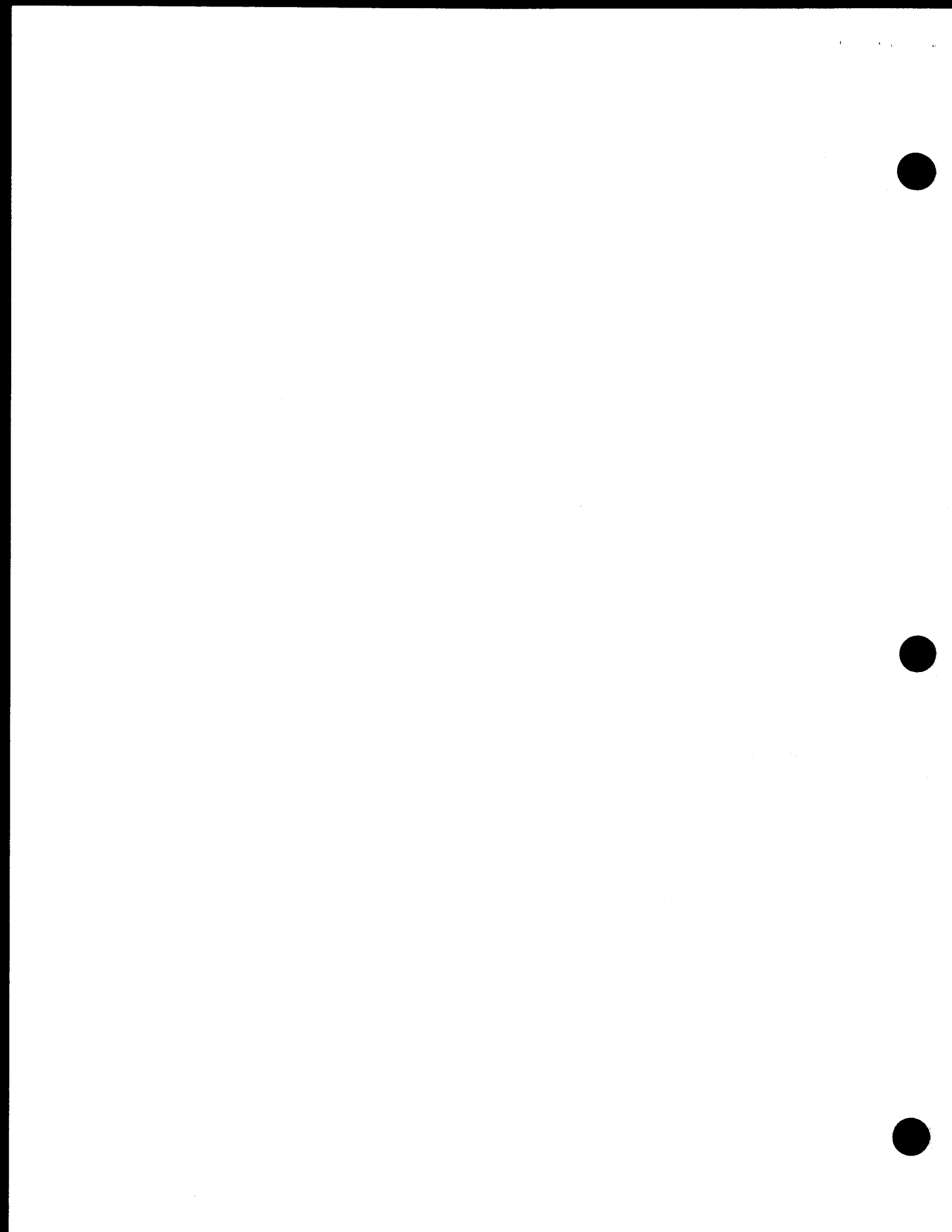
Mixing water temperatures must be determined before blending operations begin. The mixing water temperature must be recorded in the daily operation log at multiple times throughout the day during the installation process. If water temperatures exceed 80°F, then the water should be chilled to 80°F or lower. The ability to provide mixing water at a consistent temperature is a critical aspect of the mixing and installation process. Industrial electronic chillers are available and should be of a suitable capacity to provide the proper amount of water and at the required temperature. High temperature applications, those greater than 80°F, require the use of water chillers to maintain the water at the proper temperature.

The geopolymer lining material shall be thoroughly mixed with the appropriate temperature water. This ensures a consistent lining material prior to pumping. Begin pumping through an industrial pump for continuous delivery to the appropriate application device.

The mixing operations must be performed so that the minimum of dust is released into the surrounding environment.

(C) EQUIPMENT

- (1) Major equipment components consist of a generator, an air compressor, a high pressure washer, a high shear mixer and pump assembly, a reciprocating high speed spin cast delivery assembly, an electric chain drive retraction system capable of +/- 5% repeatability, and high pressure hoses and couplings.
- (2) Application equipment should have material feed, a high shear mixer and pump. These three functions should operate as a synchronized unit. In addition, the application equipment is required to have sensors that have the ability to shut down the equipment in the event of interruption of any of the functions. This will ensure consistent delivery of materials over time and distance. Application equipment needs to have visible display for the rate of water addition. This will ensure water/material ratios are known and controlled. Water/material ratio must be monitored and recorded throughout the application process. Application equipment should measure the back pressure on the discharge side of the pump. The change in pressure will alert the operator to any potential changes in flow rates. Spinner heads needs to be capable of spraying in both a clock wise and counter clock wise direction. The change in spin direction achieves superior application by applying the materials at multiple angles, when making multiple application passes. Spinner head needs to be attached to a reciprocating mechanism to layer the materials. The reciprocating mechanism needs to oscillate the spinner head by a minimum of 6-inches. The layering allows more uniform application of the product and achieves higher thickness levels. Retraction system needs to be capable of pulling the spinner head at a minimum rate of 4-inches per minute with no more than ±5% tolerance. Retraction system needs to have a visible display that monitors the rate of retraction. The rate of retraction and the volume of material discharged are necessary to calculate the thickness of the sprayed materials. The rate of retraction, material discharge volume, dry material usage and length of pipe covered should be monitored and recorded on a daily basis. This is critical to measure the thickness of material applied.
- (3) The Contractor shall prepare and inspect all necessary tools and any spare parts that are required for equipment that suffer frequent breakdowns, and shall ensure that said tools and spare parts are available at the site. Supporting equipment, such as pumps and generators, shall be provided at the site in the event there is a fluid surge and pumping is required on an



emergency basis. The Contractor shall also prepare and make operable all necessary communication equipment for the Contractor's field crew.

(D) SCGP LINING MORTAR CONTRACTOR - The Contractor is required to use one of the following installers to perform the spin cast geopolymer pipe (SCGP) lining work: : (i) North American Pipeline Services, 3663 Route 9 North, Old Bridge, NJ 08857, Contact: Tom Mullen, GM, Tel No. 732-890-5321; (ii) Midas Utilities, 5101 Sunnyside Avenue, College Park, MD 20740, Contact: Dave Ventresca, GM, Tel No. 301-943-3375; (iii) Green Mountain Pipeline Services, 1887 River Street, Bethel, VT 05032, Contact: Tim Vivian, GM, Tel. No. 802-316-0057; and, (iv) IGV Incorporated, 399 Route 109 Suite 2, West Babylon, NY 11704, Contact: Tom Mina, GM, Tel. No. 917-517-3789; (v) Inland Pipe Rehabilitation (IPR), 2002 Timberloch Place, Suite 550, The Woodlands, TX 77380 Contact: Steve Henning, Tel. No. 281-651-8201, shenning@teamipr.com ; or approved equal.

(E) CONNECTIONS TO HYDRANTS - The Contractor shall strictly comply with the New York State Department of Health's Public Water Supply Guide on "CROSS-CONNECTION CONTROL". In order to insure strict compliance with the State Guide, all connections to Hydrants shall be provided with an approved and certified "REDUCED PRESSURE ZONE BACKFLOW PREVENTER" in accordance with the Department's Standards and as directed by the Engineer. The cost for all labor, materials and equipment required to complete this work shall be deemed included in the prices bid for all items of this contract.

(F) MEANS AND METHODS - Upon completion of the cleaning, obstruction removal, corrosion protection application and repair of the existing sewers to be reconstructed using spin cast geopolymer pipe (SCGP) lining method, the Contractor shall inform the Engineer of such and shall perform no further work until such time that the Engineer inspects and notifies the Contractor, in writing, that the sewers have been cleaned, corrosion protected, repaired and that the quality of the substrate is to the satisfaction of the Engineer and that the Contractor may proceed with the spin cast geopolymer pipe (SCGP) lining installation. After such notification, the Contractor shall proceed with the spin cast geopolymer pipe (SCGP) lining installation in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

Four (4) small plastic depth gauges shall be attached as a ring around the inner surface of the sewer, one (1) at the crown, one (1) at the invert, and one (1) at each spring line. The depth gauges shall show the thickness as designed or specified. The gauge rings shall be placed five (5) linear feet apart parallel to the center line of the sewer. The preset depth gauge guides shall be positioned just below the designed or specified finished geopolymer layer. The gauges will be left in place within the geopolymer layer. The Contractor shall be required to hit the approved designed or specified liner thickness. Additional material thicknesses applied by the Contractor will be at the Contractor's own expense. No separate or additional payment will be made for any extra material thicknesses applied above the approved designed or specified liner thickness.

The Contractor shall furnish all labor, materials, and equipment and shall do all work necessary to place the geopolymer layer over the entire surface area of the interior of the existing sewer, including the invert, walls and crown, in accordance with the plans and specifications, the manufacturer's instructions, recommendations, specifications and standards, and as directed by the Engineer.

(G) APPLICATION CONDITIONS - The geopolymer layer can be applied over a damp substrate. However, pools of water should be removed before start of application of geopolymer layer.

The mortar shall not be applied when ambient and substrate temperatures are 100°F and above. Shade the material and prepared surfaces to keep them cool. To extend work time, mix the material with cool water or ice-cooled water. The substrate shall be in a saturated surface-dry (SSD) condition before application begins.

The mortar shall not be applied when ambient and surface temperatures are expected to fall below 36°F within 72-hours of placement. Both ambient and surface temperatures must be at least 36°F at time of placement. For applying mortar at temperatures below 36°F, the material, water and



substrate shall be warmed to above a temperature of 36°F. The area when heating shall be properly ventilated. The newly installed liner shall be protected from freezing.

(H) APPLICATION

- (1) The geopolymer lining material delivery hose shall be coupled to a medium velocity spray application nozzle. Pumping of the material shall begin and the material shall be atomized by the introduction of air at the nozzle, creating a medium-velocity spray pattern for material application.
- (2) The spin cast nozzle must be capable of bidirectional operation.
- (3) The bidirectional nozzle shall have the capability to be adjusted to match the angle or gauge of the corrugations when lining corrugated metal pipe.
- (4) A reciprocating head that has a speed adjustment for making multiple position changes per minute is required.
- (5) The reciprocating head allows the spin cast mechanism and the associated selected nozzle to make multiple passes on the pipe wall in a single pass of the sled assembly.
- (6) Spraying shall be performed by starting at the pipe end-project location and progressing towards the entrance of the pipe.
- (7) Begin at downstream side of the pipe, and retract the spin cast assembly at a monitored uniform rate. Just as important as knowing that a consistent amount of water is being added to the mix, the retrieval rate of the spin head must be measurable and constant. At the beginning of each pipe segment the retraction device should be calibrated. The calibration process includes setting the digital readout to the desired retrieval rate (in inches per minute). Then the retrieval chain is laid out and marked to show the distance traveled in two (2) minutes. The rate obtained must be within 5% of the expected speed and can be verified by this process.
- (8) The liner shall be applied to a specific uniform minimum thickness no less than 1/4-inch.
- (9) The delivery hose shall be coupled to a high speed rotating applicator device. The rotating casting applicator shall then be positioned within the center, or positioned higher inside the pipe, as required by the diameter or shape of the pipe.
- (10) The high speed rotating applicator shall then be initialized, and pumping of the material shall begin. As the material begins to be centrifugally cast evenly around the interior of the pipe, the rotating applicator head shall uniformly travel back and forth at or near the center point of the pipe at a controlled frequency conducive to providing a uniform material thickness to the pipe walls.
- (11) Controlled multiple passes shall then be made until the specified minimum finished thickness is attained. If the procedure is interrupted for any reason, the operator shall arrest the retrieval of the applicator head until flows are reestablished.
- (12) Material thickness may be verified at any point with a depth gauge and shall be no less than a uniform 1/4-inch. If additional material is required at any level, the rotating applicator head shall be placed at the location and application shall begin until that area meets the required thickness.
- (13) The geopolymer lining material shall be applied to a damp surface, with no free water.



- (14) The medium velocity spray nozzle and the centrifugal spin casting head may be used in conjunction to facilitate uniform application of the material to irregularities in the contour of the pipe walls.
- (15) If desired, the geopolymer liner may be troweled following the spray application. Initial troweling shall be in an upward motion, to compress the material and solidify the pipe wall. Precautions shall be taken not to over-trowel.
- (16) Proper steps shall be taken to ensure the material is cured in a moist and moderate climate. General underground conditions are usually adequate to meet this curing requirement, however, when situations of dry and/or hot conditions are present, the use of a wind barrier and fogging may be required.
- (17) The geopolymer liner should not be placed when the ambient temperature is 36°F and falling or when the temperature is anticipated to fall below 32°F during the next 24-hours, unless specific precautions are employed.
- (18) During extreme hot weather conditions, chilled water must be used to mix the geopolymer liner material. The geopolymer liner material should be maintained at a temperature lower than 90°F.

(I) SERVICE CONNECTIONS - After the liner has been installed, the Contractor shall clean all existing active service connections and those inactive connections ordered by the Engineer of lining material that may hinder or block flow from the service connection.

(J) CURING - The use of curing compounds is not advised for geopolymer liners.

(K) TESTING - TEST CUBES

Determination of the strength of the mortar will be based on the average strength of test cubes made in the manner hereinafter described. The test cubes shall be 4" x 4" x 4". A minimum of one (1) set of two (2) test cubes will be required at the start of the project for the first three hundred (300) linear feet of sewer lined with a minimum of one (1) additional set made for every additional three hundred (300) linear feet of sewer lined. During the progress of the reconstruction, the Engineer will have test cubes made to determine whether the mortar being produced complies with the contract requirements. Test cubes will be made and stored in accordance with ASTM C31 and tested in accordance with ASTM C39, except as otherwise modified by the Engineer. Each test will consist of two (2) cubes at twenty-eight (28) days.

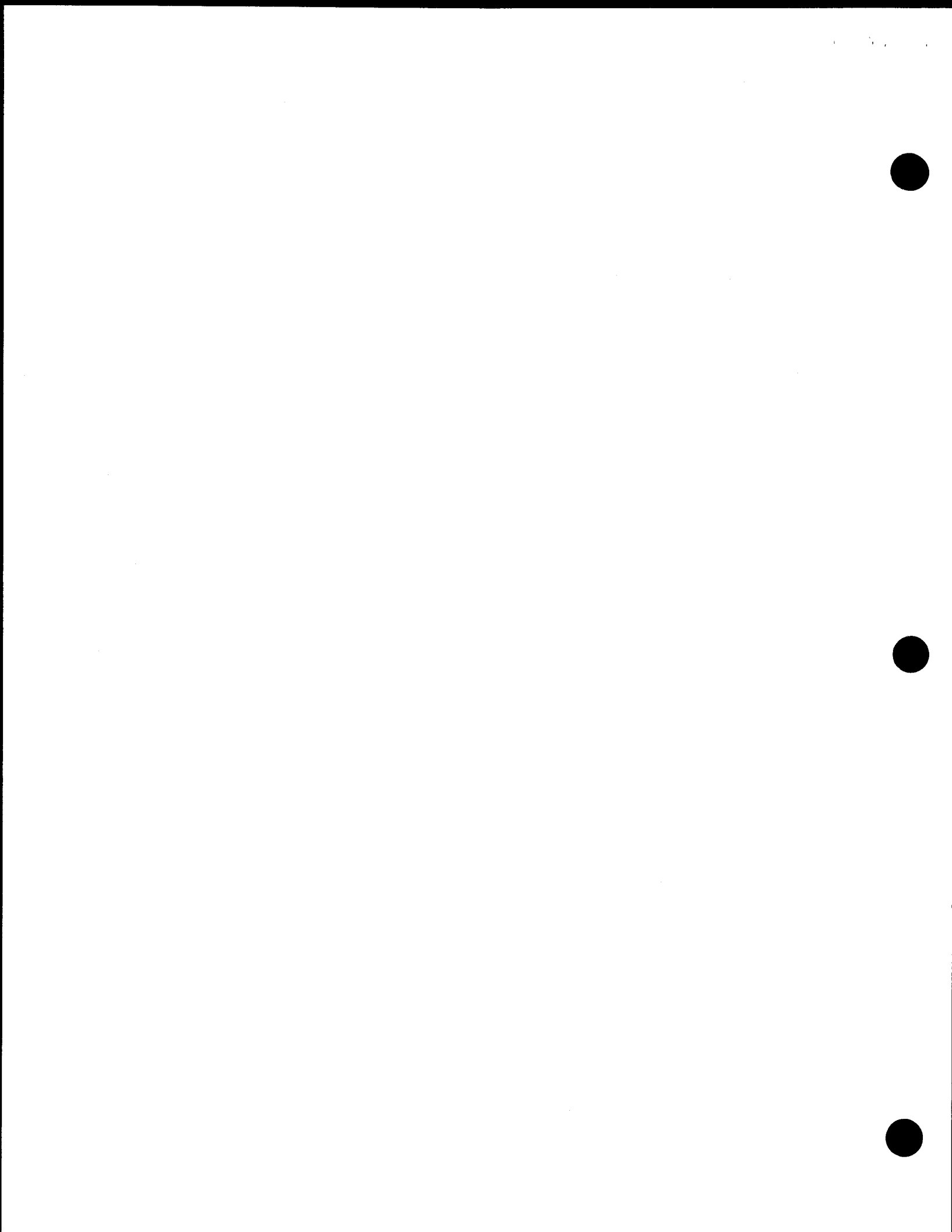
Test cubes shall be made at the point of mortar deposit and shall be representative of the batch from which they are taken. The Contractor under the Engineer's supervision shall provide the necessary labor and facilities required to make, store and care for the test cubes. They shall be safeguarded against injury and protected from the elements.

The Engineer will be responsible for the preparation, documentation and labeling of the test cubes and for notifying the Contractor, at least twenty-four (24) hours in advance, when a shipment of test cubes is ready for delivery, so that cubes can be tested for the standard twenty-eight (28) day tests. Test cubes shall be transported to the testing laboratory when directed by the Engineer.

The Contractor shall make arrangements to protect all cubes from damage during loading, transport to, and unloading at a Department of Design and Construction designated testing laboratory, and shall obtain a receipt for delivered test cubes, which shall be submitted to the Engineer.

The Total Minimum Number of Test Cube Sets to be taken by the Engineer shall be determined as follows:

- (a) A minimum of One (1) Test cube set shall be taken at the start of the project for the first Three Hundred (300) Linear Feet of Sewer Section Lined;



- (b) Then a minimum of One (1) Test cube set shall be taken for every additional Three Hundred (300) Linear Feet of Sewer Section Lined.

All tests will be made by the Department of Design and Construction designated testing laboratory. The Contractor may, if the Contractor so desires, take test cubes corresponding to those taken for the Department of Design and Construction designated testing laboratory. However, determination of payment will be based solely on the test cubes taken for the Department of Design and Construction designated testing laboratory. The sampling shall be based on the quantities indicated hereinafter.

Mortar shall have a minimum compressive strength of eight thousand (8,000) pounds per square inch at the end of twenty-eight (28) days. The Contractor shall be considered to have met the requirements of the specifications for mortar placed in the section of sewer, when the average strength of all twenty-eight (28) day test cubes taken for that section of sewer is equal to or better than the eight thousand (8,000) pound per square inch requirement.

The strength of mortar placed in each section of sewer will be recorded as the average strength of all twenty-eight (28) day test cubes taken for that section of sewer, determined in accordance with the following conditions: Test cubes exhibiting strengths in excess of one hundred fifteen (115) percent of the specified minimum strength will be considered to have only a strength of one hundred fifteen (115) percent of the specified minimum strength in determining the average strength of the mortar. The cubes exhibiting strengths below the specified minimum strength will be considered as having the exhibited strength in determining the average strength of the mortar.

(L) FINAL TELEVISION INSPECTION AND RECORDING - Upon completion of the work the Contractor shall perform a final television inspection and digital audio-visual recording of the newly lined sewer in accordance with **Section 5.17** of the specifications, with the exception that all sewers regardless of size (including those larger than fifty-four (54) inches in their least inside dimension) shall receive this final television inspection and digital audio-visual recording. Payment for final television inspection and digital audio-visual recording shall be made under Item No. 53.11DR - TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS.

Should the results of this final inspection reveal any defects, as determined by the Engineer, the Contractor will be required to repair or replace these defects as ordered by the Engineer and in accordance with the manufacturer's instructions, recommendations, specifications and standards. Such repair work shall be done at the sole expense of the Contractor.

5.05M.11 MEASUREMENT

The quantity to be measured for payment shall be the number of linear feet of existing sewer reconstructed to the satisfaction of the Engineer, as shown, specified or required, measured horizontally along the centerline of the existing sewer from inside face of manhole to inside face of manhole.

The quantity to be measured for payment per linear foot for reconstruction of multiple barrel sewers shall be measured once for all barrels within that linear section. Measurement for payment will not be made for each multiple barrel reconstructed.

5.05M.12 PRICE TO COVER

The contract price for "RECONSTRUCTION OF EXISTING SEWERS USING D.E.P. APPROVED SPIN CAST GEOPOLYMER PIPE (SCGP) LINING METHOD" shall be the unit price bid per linear foot for each size, shape, kind and type of existing sewer and shall cover the cost of all labor, materials, plant, equipment, samples and tests required or necessary to reconstruct the existing sewer as specified herein, including the taking, storing and protecting of test cubes; all submittals; fluming and/or diversion of the flow in the existing sewer; applying GeoSpray™ AMS corrosion protection pre-treatment; walk-through inspection or television inspection prior to lining; cleaning of lining material from active and inactive service connection; applying GeoSpray™ AMS corrosion



protection post-coat; and furnishing and installing all other items necessary to complete this work and do all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

The contract price hereunder shall also include the cost of all labor and materials required and necessary to provide for the safe environment and temporary lighting as specified herein.

The contract price per linear foot for reconstruction of multiple barrel sewers shall be made once for all barrels within that linear foot section. Payment will not be made for each multiple barrel reconstructed.

5.05M.13 SEPARATE PAYMENT

Payment for this final television inspection will be made under Item No. 53.11DR - TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS.

5.05M.14 DETERMINATION OF PAYMENT

When the average strength of the test cubes equals or exceeds eight thousand (8,000) pounds per square inch, the appropriate mortar incorporated in the existing sewer will be paid for at the contract price bid.

When the average strength of the test cubes is less than eight thousand (8,000) pounds per square inch, the appropriate mortar incorporated in the existing sewer will be paid for at a price which will have the same proportion to a price of five hundred (\$500.00) dollars per cubic yard for such mortar that the deficient strength bears to eight thousand (8,000) pounds per square inch. Such difference in cost shall be deducted from the contract price bid. When the average strength of the test cubes is six thousand four hundred (6,400) pounds per square inch or less, the Contractor may be required, at the order of the Engineer, to remove the defective mortar or portions thereof and replace it with mortar in full compliance with the specifications at no extra cost to the City.

In the event the Contractor should take exception to the results as determined by test cubes taken for the Department of Design and Construction designated testing laboratory, the Contractor may, at the Contractor's own cost, elect to take core borings of the completed mortar work at places to be designated by the Engineer. Such core borings will be tested by the Department of Design and Construction designated testing laboratory. The Contractor, at the Contractor's own expense, may elect to take corresponding core borings adjacent to the Department's core borings and employ a recognized testing laboratory to make comprehensive tests. All such tests shall be done in the presence of a representative of the Department of Design and Construction designated testing laboratory. The core borings must be delivered to the laboratories by the Contractor immediately so that compressive tests can be performed as close to the twenty-eight (28) day compressive test requirement as is possible. The result of the test of each Contractor's corresponding core boring will be averaged with that of the adjacent Department's core boring, and the resulting averages will be used to determine the average strength of the mortar in lieu of the comparable test cube results. Determination of payment based on the average strength of core borings will be made according to the method specified herein.

Core borings having strengths exceeding one hundred twenty-five (125) percent of the specified minimum strength will be considered to have a strength of only one hundred twenty-five (125) percent of the specified minimum strength in determining the average strength of the mortar. Core borings exhibiting strengths below the specified minimum strength will be considered as having the exhibited strength in determining the average strength of the mortar.

Where cores have been removed within the limits of this contract, the Contractor shall refill core openings in accordance with the manufacturer's instructions, recommendations, specifications and standards at no cost to the City.



Payment for Reconstruction Of Existing Sewers Using D.E.P Approved Spin Cast Geopolymer Pipe (SCGP) Lining Method will be made under the Item Number as calculated below:

The Item Numbers for Reconstruction Of Existing Sewers Using D.E.P. Approved Spin Cast Geopolymer Pipe (SCGP) Lining Method have fourteen characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Reconstruction Of Existing Sewers Using D.E.P. Approved Spin Cast Geopolymer Pipe (SCGP) Lining Method:
50.79

(2) The sixth character shall define the Type of Sewer Effluent:
S - Sanitary Sewer
M - Storm Sewer
C - Combined Sewer
I - Interceptor Sewer

(3) The seventh, eighth and ninth characters shall define either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Sewers of Other Shapes (e.g. Rectangular, Arched, Elliptical, and Egg). (The seventh, eighth and ninth characters representing the unit of inches for either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Sewers of Other Shapes.) See examples below:

060 - 60"
096 - 96"
108 - 108"
120 - 120"

(4) The tenth character shall define the Shape of the Existing Sewer:
D - Circular (Diameter)
R - Rectangular (Single Barrel)
B - Double Barrel Rectangular
T - Triple Barrel Rectangular
A - Arch-Shaped
H - Horizontal Elliptical
V - Vertical Elliptical
E - Egg-Shaped

(5) The eleventh character shall define the Kind of Existing Sewer:
B - Brick
C - Concrete

(6) The twelfth, thirteenth and fourteenth characters shall define either Circular and Arch-Shaped or the Height of the Sewer for Existing Sewers of Other Shapes (e.g. Rectangular, Elliptical, and Egg). (The twelfth, thirteenth and fourteenth characters representing the unit of inches for the Height of the Sewer for Existing Sewers of Other Shapes.) See examples below:

000 - Circular and Arch-Shaped
087 - 87"
096 - 96"
108 - 108"
120 - 120"

(7) Examples of Item Numbers together with Description and Pay Unit as provided in the Bid Schedule are provided below:

Item No.	Description	Pay Unit
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ADDENDUM NO. 7

PROJECT NO.: PS-312KR

50.79S054DB000	RECONSTRUCTION OF EXISTING 54" DIAMETER CIRCULAR BRICK SANITARY SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79S054DC000	RECONSTRUCTION OF EXISTING 54" DIAMETER CIRCULAR CONCRETE SANITARY SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79S051RC048	RECONSTRUCTION OF EXISTING 51"W X 48"H RECTANGULAR CONCRETE SANITARY SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79S084AB000	RECONSTRUCTION OF EXISTING 84"W ARCH-SHAPED BRICK SANITARY SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79S048VB076	RECONSTRUCTION OF EXISTING 48"W X 76"H VERTICAL ELLIPTICAL BRICK SANITARY SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79S043VC068	RECONSTRUCTION OF EXISTING 43"W X 68"H VERTICAL ELLIPTICAL CONCRETE SANITARY SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79S040EB060	RECONSTRUCTION OF EXISTING 40"W X 60"H EGG-SHAPED BRICK SANITARY SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79S045EC060	RECONSTRUCTION OF EXISTING 45"W X 60"H EGG-SHAPED CONCRETE SANITARY SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79M060DB000	RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR BRICK STORM SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79M060DC000	RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR CONCRETE STORM SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79M060RC051	RECONSTRUCTION OF EXISTING 60"W X 51"H RECTANGULAR CONCRETE STORM SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79M108AB000	RECONSTRUCTION OF EXISTING 108"W ARCH-SHAPED BRICK STORM SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79M053VB083	RECONSTRUCTION OF EXISTING 53"W X 83"H VERTICAL ELLIPTICAL BRICK STORM SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79M058VC091	RECONSTRUCTION OF EXISTING 58"W X 91"H VERTICAL ELLIPTICAL CONCRETE STORM SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79M047EB070	RECONSTRUCTION OF EXISTING 47"W X 70"H EGG-SHAPED BRICK STORM SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79M052EC065	RECONSTRUCTION OF EXISTING 52"W X 65"H EGG-SHAPED CONCRETE STORM SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79M072BC072	RECONSTRUCTION OF EXISTING 72"W X 72"H DOUBLE BARREL RECTANGULAR CONCRETE STORM SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79M087TC060	RECONSTRUCTION OF EXISTING 87"W X 60"H TRIPLE BARREL RECTANGULAR CONCRETE STORM SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79C072DB000	RECONSTRUCTION OF EXISTING 72" DIAMETER CIRCULAR BRICK COMBINED SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79C072DC000	RECONSTRUCTION OF EXISTING 72" DIAMETER CIRCULAR CONCRETE COMBINED SEWER USING D.E.P. APPROVED SCGP	L.F.



	LINING METHOD	
50.79C126RC075	RECONSTRUCTION OF EXISTING 126"W X 75"H RECTANGULAR CONCRETE COMBINED SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79C132AB000	RECONSTRUCTION OF EXISTING 132"W ARCH-SHAPED BRICK COMBINED SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79C063VB098	RECONSTRUCTION OF EXISTING 63"W X 98"H VERTICAL ELLIPTICAL BRICK COMBINED SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79C077VC121	RECONSTRUCTION OF EXISTING 77"W X 121"H VERTICAL ELLIPTICAL CONCRETE COMBINED SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79C050EB074	RECONSTRUCTION OF EXISTING 50"W X 74"H EGG-SHAPED BRICK COMBINED SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79C058EC077	RECONSTRUCTION OF EXISTING 58"W X 77"H EGG-SHAPED CONCRETE COMBINED SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79I060DC000	RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79I064RC048	RECONSTRUCTION OF EXISTING 64"W X 48"H RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79I060BC060	RECONSTRUCTION OF EXISTING 60"W X 60"H DOUBLE BARREL RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.
50.79I078TC060	RECONSTRUCTION OF EXISTING 78"W X 60"H TRIPLE BARREL RECTANGULAR CONCRETE INTERCEPTOR SEWER USING D.E.P. APPROVED SCGP LINING METHOD	L.F.

- (8) Refer to Page V-65:
Add the following new **Section 5.05N**:

SECTION 5.05N
RECONSTRUCTION OF EXISTING SEWERS USING EITHER D.E.P. APPROVED CENTRIFUGALLY-CAST-CONCRETE-PIPE (CCCP), OR SPIN CAST GEOPOLYMER PIPE (SCGP), OR POLYURETHANE LINING METHOD

5.05N.1 INTENT

It is the intent of this section to provide for the reconstruction of existing sewers by using either the D.E.P approved centrifugally-cast-concrete-pipe (CCCP) lining method, or the D.E.P approved spin cast geopolymer pipe (SCGP) lining method, or the D.E.P approved polyurethane lining method. The Contractor will only be allowed to choose and use one of these lining methods for the reconstruction at the specific location(s) and length(s) shown on the contract drawing allowing these options. Where location(s) and length(s) specifically specify reconstruction to be done with a specific lining method the Contractor will not be permitted to use another option.

5.05N.2 DESCRIPTION

At the location(s) and length(s) shown on the contract drawing allowing for the use of either the D.E.P approved centrifugally-cast-concrete-pipe (CCCP) lining method, or the D.E.P approved spin cast geopolymer pipe (SCGP) lining method, or the D.E.P approved polyurethane lining method, it shall be the Contractor's option to choose only one of these lining methods, and to perform the reconstruction



work of the existing sewer in accordance with the specification corresponding to the Contractor's chosen lining method (**Section 5.05I, or Section 5.05K, or Section 5.05M**).

5.05N.3 MEASUREMENT

The quantity to be measured for payment shall be the number of linear feet of existing sewer reconstructed to the satisfaction of the Engineer, as shown, specified or required, measured horizontally along the centerline of the existing sewer from inside face of manhole to inside face of manhole.

The quantity to be measured for payment per linear foot for reconstruction of multiple barrel sewers shall be measured once for all barrels within that linear section. Measurement for payment will not be made for each multiple barrel reconstructed.

5.05N.4 PRICE TO COVER

The contract price for "RECONSTRUCTION OF EXISTING SEWERS USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD" shall be the unit price bid per linear foot for each size, shape, kind and type of existing sewer and shall cover the cost of all labor, materials, plant, equipment, samples and tests required or necessary to reconstruct the existing sewer as specified herein, and furnishing and installing all other items necessary to complete this work and do all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

The contract price shall including all work specified in either **Section 5.05I, or Section 5.05K, or Section 5.05M** in accordance with the option chosen by the Contractor.

The contract price per linear foot for reconstruction of multiple barrel sewers shall be made once for all barrels within that linear foot section. Payment will not be made for each multiple barrel reconstructed.

Payment for Reconstruction Of Existing Sewers Using Either D.E.P Approved CCCP, Or SCGP, Or Polyurethane Lining Method will be made under the Item Number as calculated below:

The Item Numbers for Reconstruction Of Existing Sewers Using Either D.E.P. Approved CCCP, Or SCGP, Or Polyurethane Lining Method have fourteen characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Reconstruction Of Existing Sewers Using Either D.E.P. Approved CCCP, Or SCGP, Or Polyurethane Lining Method:

50.89

(2) The sixth character shall define the Type of Sewer Effluent:

S - Sanitary Sewer
M - Storm Sewer
C - Combined Sewer
I - Interceptor Sewer

(3) The seventh, eighth and ninth characters shall define either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Sewers of Other Shapes (e.g. Rectangular, Arched, Elliptical, and Egg). (The seventh, eighth and ninth characters representing the unit of inches for either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Sewers of Other Shapes.) See examples below:

060 - 60"
096 - 96"
108 - 108"
120 - 120"



(4) The tenth character shall define the Shape of the Existing Sewer:

- D - Circular (Diameter)
- R - Rectangular (Single Barrel)
- B - Double Barrel Rectangular
- T - Triple Barrel Rectangular
- A - Arch-Shaped
- H - Horizontal Elliptical
- V - Vertical Elliptical
- E - Egg-Shaped

(5) The eleventh character shall define the Kind of Existing Sewer:

- B - Brick
- C - Concrete

(6) The twelfth, thirteenth and fourteenth characters shall define either Circular and Arch-Shaped or the Height of the Sewer for Existing Sewers of Other Shapes (e.g. Rectangular, Elliptical, and Egg). (The twelfth, thirteenth and fourteenth characters representing the unit of inches for the Height of the Sewer for Existing Sewers of Other Shapes.) See examples below:

- 000 - Circular and Arch-Shaped
- 087 - 87"
- 096 - 96"
- 108 - 108"
- 120 - 120"

(7) Examples of Item Numbers together with Description and Pay Unit as provided in the Bid Schedule are provided below:

Item No.	Description	Pay Unit
50.89S054DB000	RECONSTRUCTION OF EXISTING 54" DIAMETER CIRCULAR BRICK SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89S054DC000	RECONSTRUCTION OF EXISTING 54" DIAMETER CIRCULAR CONCRETE SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89S051RC048	RECONSTRUCTION OF EXISTING 51"W X 48"H RECTANGULAR CONCRETE SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89S084AB000	RECONSTRUCTION OF EXISTING 84"W ARCH-SHAPED BRICK SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89S048VB076	RECONSTRUCTION OF EXISTING 48"W X 76"H VERTICAL ELLIPTICAL BRICK SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89S043VC068	RECONSTRUCTION OF EXISTING 43"W X 68"H VERTICAL ELLIPTICAL CONCRETE SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89S040EB060	RECONSTRUCTION OF EXISTING 40"W X 60"H EGG-SHAPED BRICK SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89S045EC060	RECONSTRUCTION OF EXISTING 45"W X 60"H EGG-SHAPED CONCRETE SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89M060DB000	RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR	L.F.



	BRICK STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	
50.89M060DC000	RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR CONCRETE STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89M060RC051	RECONSTRUCTION OF EXISTING 60"W X 51"H RECTANGULAR CONCRETE STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89M108AB000	RECONSTRUCTION OF EXISTING 108"W ARCH-SHAPED BRICK STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89M053VB083	RECONSTRUCTION OF EXISTING 53"W X 83"H VERTICAL ELLIPTICAL BRICK STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89M058VC091	RECONSTRUCTION OF EXISTING 58"W X 91"H VERTICAL ELLIPTICAL CONCRETE STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89M047EB070	RECONSTRUCTION OF EXISTING 47"W X 70"H EGG-SHAPED BRICK STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89M052EC065	RECONSTRUCTION OF EXISTING 52"W X 65"H EGG-SHAPED CONCRETE STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89M072BC072	RECONSTRUCTION OF EXISTING 72"W X 72"H DOUBLE BARREL RECTANGULAR CONCRETE STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89M087TC060	RECONSTRUCTION OF EXISTING 87"W X 60"H TRIPLE BARREL RECTANGULAR CONCRETE STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89C072DB000	RECONSTRUCTION OF EXISTING 72" DIAMETER CIRCULAR BRICK COMBINED SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89C072DC000	RECONSTRUCTION OF EXISTING 72" DIAMETER CIRCULAR CONCRETE COMBINED SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89C126RC075	RECONSTRUCTION OF EXISTING 126"W X 75"H RECTANGULAR CONCRETE COMBINED SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89C132AB000	RECONSTRUCTION OF EXISTING 132"W ARCH-SHAPED BRICK COMBINED SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89C063VB098	RECONSTRUCTION OF EXISTING 63"W X 98"H VERTICAL ELLIPTICAL BRICK COMBINED SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89C077VC121	RECONSTRUCTION OF EXISTING 77"W X 121"H VERTICAL ELLIPTICAL CONCRETE COMBINED SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89C050EB074	RECONSTRUCTION OF EXISTING 50"W X 74"H EGG-SHAPED BRICK COMBINED SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89C058EC077	RECONSTRUCTION OF EXISTING 58"W X 77"H EGG-SHAPED CONCRETE COMBINED SEWER USING EITHER D.E.P. APPROVED	L.F.



50.89I060DC000	CCCP, OR SCGP, OR POLYURETHANE LINING METHOD RECONSTRUCTION OF EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89I064RC048	RECONSTRUCTION OF EXISTING 64"W X 48"H RECTANGULAR CONCRETE INTERCEPTOR SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89I060BC060	RECONSTRUCTION OF EXISTING 60"W X 60"H DOUBLE BARREL RECTANGULAR CONCRETE INTERCEPTOR SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.
50.89I078TC060	RECONSTRUCTION OF EXISTING 78"W X 60"H TRIPLE BARREL RECTANGULAR CONCRETE INTERCEPTOR SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	L.F.

- (9) Refer to Page V-78:
Add the following new **Section 5.07E**:

SECTION 5.07E

RECONSTRUCTION OF EXISTING MANHOLES ON EXISTING SEWERS USING EITHER D.E.P. APPROVED CENTRIFUGALLY-CAST-CONCRETE-PIPE (CCCP), OR SPIN CAST GEOPOLYMER PIPE (SCGP), OR POLYURETHANE LINING METHOD

5.07E.1 INTENT

It is the intent of this section to provide for the reconstruction of existing manholes on existing sewers by using either the D.E.P approved centrifugally-cast-concrete-pipe (CCCP) lining method, or the D.E.P approved spin cast geopolymer pipe (SCGP) lining method, or the D.E.P approved polyurethane lining method. The Contractor will only be allowed to choose and use one of these lining methods for the reconstruction at the specific location(s) shown on the contract drawing allowing these options. Where location(s) specifically specify reconstruction to be done with a specific lining method the Contractor will not be permitted to use another option.

The chose the Contractor decides on to reconstruct the existing manhole shall be the same chose the Contractor decided on to reconstruct the existing sewer the existing manhole is on, in accordance with **Section 5.05N - Reconstruction Of Existing Sewers Using Either D.E.P. Approved Centrifugally-Cast-Concrete-Pipe (CCCP), Or Spin Cast Geopolymer Pipe (SCGP), Or Polyurethane Lining Method.**

5.07E.2 DESCRIPTION

The reconstruction of the existing manhole by the chosen lining method the Contractor decides on shall be performed in accordance with **Section 5.07D - Reconstruction Of Existing Manholes On Existing Sewers Using D.E.P. Approved Lining Methods.**

5.07E.3 MEASUREMENT

The quantity to be measured for payment shall be the number of existing manholes reconstructed on each size, type, shape and kind of existing sewer by either the D.E.P. approved centrifugally-cast-concrete-pipe (CCCP), or spin cast geopolymer pipe (SCGP), or polyurethane lining method, completely, as shown, specified, or ordered, and which are accepted by the Engineer.

5.07E.4 PRICE TO COVER



The contract price for "RECONSTRUCTION OF EXISTING MANHOLES ON EXISTING SEWERS USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD" shall be the unit price bid per each existing manhole reconstructed on each size, type, shape and kind of existing sewer by either the D.E.P. approved centrifugally-cast-concrete-pipe (CCCP), or spin cast geopolymer pipe (SCGP), or polyurethane lining method and shall cover the cost of all labor, materials, plant, equipment, samples and tests required or necessary to reconstruct the existing manhole as specified herein, and furnishing and installing all other items necessary to complete this work and do all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

The contract price shall including all work specified in **Section 5.07D** in accordance with the option chosen by the Contractor.

Payment for Reconstruction Of Existing Manholes On Existing Sewers Using Either D.E.P. Approved CCCP, Or SCGP, Or Polyurethane Lining Method will be made under the Item Number as calculated below:

The Item Numbers for Reconstruction Of Existing Manholes On Existing Sewers Using Either D.E.P. Approved CCCP, Or SCGP, Or Polyurethane Lining Method have fourteen characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Reconstruction Of Existing Manholes On Existing Sewers Using Either D.E.P. Approved CCCP, Or SCGP, Or Polyurethane Lining Method:

51.28

(2) The sixth character shall define the Type of Sewer Effluent of the existing sewer the existing manhole is on:

S - Sanitary Sewer
M - Storm Sewer
C - Combined Sewer
I - Interceptor Sewer

(3) The seventh, eighth and ninth characters shall define either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Sewers of Other Shapes the existing manhole is on (e.g. Rectangular, Arched, Elliptical, and Egg). (The eighth, ninth and tenth characters representing the unit of inches for either the Diameter of the Sewer for Existing Circular Sewers or the Width of the Sewer for Existing Sewers of Other Shapes.) See examples below:

060 - 60"
096 - 96"
108 - 108"
120 - 120"

(4) The tenth character shall define the Shape of the Existing Sewer the existing manhole is on:

D - Circular (Diameter)
R - Rectangular (Single Barrel)
B - Double Barrel Rectangular
T - Triple Barrel Rectangular
A - Arch-Shaped
H - Horizontal Elliptical
V - Vertical Elliptical
E - Egg-Shaped

(5) The eleventh character shall define the Kind of Existing Sewer the existing manhole is on:

B - Brick
C - Concrete



(6) The twelfth, thirteenth and fourteenth characters shall define either Circular and Arch-Shaped or the Height of the Sewer for Existing Sewers of Other Shapes the existing manhole is on (e.g. Rectangular, Elliptical, and Egg). (The thirteenth, fourteenth and fifteenth characters representing the unit of inches for the Height of the Sewer for Existing Sewers of Other Shapes.) See examples below:

000 - Circular and Arch-Shaped
 087 - 87"
 096 - 96"
 108 - 108"
 120 - 120"

(7) The Item Numbers together with Description and Pay Unit as provided in the Bid Schedule are provided below:

Item No.	Description	Pay Unit
51.28S054DB000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 54" DIAMETER CIRCULAR BRICK SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28S054DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 54" DIAMETER CIRCULAR CONCRETE SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28S054DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 54" DIAMETER CIRCULAR CONCRETE SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28S054DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 54" DIAMETER CIRCULAR CONCRETE SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28S054DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 54" DIAMETER CIRCULAR CONCRETE SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28S051RC048	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 51"W X 48"H RECTANGULAR CONCRETE SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28S084AB000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 84"W ARCH-SHAPED BRICK SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28S048VB076	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 48"W X 76"H VERTICAL ELLIPTICAL BRICK SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28S043VC068	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 43"W X 68"H VERTICAL ELLIPTICAL CONCRETE SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28S040EB060	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 40"W X 60"H EGG-SHAPED BRICK SANITARY SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH.
51.28M060DB000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60"	EACH



	DIAMETER CIRCULAR BRICK STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	
51.28M060DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60" DIAMETER CIRCULAR CONCRETE STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28M060DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60" DIAMETER CIRCULAR CONCRETE STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28M060RC051	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60"W X 51"H RECTANGULAR CONCRETE STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28M108AB000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 108"W ARCH-SHAPED BRICK STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28M053VB083	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 53"W X 83"H VERTICAL ELLIPTICAL BRICK STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28M058VC091	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 58"W X 91"H VERTICAL ELLIPTICAL CONCRETE STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28M047EB070	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 47"W X 70"H EGG-SHAPED BRICK STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28M052EC065	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 52"W X 65"H EGG-SHAPED CONCRETE STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28M072BC072	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 72"W X 72"H DOUBLE BARREL RECTANGULAR CONCRETE STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28M087TC060	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 87"W X 60"H TRIPLE BARREL RECTANGULAR CONCRETE STORM SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28C072DB000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 72" DIAMETER CIRCULAR BRICK COMBINED SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28C072DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 72" DIAMETER CIRCULAR CONCRETE COMBINED SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28C072DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 72" DIAMETER CIRCULAR CONCRETE COMBINED SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28C126RC075	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 126"W X 75"H RECTANGULAR CONCRETE COMBINED SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE	EACH



51.28C132AB000	LINING METHOD RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 132"W ARCH-SHAPED BRICK COMBINED SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28C063VB098	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 63"W X 98"H VERTICAL ELLIPTICAL BRICK COMBINED SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28C077VC121	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 77"W X 121"H VERTICAL ELLIPTICAL CONCRETE COMBINED SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28C050EB074	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 50"W X 74"H EGG-SHAPED BRICK COMBINED SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28C058EC077	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 58"W X 77"H EGG-SHAPED CONCRETE COMBINED SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28I060DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28I060DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28I060DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28I060DC000	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60" DIAMETER CIRCULAR CONCRETE INTERCEPTOR USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28I064RC048	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 64"W X 48"H RECTANGULAR CONCRETE INTERCEPTOR USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28I060BC060	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 60"W X 60"H DOUBLE BARREL RECTANGULAR CONCRETE INTERCEPTOR SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH
51.28I078TC060	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING 78"W X 60"H TRIPLE BARREL RECTANGULAR CONCRETE INTERCEPTOR SEWER USING EITHER D.E.P. APPROVED CCCP, OR SCGP, OR POLYURETHANE LINING METHOD	EACH

(10) Refer to Page V-132:

Add the following new Section 5.20F:

SECTION 5.20F

MATERIAL FOR SEWER/MANHOLE REPAIR WORK (FOR POLYURETHANE LINING METHOD)

5.20F.1 INTENT



This section describes repair work that is required to repair the existing sewer/manhole that is to be reconstructed by a D.E.P. approved polyurethane lining method, to its original structural (surface plane) lines.

5.20F.2 MATERIALS

(A) REPAIR MATERIAL: Selection of the material for repair shall be dependent upon concrete condition, depth and extent of voids and cracks, type of defect, whether application is on vertical, horizontal or overhead surfaces, manufacturer's instructions, recommendations, specifications and standards and direction of the Engineer.

The repair materials and substrate shall be kept at 60°-80°F for at least 48-hours prior to application.

The repair material shall not be applied when ambient and surface temperatures are expected to fall below 60°F within 72-hours of placement. Both ambient and surface temperatures must be at least 60°F at time of placement. For applying repair material at temperatures below 60°F, the material and substrate shall be warmed to a minimum temperature of 60°F for at least 48-hours prior to application. The area when heating shall be properly ventilated. The newly installed repair material shall be protected from freezing. Heating devices and other special equipment approved by the manufacturer and the Engineer shall be used to achieve the optimum application environment.

- (1) Repair material for filling voids, substrate irregularities and air pockets shall be SR-6100® EPOXY REPAIR as manufactured by SPRAYROQ, INC. available from the following installers: (i) Songer Contracting, 44 Walnut Street, Montgomery, NY 12549, Contact: Perry Songer, Tel. No. 800-457-0747, Fax No. 845-457-9938, psonger@hvc.rr.com ; (ii) Abel Recon, 3925 Columbia Avenue, P.O. Box 476, Mountville, PA 17554-0476, Contact: Hap Witmer, Tel. No. 717-285-3103, Fax No. 717-285-2321, hwitmer@abelrec.com ; (iii) Infrastructure Rehab Service, 6104 Hardware Drive, Prince George, VA 23875-3049, Contact: Dan Gadams, Tel. No. 804-861-9888, dgadams@irs-rehab.com ; (iv) Osborn Contract Services, Inc., 125 Sunbelt Court, Greer, SC 19650, Contact: Jeff Hargett, Tel. No. 864-877-2535, Fax No. 864-877-5859, jeff@osborninc.com ; or approved equal.

SR-6100® EPOXY REPAIR comes in components of two parts, (i) Part A Hardener, (ii) Part B Liquid Resin. (Containers are filled by weight, not by volume. Container size does not indicate volume of contents.) SR-6100® EPOXY REPAIR is a Trowelable fast setting, high-strength and durable, epoxy formulated material.

Physical Properties:

Tensile Strength ASTM D638	3,408-psi
Tensile Modulus ASTM D638	198,265-psi
Flexural Strength ASTM D790	9,173-psi
Flexural Modulus ASTM D790	1,902,823-psi
Bond-Lap Shear ASTM D3164	1,776-psi
Compressive Strength ASTM D695	10,089-psi
Shore D Hardness ASTM D2240	85-Shore D

- (2) Repair material for filling voids and substrate irregularities shall be STRONG-SEAL® QSR as manufactured by THE STRONG SEAL COMPANY, INC. available from the installers specified above.

STRONG-SEAL® QSR comes in moisture-resistant bags of 50-lbs each. STRONG-SEAL® QSR is a Trowelable, fast setting, corrosion resistant, fiber reinforced calcium aluminate cementitious repair material. STRONG-SEAL® QSR may be applied at a thickness of 1/2-inch and greater and when applied to vertical or overhead surfaces must be reinforced or anchored. "T" type anchors or 2-inch x 2-inch mesh are suitable to secure STRONG-SEAL® QSR material.

Physical Properties:



Bond Strength By Slant Shear ASTM C882	
28-days	>1,600-psi
Compressive Strength ASTM C109:	
1-hour	>1,800-psi
24-hours	>2,600-psi
28-days	>3,000-psi
Density ASTM C20	105-pcf \pm 5-lbs/ft ³
Shrinkage ASTM C596	0% at 90% R.H.
Placement Time	5 to 10-minutes
Set Time	15 to 30-minutes

- (3) Repair material for filling voids and substrate irregularities shall be **STRONG SEAL® PROFILE PLUS MIX** as manufactured by **THE STRONG SEAL COMPANY, INC.** available from the installers specified above.

STRONG SEAL® PROFILE PLUS MIX comes in moisture-resistant bags of 65-lbs each. **STRONG SEAL® PROFILE PLUS MIX** is a Sprayable, corrosion resistant, calcium aluminate cementitious repair material. **STRONG SEAL® PROFILE PLUS MIX** may be applied at a thickness of 1/2-inch and greater and when applied to vertical or overhead surfaces must be reinforced or anchored. "T" type anchors or 2-inch x 2-inch mesh are suitable to secure **STRONG SEAL® PROFILE PLUS MIX** material.

Physical Properties:

Bond Strength By Slant Shear ASTM C882	
28-days	>2,000-psi
Compressive Strength ASTM C109:	
28-days	>9,000-psi
Tensile Strength ASTM C496:	
28-days	>600-psi
Flexural Strength ASTM C293:	
28-days	>900-psi
Density ASTM C20	134-pcf \pm 5-lbs/ft ³
Shrinkage ASTM C596	0% at 90% R.H.
Freeze/Thaw ASTM C666	300-cycles no visible damage

- (B) Water shall be fresh, clean and free from oils, acids, alkali or organic matter.

- (C) Reinforcement shall comply with the requirements of **General Specification 11 - Concrete, as modified in Section 2.15 and Section 5.38.**

5.20F.3 CONSTRUCTION METHOD

(A) DESCRIPTION - The Contractor will be responsible for repairing the existing sewer/manhole as directed by the Engineer, to its original structural (surface plane) lines. This repair work and choice of material for repair shall be accomplished in accordance with the manufacturer's instructions, recommendations, specifications and standards, and as approved by the Engineer.

(B) MIXING

- (1) SR-6100® EPOXY REPAIR epoxy repair material shall be mixed in the proportions specified by the manufacturer and as follows:
- (i) Remix contents of Part A Hardener by shaking;
 - (ii) Remix contents of Part B Liquid Resin component for a minimum of 2-minutes with a slow speed paddle or "Jiffy" mixer;
 - (iii) Then add one Part A Hardener to two Parts B Liquid Resin and mix for a minimum of 3-minutes with a slow speed paddle or "Jiffy" mixer until thoroughly blended;



- (iv) Mix only the amount of material that can be applied within the working time. The working time of the mix is approximately fifteen (15) minutes for SR-6100[®] EPOXY REPAIR depending on conditions.
 - (v) Material which has begun to set must be discarded. Do not try to retemper the material.
- (2) STRONG-SEAL[®] QSR and STRONG SEAL[®] PROFILE PLUS MIX mortar repair material shall be mixed by combining the respective 50-lbs or 65-lbs packaged dry mix with potable water in an amount and in the manner specified by the manufacturer. The material shall be mixed with a low-speed mortar mixer until proper consistency is obtained. The working time of the mix is approximately ten (10) minutes for STRONG-SEAL[®] QSR and fifteen (15) minutes for STRONG SEAL[®] PROFILE PLUS MIX depending on conditions. Mix only the amount of material that can be applied within the working time. Material which has begun to set must be discarded. Do not try to retemper the material.

(C) EQUIPMENT

- (1) Mortar mixers, spray guns, gun tips, compressors, pumps, hoses, tools, etc. shall be standard commercial models as specified by the manufacturer. Mixing equipment shall be capable of thoroughly mixing the materials in sufficient quantity to maintain placing continuity. Compressor shall be of sufficient capacity to maintain, without interruption, the pressures and volume necessary for delivery.
- (2) The Contractor shall prepare and inspect all necessary tools and any spare parts that are required for equipment that suffer frequent breakdowns, and shall ensure that said tools and spare parts are available at the site. Supporting equipment, such as pumps and generators, shall be provided at the site in the event there is a fluid surge and pumping is required on an emergency basis. The Contractor shall also prepare and make operable all necessary communication equipment for the Contractor's field crew.

(D) DAMAGED INVERT - If the existing invert is found to be damaged and lower than its original designed elevation, as determined by the Engineer, the Contractor shall restore the invert up to its original structural (surface plane) line as follows:

- (i) For Severely Eroded Inverts: The Contractor shall place Number Four (4) Steel Reinforcing Bars at twelve (12) inches spacing in both directions throughout the depressed and damaged area and then apply sufficient quantities of STRONG-SEAL[®] QSR or STRONG SEAL[®] PROFILE PLUS MIX mortar repair material to restore the surface of the sewer/manhole to its original structural (surface plane) lines. There shall be a minimum clearance of three-quarter (3/4) inch between steel reinforcement and the surface of the STRONG-SEAL[®] QSR or STRONG SEAL[®] PROFILE PLUS MIX mortar repair material.
- (ii) For Moderately Eroded Inverts (1/2-Inch Or Greater): The Contractor shall apply sufficient quantities of STRONG-SEAL[®] QSR or STRONG SEAL[®] PROFILE PLUS MIX mortar repair material to restore the surface of the sewer/manhole to its original structural (surface plane) lines.
- (iii) For Moderately Eroded Inverts (Less Than 1/2-Inch): The Contractor shall apply sufficient quantities of SR-6100[®] EPOXY REPAIR epoxy repair material to restore the surface of the sewer/manhole to its original structural (surface plane) lines.

STRONG-SEAL[®] QSR or STRONG SEAL[®] PROFILE PLUS MIX mortar repair material or SR-6100[®] EPOXY REPAIR epoxy repair material shall be applied as specified by the manufacturer and as approved by the Engineer. The mortar repair material and epoxy repair material shall be shaped to conform generally to the original structural (surface plane) lines. The Contractor shall perform a broom or brush finish to mortar repair material to provide a more desirable bonding surface.

(E) CRACKS IN WALLS, AIR POCKETS, SUBSTRATE IRREGULARITIES AND VOIDS DUE TO MISSING BRICK, MASONRY OR CONCRETE



- (1) The following repair procedure is to be used only when in the opinion of the Engineer the structural integrity of the sewer/manhole has not been compromised.
 - (i) Areas containing large and/or extensive air pockets, isolated cracks up to five (5) linear feet long and up to one-half (1/2) inch wide, substrate irregularities up to five (5) linear feet long and up to twelve (12) inches wide and voids created by three (3) or less missing bricks or created by missing masonry or concrete less than one (1) square foot in area, are to be considered nonthreatening and shall be repaired by the Contractor by apply sufficient quantities of SR-6100[®] EPOXY REPAIR epoxy repair material into the air pockets, cracks and voids to restore the surface of the sewer/manhole to its original structural (surface plane) lines. T⁷ type anchors or 2-inch x 2-inch mesh shall be used where conditions require use.
 - (ii) Where cracks, substrate irregularities and voids exceed the listed parameters specified in subparagraph (i) above, the Contractor shall repair the sewer/manhole by mechanically raking out loose or crumbling material from the opening, flush the void with water from a pressure hose, place Number Three (3) Steel Reinforcing Bars at six (6) inches spacing in both directions throughout the area of the void, properly anchoring the steel reinforcement bars to the existing sewer/manhole, and apply sufficient quantities of STRONG-SEAL[®] QSR or STRONG SEAL[®] PROFILE PLUS MIX mortar repair material into the opening so as to completely fill the void in order to restore the surface of the sewer/manhole to its original structural (surface plane) lines. There shall be a minimum clearance of three-quarter (3/4) inch between steel reinforcement and the surface of the STRONG-SEAL[®] QSR or STRONG SEAL[®] PROFILE PLUS MIX mortar repair material.
- (2) The following repair procedure is to be used only when, in the opinion of the Engineer, the structural integrity of the sewer/manhole has been compromised because of cracks and voids to the extent that the sewer/manhole is considered unsafe.

The Contractor shall cease work in that unsafe section of the sewer/manhole. The Contractor shall then submit for the Engineer's review and approval, the Contractor's recommendation (including an estimate of costs) for repairing the damage so as to make the sewer/manhole safe as well as operable. The Contractor shall not perform any remedial work prior to receiving written notification of the Engineer's approval. This "make safe" work shall be considered as extra work, and shall be paid for in accordance with **Articles 25 and 26** of the Contract.

(F) CURING

- (1) STRONG-SEAL[®] QSR and STRONG SEAL[®] PROFILE PLUS MIX mortar repair material must be properly cured in a high humidity (70% humidity) environment (fog spray or equivalent). If special conditions exist a curing compound specified by the manufacturer and approved by the Engineer may be utilized. The time for initial set and final set shall be as specified by the manufacturer. STRONG-SEAL[®] QSR and STRONG SEAL[®] PROFILE PLUS MIX mortar repair material may be top coated after final set has occurred.
- (2) SR-6100[®] EPOXY REPAIR epoxy repair material shall be cured as specified by the manufacturer and approved by the Engineer. The time for initial set and final set shall be as specified by the manufacturer. SR-6100[®] EPOXY REPAIR epoxy repair material may be top coated after initial set has occurred.

(G) All house connection piping spigots intruding into the sewer to be lined shall be trimmed back so that the ends of their spigots will line up with the proposed inside face of the lined sewer.

5.20F.4 MEASUREMENT

(A) The quantity of repair material for repair work will be measured on the basis of the actual number of cubic feet of repair material used to repair the damages to the invert, fill cracks in the walls, fill air



pockets, fill substrate irregularities and fill voids created by missing brick, masonry or concrete) placed in the work to the satisfaction of the Engineer, in conformity with the contract documents.

(B) The quantity of steel used for repair work will be measured on the basis of the actual number of pounds of additional steel reinforcement bars placed in the work to the satisfaction of the Engineer, in conformity with the contract documents.

5.20F.5 PRICE TO COVER

(A) The contract price for Item No. 54.34MRP - MATERIAL FOR SEWER/MANHOLE REPAIR WORK (FOR POLYURETHANE LINING METHOD) - PORTLAND CEMENT-BASED shall be the unit price bid per cubic foot and shall cover the cost of all labor, materials and equipment required or necessary to repair the existing sewer/manhole (using STRONG-SEAL® QSR and STRONG SEAL® PROFILE PLUS MIX) as specified herein, including fluming and/or diversion of the flow in the existing sewer/manhole, anchors and/or mesh, trimming back of house connections and furnishing and installing all other items necessary to complete this work, together with all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

(B) The contract price for Item No. 54.34MRE - MATERIAL FOR SEWER/MANHOLE REPAIR WORK (FOR POLYURETHANE LINING METHOD) - EPOXY FORMULATION shall be the unit price bid per cubic foot and shall cover the cost of all labor, materials and equipment required or necessary to repair the existing sewer/manhole (using SR-6100® EPOXY REPAIR) as specified herein, including fluming and/or diversion of the flow in the existing sewer/manhole, anchors and/or mesh, trimming back of house connections and furnishing and installing all other items necessary to complete this work, together with all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

(C) Payment for the cost of all labor, material and equipment required or necessary to properly place in the existing sewer/manhole steel reinforcing bars used for repair work shall be made under Item No. 73.51AS - ADDITIONAL STEEL REINFORCING BARS.

Payment for Material For Sewer/Manhole Repair Work (For Polyurethane Lining Method) will be made under the Item Number as calculated below:

The Item Number for Material For Sewer/Manhole Repair Work (For Polyurethane Lining Method) has eight characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Material For Sewer/Manhole Repair Work (For Polyurethane Lining Method):

54.34

(2) The sixth and seventh characters shall define Material For Sewer/Manhole Repair Work (For Polyurethane Lining Method):

MR - Material For Sewer/Manhole Repair Work
(For Polyurethane Lining Method)

(3) The eighth character shall define Type of Repair Material Used For Sewer/Manhole Repair Work (For Polyurethane Lining Method):

P - Portland Cement-Based
E - Epoxy Formulation

(4) The Item Number together with Description and Pay Unit as provided in the Bid Schedule is provided below:

Item No.	Description	Pay Unit
54.34MRP	MATERIAL FOR SEWER/MANHOLE REPAIR WORK (FOR POLYURETHANE LINING METHOD) - PORTLAND CEMENT-BASED	C.F.



54.34MRE

MATERIAL FOR SEWER/MANHOLE REPAIR WORK (FOR
POLYURETHANE LINING METHOD) - EPOXY FORMULATION

C.F.

(11) Refer to Page V-132:

Add the following new Section 5.20G:

**SECTION 5.20G
HYDROACTIVE POLYURETHANE - INJECTION GROUTING
(FOR POLYURETHANE LINING METHOD)**

5.20G.1 INTENT

This section describes injection grouting that is required to fill surrounding voids and/or stop infiltration/exfiltration of the existing sewer/manhole to be reconstructed by a D.E.P. approved polyurethane lining method.

5.20G.2 MATERIALS

(A) Injection Grout shall be HYDRO ACTIVE® CUT HYDROPHOBIC POLYURETHANE GROUT as manufactured by DE NEEF® CONSTRUCTION CHEMICALS, INC. available from the following installers: (i) Songer Contracting, 44 Walnut Street, Montgomery, NY 12549, Contact: Perry Songer, Tel. No. 800-457-0747, Fax No. 845-457-9938, psonger@hvc.rr.com ; (ii) Abel Recon, 3925 Columbia Avenue, P.O. Box 476, Mountville, PA 17554-0476, Contact: Hap Witmer, Tel. No. 717-285-3103, Fax No. 717-285-2321, hwitmer@abelrec.com ; (iii) Infrastructure Rehab Service, 6104 Hardware Drive, Prince George, VA 23875-3049, Contact: Dan Gadams, Tel. No. 804-861-9888, dgadams@irs-rehab.com ; (iv) Osborn Contract Services, Inc., 125 Sunbelt Court, Greer, SC 19650, Contact: Jeff Hargett, Tel. No. 864-877-2535, Fax No. 864-877-5859, jeff@osborninc.com ; or approved equal.

HYDRO ACTIVE® CUT HYDROPHOBIC POLYURETHANE GROUT comes in 55-gallon metal drum sealed under dry nitrogen and 5-gallon metal pail sealed under dry nitrogen. HYDRO ACTIVE® CUT HYDROPHOBIC POLYURETHANE GROUT is a hydrophobic, injection-applied material that, when mixed with an accelerator (HYDRO ACTIVE CUT CAT ACCELERATOR) and makes contact with any source of moisture fills voids and quickly cures to a rigid, closed cell polyurethane foam that adheres tenaciously to practically any wet or dry substrate, and that is resistant to most solvents, mild acids, alkali, petroleum and micro-organisms. The gel-time is dependent on the temperature and amount of HYDRO ACTIVE CUT CAT ACCELERATOR used.

Physical Properties:

Density ASTM D3574 -----	8.75-9.17-lbs/gal
Tensile Strength ASTM D3574-----	56-psi
Compressive Strength (Sand Mortar) -----	895-psi
Bending Strength-----	213-psi
Bond Strength to Bending Bond Strength-----	28-psi
Mortar Joints Shearing Bond Strength-----	255-psi
Absorption (6-Months Immersion In Water)-----	15%
Reactivity at 50°F:	
2% HYDRO ACTIVE CUT CAT ACCELERATOR -----	19'00" Gel-Time
6% HYDRO ACTIVE CUT CAT ACCELERATOR -----	7'40" Gel-Time
10% HYDRO ACTIVE CUT CAT ACCELERATOR-----	4'30" Gel-Time
Reactivity at 68°F:	
2% HYDRO ACTIVE CUT CAT ACCELERATOR -----	9'50" Gel-Time
6% HYDRO ACTIVE CUT CAT ACCELERATOR -----	4'05" Gel-Time
10% HYDRO ACTIVE CUT CAT ACCELERATOR-----	2'24" Gel-Time



(B) HYDRO ACTIVE® CUT HYDROPHOBIC POLYURETHANE GROUT injection grout resin material and HYDRO ACTIVE CUT CAT ACCELERATOR shall be mixed in the proportions specified by the manufacturer and as follows:

(1) For Application By Pumping:

- (i) Both the grout resin and accelerator shall be agitated separately before combining by vigorously shaking the containers or by mixing with a slow speed paddle or "Jiffy" mixer;
- (ii) Pour desired amount of HYDRO ACTIVE® CUT HYDROPHOBIC POLYURETHANE GROUT into a clean dry pail;
- (iii) Measure the appropriate amount of HYDRO ACTIVE CUT CAT ACCELERATOR and pour it into the grout and stir until adequately mixed. Mix only complete batches that can be used within time specified by the manufacturer. Avoid splashing water and whipping air, which contains moisture into the grout (The grout may begin to react if too much moisture contaminates the mix.);
- (iv) Note:
 - (a) 1% HYDRO ACTIVE CUT CAT ACCELERATOR = 1.3-ounces per gallon of HYDRO ACTIVE® CUT HYDROPHOBIC POLYURETHANE GROUT;
 - (b) Excess acceleration will cause vigorous expansion that is prone to shrinkage;
- (v) It is normal for a thin crust to develop on the surface of the material, removal of this thin crust is not required. This crust is formed as a result of moisture in the air. Simply pump the material underneath the crust. Do not use the crusted material.

(C) DeNeef Washing Agent is clear, nonflammable and odorless. It is a medium viscosity, solvent-free liquid which can be used as a flush for urethane pumps. DeNeef Washing Agent is not harmful to the pumps, hoses or rings and can be left in the pumps and hoses until further use of the equipment is required.

(D) Mixers, injection packers, compressors, pumps, hoses, tools, etc. shall be standard commercial models as specified by the manufacturer. Mixing equipment shall be capable of thoroughly mixing the materials in sufficient quantity to maintain placing continuity. Compressor and pumps shall be of sufficient capacity to maintain, without interruption, the pressures and volume necessary for delivery. (The minimum pump capacity shall be 1,000-psi and shall be suitable for void size and water flow rate.)

The Contractor shall prepare and inspect all necessary tools and any spare parts that are required for equipment that suffer frequent breakdowns, and shall ensure that said tools and spare parts are available at the site. Supporting equipment, such as pumps and generators, shall be provided at the site in the event there is a fluid surge and pumping is required on an emergency basis. The Contractor shall also prepare and make operable all necessary communication equipment for the Contractor's field crew.

5.20G.3 CONSTRUCTION METHOD

(A) Injection Packers shall be placed in pre-drilled 5/8-inch diameter holes located at strategic locations in the concrete sewer/manhole to ensure complete injection grout penetration of the hydroactive polyurethane grout. The location of the injection grout holes shall be determined in accordance with manufacturer's recommendations and as directed and approved by the Engineer. Injection Packers used shall be 5/8-inch diameter by 2.25-inch long packers with male zerk fittings and check valves (available from DeNeef). The packers shall be inserted into the hole with the zerk fitting pointed outward. The packer shall be tightened very tight so as to prevent it from coming out of the concrete. Packers are not to be reused.

(B) The pump and all hoses shall be flushed with DeNeef Washing Agent prior to pumping grout so as to remove all traces of water and other contaminants. Do not add this contaminated material to the mixed grout.

(C) The hydroactive polyurethane grout shall be injected through the injection packers to ensure filling of the voids to block infiltration/exfiltration. Pump the grout for a short time and wait for the material to flow into all of the cracks and crevices under its own pressure. This will eliminate material



waste and will prevent surrounding areas from exposure to traveling material. Watch for material flow to appear in surrounding cracks, and for water leakage to decrease. After the material stops moving, drill another hole near the end of the material vein and repeat. As the job progresses, return at least twice to previously injected ports and re-inject with more grout, this procedure aids in getting a denser resin into all sections of the void. It is recommended that each port be injected three separate times.

(D) Injection grouting pressure shall be the minimum pressure required to overcome the hydrostatic pressures. (In no case shall they be less than 1,000-psi.)

(E) Injection grouting shall commence from the upstream end of the void and/or infiltration/exfiltration area of the sewer/manhole and as directed by the Engineer.

(F) Depending upon the conditions encountered in the existing sewer/manhole, injection grouting shall be performed prior to the repair of any damaged areas as directed by the Engineer.

(G) After completion of grouting, the injection packers shall be cut off flush with the concrete surface.

(H) Immediately after using a pump and/or during breaks in grouting, the pump and all hoses shall be flushed with DeNeef Washing Agent so that all the grout is cleared from the pump and hoses. If grout is left in the pump and/or hoses, it will react with moisture (even from the air), and render the pump useless. **NEVER FLUSH THE PUMP AND HOSES WITH WATER!**

5.20G.4 MEASUREMENT

The quantity of injection grout used for injection grouting will be measured on the basis of the actual cubic feet of hydroactive polyurethane grout mixed and placed (prior to expansion) in the work to the satisfaction of the Engineer, in conformity with the contract documents. Hydroactive polyurethane grout used for injection grout which remains in the grout hose, mixing pails, grout machine, or for waste grout which re-enters the interior of the sewer/manhole as the result of improper sealing, or as a result of improper work on the part of the Contractor, shall be deducted from the measurement.

5.20G.5 PRICE TO COVER

The contract price for Item No. 54.23HP - HYDROACTIVE POLYURETHANE - INJECTION GROUTING (FOR POLYURETHANE LINING METHOD) shall be the unit price bid per cubic foot of hydroactive polyurethane grout used for injection grouting under and around the sewer/manhole and shall cover the cost of all labor, materials and equipment required or necessary for the proper placement of the injection grout around the existing sewer/manhole, including fluming and/or diversion of the flow in the existing sewer/manhole, installation of injection packers, flushing of equipment and furnishing and installing all other items necessary to complete this work, together with all work incidental thereto, all in accordance with the plans and specifications and as directed by the Engineer.

Payment for Hydroactive Polyurethane - Injection Grouting (For Polyurethane Lining Method) will be made under the Item Number as calculated below:

The Item Number for Hydroactive Polyurethane - Injection Grouting (For Polyurethane Lining Method) has seven characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Hydroactive Polyurethane - Injection Grouting (For Polyurethane Lining Method):

54.23

(2) The sixth and seventh characters shall define Hydroactive Polyurethane - Injection Grouting (For Polyurethane Lining Method):

HP - Hydroactive Polyurethane - Injection Grouting (For Polyurethane Lining Method)



(3) The Item Number together with Description and Pay Unit as provided in the Bid Schedule is provided below:

Item No.	Description	Pay Unit
54.23HP	HYDROACTIVE POLYURETHANE - INJECTION GROUTING (FOR POLYURETHANE LINING METHOD)	C.F.

By signing in the space provided below, the bidder acknowledges receipt of the forty-one (41) pages of this Addendum plus thirteen (13) pages of attachments, and fourteen (14) sheets of revised contract drawing.

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

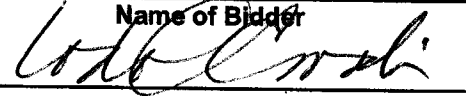


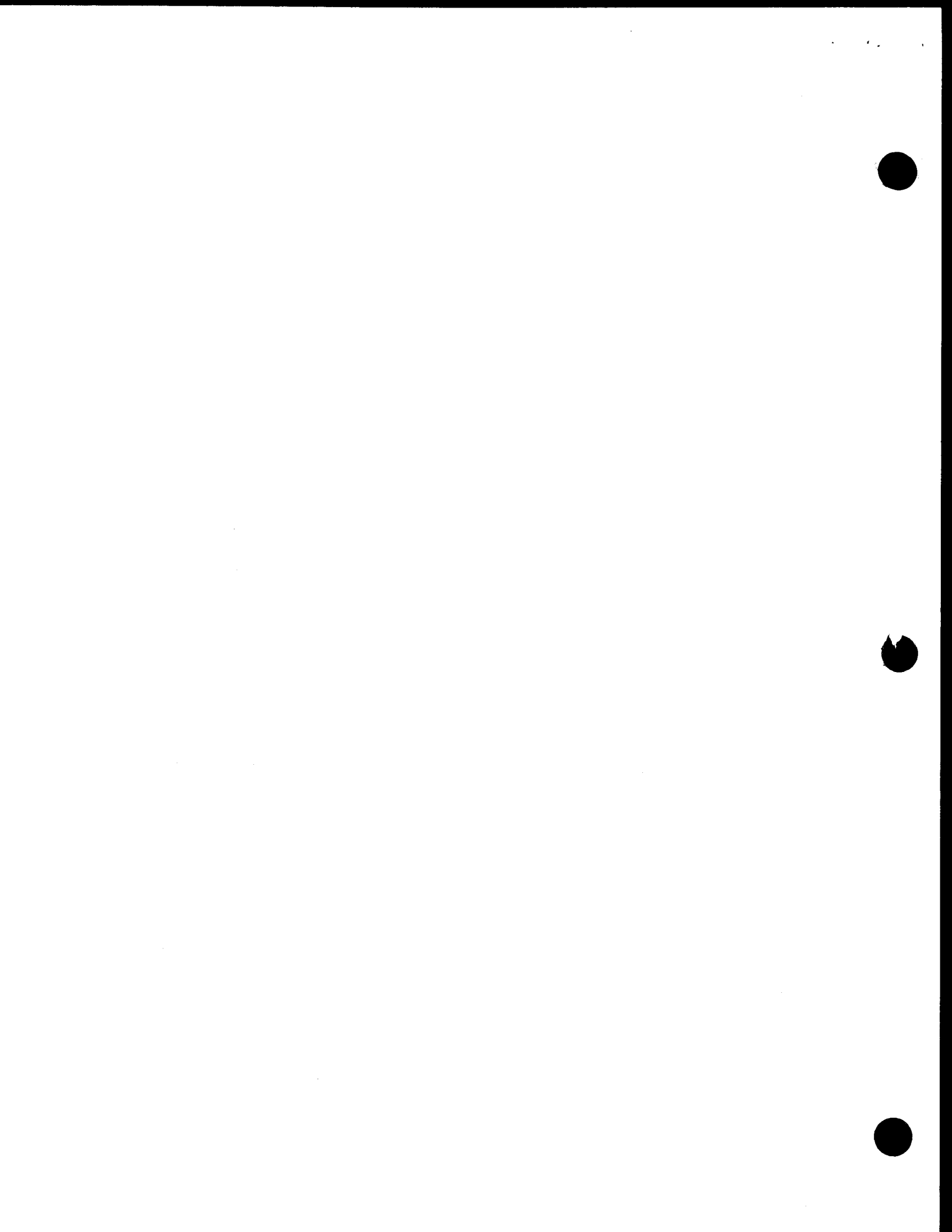
GURDIP SAINI, P.E.
Assistant Commissioner

EN-TECH CORP

Name of Bidder

By:





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

PROJECT ID: PS-312KR

FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES IN:

BROOKLYN

IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET AND RYDER STREET;
RALPH AVENUE BETWEEN PRESTON COURT AND FOSTER AVENUE; AND, RALPH AVENUE
BETWEEN AVENUE L AND AVENUE K

STATEN ISLAND

RICHMOND TERRACE BETWEEN MORNINGSTAR ROAD AND NEWARK AVENUE; RICHMOND
TERRACE BETWEEN WINANT STREET AND MORNINGSTAR ROAD; RICHMOND TERRACE
BETWEEN GRANITE AVENUE AND WINANT STREET; RICHMOND TERRACE BETWEEN VAN
NAME AVENUE AND SIMONSON AVENUE; RICHMOND TERRACE BETWEEN VAN PELT AVENUE
AND VAN NAME AVENUE; RICHMOND TERRACE BETWEEN DE HART AVENUE AND VAN PELT
AVENUE; RICHMOND TERRACE BETWEEN BUSH AVENUE AND UNION AVENUE; RICHMOND
TERRACE BETWEEN HARBOR ROAD AND BUSH AVENUE; RICHMOND TERRACE AND MAPLE
AVENUE; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND HOUSEMAN AVENUE; AND,
CEDAR GROVE AVENUE AND EBBITS STREET;

Together With All Work Incidental Thereto

BOROUGHES OF BROOKLYN AND STATEN ISLAND

ADDENDUM NO. 8

DATED: September 11, 2014

This Addendum is issued for the purpose of amending the requirements of the contract documents and is hereby made part of said contract documents to the same extent as if it was originally included therein.

- (1) Refer to Addendum No. 7, Page A7-2, Note No. (2), Article (10), second paragraph;
Delete from the second paragraph, the first sentence starting with the words, "The Contractor...", and ending with the words, "...bypass piping.", in its entirety;
Substitute the following new sentence:

"The Contractor is informed that if due to the traffic stipulation permit(s), the Contractor is required at the intersections only to bury bypass piping, the Contractor shall be required to submit to the Engineer for approval, all details, drawings and computations required for the burying of the bypass piping."

- (2) Refer to Addendum No. 7, Page A7-2, Note No. 4, Answer to Question (2);
Delete Answer to Question (2) in its entirety;
Substitute the following new Answer to Question (2):

"**Answer to Question (2)** - The Contractor is notified that the Contractor will be allowed at all locations approved in writing by the Engineer, to remove the frames and covers together with the roof slabs from existing manholes to facilitate bypassing operation. Payment for this removal/demolition work shall be deemed included in the prices bid for all items of the contract. No separate or additional payment will be made for this removal/demolition work. The Contractor will be required to restore the roof slabs and manhole frames and covers in kind in accordance with the standards and specifications and as directed by the Engineer. Payment for this work



shall be made under the respective Item No. 73.21AC - ADDITIONAL CONCRETE, Item No. 73.51AS - ADDITIONAL STEEL REINFORCING BARS, and, Item No. 51.23RF - REPLACEMENT OF EXISTING MANHOLE FRAME AND COVER. Payment for the removal of any existing roadway pavements and for any roadway restoration required due to removal of manhole slabs and frames and covers shall be deemed included in the prices bid for all items of the contract. No separate or additional payment will be made for this removal and restoration of roadway pavements work.

Where the Engineer deems that special field conditions exist making it not feasible to use the method specified above because the system required for bypass necessitates a larger entry area, the Contractor shall be permitted to expand the size of the manhole chimney to accomplish the bypassing operation. All modifications to existing manhole the Contractor deems necessary shall be submitted to the Engineer for approval. This submittal shall include, but not be limited to, all means and methods of the Contractor's enlargement operation, sheeting and bracing drawings and computations, and shop drawings and computations for the rebuilding of the manhole and all other effective portion of the existing sewer structure. Payment for all costs required to modify and reconstruct the manhole shall be made in accordance with **Articles 25 and 26** of the Standard Construction Contract. These costs shall include, full-depth saw cutting, excavation, removal and disposal of pavements; demolition of structures, earth excavation of all materials of whatever nature encountered, sheeting and bracing, shop drawings and computations; backfilling and compaction of trench; and, restoring the roadway to match the existing pavement, all in accordance with the standards and specification and as directed by the Engineer."

By signing in the space provided below, the bidder acknowledges receipt of the two (2) pages of this Addendum.

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

G. Saini

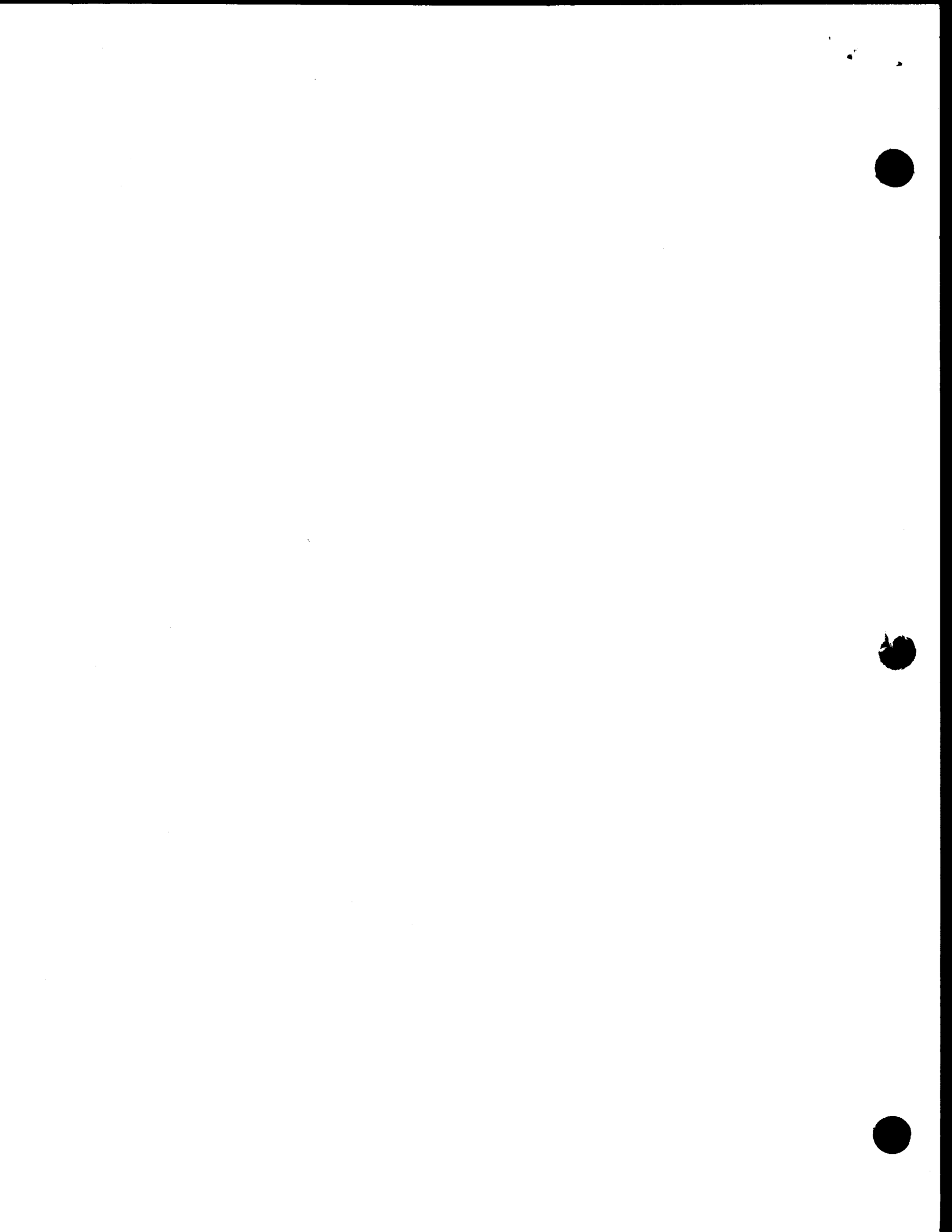
GURDIP SAINI, P.E.
Assistant Commissioner

EN-TECH CORP

Name of Bidder

By:

[Signature]







**INFRASTRUCTURE DIVISION
BUREAU OF DESIGN**

VOLUME 3 OF 3

PROJECT ID: PS-312KR

FOR THE REHABILITATION OF INTERCEPTOR SEWERS AND APPURTENANCES IN:

BROOKLYN

IMLAY STREET AND VERONA STREET; AVENUE T BETWEEN 37TH STREET AND RYDER STREET; RALPH AVENUE BETWEEN PRESTON COURT AND FOSTER AVENUE; AND, RALPH AVENUE BETWEEN AVENUE L AND AVENUE K

STATEN ISLAND

RICHMOND TERRACE BETWEEN MORNINGSTAR ROAD AND NEWARK AVENUE; RICHMOND TERRACE BETWEEN WINANT STREET AND MORNINGSTAR ROAD; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND WINANT STREET; RICHMOND TERRACE BETWEEN VAN NAME AVENUE AND SIMONSON AVENUE; RICHMOND TERRACE BETWEEN VAN PELT AVENUE AND VAN NAME AVENUE; RICHMOND TERRACE BETWEEN DE HART AVENUE AND VAN PELT AVENUE; RICHMOND TERRACE BETWEEN BUSH AVENUE AND UNION AVENUE; RICHMOND TERRACE BETWEEN HARBOR ROAD AND BUSH AVENUE; RICHMOND TERRACE AND MAPLE AVENUE; RICHMOND TERRACE BETWEEN GRANITE AVENUE AND HOUSEMAN AVENUE; AND, CEDAR GROVE AVENUE AND EBBITS STREET;

Together With All Work Incidental Thereto

BOROUGHS OF THE BROOKLYN AND STATEN ISLAND
CITY OF NEW YORK

Contractor

Dated _____, 20____
